

UNIVERSITY OF LJUBLJANA
BIOTECHNICAL FACULTY

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**THE ROLE OF CERTAIN SENSES IN CREATING
THE REGIONAL IDENTITY OF DALMATIA**

DOCTORAL DISSERTATION

Ljubljana, 2014

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DOCTORAL DISSERTATION

**VLOGA POSAMEZNIH ČUTIL PRI OBLIKOVANJU REGIONALNE
IDENTITETE DALMACIJE**

DOKTORSKA DISERTACIJA

Ljubljana, 2014

Doctoral dissertation was made at the Department of Landscape Architecture at Biotechnical Faculty, University of Ljubljana. Based on the Statute of the University of Ljubljana and by decision of the Senate of the Biotechnical Faculty and decision of the University Senate of 12th of February 2009, it was confirmed that the candidate qualifies for a PhD Postgraduate Study of Biological and Biotechnical Sciences, Field: Landscape Architecture and the pursuit of a doctorate degree in the field of Landscape Architecture. Prof. dr. Mojca Golobič was appointed as the mentor and prof. dr. Marko Polič was appointed as co-mentor.

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The work is the result of my own research work. I agree with publishing of my work in full text on the internet page Digitalna knjižnica Biotehniške fakultete. I declare that the text in the electronic version is identical to the printed one.

Maja Kljenak

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AB Within this dissertation, the concept of landscape identity is considered from the perspective of the five fundamental human senses: sight, hearing, smell, touch and taste. Landscape identity is usually understood as a phenomenon based on recognisable visual features. However, the environment is a multisensory medium, rich in information from all fields of perception. Equally, a man is multisensory being and experiences his environment with multiple senses. The underlying assumption is that human identification with places does not only arise from the interaction with their visual, but also with non-visual spatial properties. The research was conducted in the Dalmatian region in Croatia. The multi-method approach included a public opinion survey, sensory walk, and content analysis of promotional, mostly tourist, materials and lyrical regional poetry. The results confirmed that the 'image' of Dalmatia does not focus only on the visual characteristics of the region, but that a significant role in experiencing and creating the sense of place is also played by auditory, olfactory, tactile and gustatory characteristics, as well as specific ambient features. It was also found that the notion of local people and visitors is congruent. Even though visual features are the most frequent, the unique *genius loci* of Dalmatia is the result of a dynamic interaction of modally different landscape features. Within each modality several typical regional characteristics were found, which proves sensory diversity of Dalmatian landscape. Findings suggest that there is a need to redefine the research phenomenon from a visual to a sensory landscape identity. The obtained knowledge is applicable in the area of landscape planning and design, destination, product and services marketing, and health tourism. Finally, this contributes to the development of the idea of sustainability by supporting the conservation of all sensory landscape values and by enabling the creation of a more pleasant and healthier environment for people.

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- AI V okviru te disertacije se koncept krajinske identitete obravnava iz perspektive petih osnovnih človeških čutov: vida, sluha, vonja, tipa in okusa. Krajinska identiteta se predvsem razume kot fenomen, ki temelji na prepoznavnih vizualnih značilnostih. Vendar je okolje multičutni medij, poln informacij z vseh področij percepcije in človek je multičutno bitje, ki doživlja okolje z vsemi čutili. Zato je izhodiščna predpostavka ideja, da identifikacija človeka s prostorom ne izhaja le iz interakcije s njegovimi vizurami, temveč tudi s njegovimi ne-vizualnimi lastnostmi. Raziskava je izvedena na področju dalmatinske regije na Hrvaškem. Multi-metodični pristop zajema anketno raziskovanje javnega mnenja, čutni sprehod in analizo vsebin (promocijskih, pretežno turističnih materialov in lirske poezije). Rezultati vseh treh metod so potrdili, da se podoba Dalmacije ne osredotoča samo na vizualne značilnosti regije, temveč imajo pomembno vlogo pri doživljanju in oblikovanju občutka kraja in povezanosti s krajem tudi avditorne, olfaktorne, taktilne in gustatorne značilnosti ter specifične ambientalne karakteristike. Ugotovljeno je tudi, da se prestave Dalmacije lokalnih prebivalcev in obiskovalcev ujemajo. Čeprav so vizualne značilnosti najštevilčnejše, je edinstveni *genius loci* Dalmacije rezultat dinamične interakcije modalno različnih krajinskih značilnosti. Znotraj vsake modalitete se pojavlja več značilnosti, po katerih je regija prepoznavna, kar nakazuje, da je krajinska identiteta Dalmacije v čutnem smislu raznolika. Ugotovitve sugerirajo potrebo po redefiniciji raziskovanega fenomena iz vizualne v čutno krajinsko identiteto. Znanje o čutnih značilnostih in njihovi identitetni vrednosti je uporabno na področju krajinskega načrtovanja in oblikovanja, marketinga turističnih destinacij, izdelkov in storitev in zdravstvenega turizma. Navsezadnje prispeva tudi k razvijanju ideje trajnosti, saj podpira ohranjanje vseh čutnih krajinskih vrednosti in hkrati omogoča oblikovanje prijetnejšega in bolj zdravega okolja.

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GLOSSARY

Compound experience	One unique experience consisting of two or more perceptually (modally) different senses (e.g. visual and auditory; visual, auditory and olfactory) expressed explicitly or implicitly.
Landscape	In this paper, landscape means the entire open space with its natural and man-made elements and properties as well as all that a person can perceive and detect in it by using their senses.
Landscape sensory features	In this paper, they encompass primarily visual, auditory, olfactory, tactile and gustatory features, both natural and man-made and conditioned, as well as their multisensory combinations.
Modality	In the context of this topic, modality refers to a specific form of perception (visual, auditory, olfactory, tactile, gustatory).
Non-visual	The expression <i>non-visual</i> in this thesis denotes modalities of human perception apart from the visual. This regards primarily auditory, olfactory, tactile, and gustatory perception, but also other types of perception (e.g. equilibrioception) and the psychological and emotional experience of the surroundings. Besides experience, the notion regards all such features of the landscape.
Perception	Perception is defined as the activity of detecting environmental stimuli by using human perceptual systems (Gibson, 1966). It is conditioned by biological, individual, and cultural factors and implicitly includes focused and unfocused attention to stimuli (sometimes referred to as conscious and non-conscious perception).
Psychoscape	A relatively new term, related to the area of psychogeography (Krygier, 2009c), implying the general ambience of the location, that is, emotion and moods generated by the location in a person (Krygier, 2008).
Senses and perceptual systems	Senses are organs with receptors for receiving stimuli from the organism's surroundings or the organism itself (i.e. man). Perceptual systems

consist of sensory organs and the entire body, where the movement of body parts and the movement of the body in space enable active exploration of the surroundings and gathering of sensory information therefrom, unlike the passive reception of stimuli (Gibson, 1966, 1986).

Sensory landscape identity

Sensory landscape identity means the totality of landscape features of an area which make it identifiable and different from other areas. These do not include only visual, but also other sensory features, primarily auditory, olfactory, tactile, gustatory, as well as ambient (psychological and emotional experiences).

Sensory walk

A relatively new and primarily qualitative scientific method used in social sciences and the humanities, aimed at the examination of human experience of the surroundings (Adams and Askins, 2008; Henshaw et al., 2009). It is based on the perception of sensory properties (and sometimes other characteristics) of the surroundings via walking, as a form of direct contact with it.

Smellscape

Dimension of the landscape consisting of olfactory space and smells contained in it.

Soundscape

Landscape dimension consisting of the acoustic space and the sounds therein.

Tastescape

The dimension of the landscape consisting of tastes available directly from the surroundings (e.g. saltiness, taste of wild local fruits, herbs, drinking water, brackish water), as well as the tastes of local dishes based on ingredients available from the surrounding landscape.

Touchscape

Landscape dimension consisting of all tactile senses a human being can experience through their skin and body. This regards touch (e.g. the perception of texture, size, shape and temperature of objects, surfaces and media in the landscape, such as water), as well as other tactile senses which do not include touch (e.g. sensation of temperature and air flow, solar radiation, etc.).

1 INTRODUCTION

It has probably occurred to everyone that a sound or a melody suddenly reminded them of a past moment, a long-forgotten event or just a casual, brief past moment. Completely unexpectedly, the memory of a place, of people, or simply of a then present feeling is revived. Sometimes it is evoked by a sudden smell or the taste of a current mouthful, thus reviving yet another time and place in mind. It is interesting to note that a memory is very often evoked by a subtle sensation, to which, at the time of its occurrence, we did not pay special regard, of whose presence we were unaware, but which remained, due to our preoccupation with something else, somehow hidden, unnoticed in the overall experience. However, it has left a trace, complemented the experience and was memorized. Are our experiences not made far richer and more complex than it appears at first glance precisely by virtue of such diverse observations, which are often 'on the margin of perception' and focused on something else at the point of their occurrence? Each of our experiences is made up of everything that human senses can perceive, thus creating a complete impression of a moment – of places and events.

While experiences are not necessarily created 'externally' – outside of the human body, it would not be wrong to say that many, if not most of experiences result from the human interaction with their environment. This interaction is a product of everyday life, wherefore it can easily be concluded that the immediate environment affects the man to a great extent and in many various ways – it affects their thoughts, behaviour and feelings. Human existence is place-bound, moreover it is conditioned by place (Heidegger, 1988; Merleau-Ponty, 1978) and hence their innate need to understand his environment, to adapt to it and shape it is not surprising.

Discussion on the experiences arising through the human interaction with their environment requires a prior definition of the terms used to denote human living space. Subject literature mainly uses, among other terms, those such as 'space', 'place', 'surroundings', and 'environment'. Lefebvre (1991) and Bachelard (1994) for instance talk about space, Casey (1993) and Canter (1977) mention place, whereas Gibson (1986) uses the terms surroundings and environment. Though the above terms differ both in their definition and scope, all of them, if put into a relevant context, can be used to designate three-dimensional spatial reality. They are occasionally interchangeably used in this doctoral thesis as well, mainly as synonyms for human space, but it is important to note that, within the scope of this thesis, their meaning is best captured in the description of the environment given by Gibson (1986). According to him, the term environment denotes the overall surroundings of an individual, comprising all non-living things, other organisms¹, as well as all other phenomena and events occurring in the environment. For Gibson, the environment is an ecological space, the space a man (or, as he sees it, some animal species as well) can perceive and experience, playing thus a crucial role in their life, for "we all behave with respect to things we can look at and feel, or smell and taste, and events we can listen to." (Gibson, 1986: 9).

¹ Here he primarily refers to humans and animals, whereas plants are seen as a different – static life form: "Plants in general are not animate; they do not move about, they do not behave, they lack a nervous system, and they do not have sensations." (Gibson, 1986: 7).

Human senses have developed concurrently and in line with the development of the environment a man lived in, reflecting the need to recognize those characteristics important for a successful survival (Polič, 2007). Therefore, they are limited, allowing only the perception of a certain segment (or a range) of the environment. Seen from the perspective of physics, Gibson (1986) says, space is quite different than from the ecological perspective. It includes relations such as atoms and molecules on one hand, or planets and galaxies on the other, and animals and humans are not capable of detecting them with their sense organs.² From the perspective of a physicist, space is not much related to the everyday experiential space that is significant to the man.

Thus, the ecological approach to space taken by Gibson (1986) might be best suitable within the framework of this doctoral thesis, for it understands the space as a comprehensive living surroundings and encompasses everything a man can perceive in it, and even more. Though Gibson focuses on visual perception, his definition of the environment provides an appropriate framework for the research of other sensory modalities as well: "The medium in which animals can move about (and in which objects can be moved about) is at the same time the medium for light, sound, and odor coming from sources in the environment." (Gibson, 1986: 17). This environment consists of an unlimited variety of 'information' and the combinations thereof available to human beings via sensory systems they are 'equipped' with (Gibson, 1966). Therefore, this doctoral thesis looks at the environment from the human perspective – that of an individual and of the society, as surroundings that human beings live or momentarily dwell in. In this sense, the environment is a dynamic system characterised by constant changes and interactions among inanimate matter, natural phenomena and living beings and their activities. All this constitutes living space and an integrated continuous field of human perception.

The environment that can be experienced directly, without any special equipment such as a microscope, a telescope, an audio receiver, a television etc., represents the immediate everyday living space of the man. In Western culture, which gives the privilege to the eyesight in relation to other human senses³, the concept of space has, in sensory terms, predominantly visual connotations, both to an average person, as well as in scientific and professional theory and practice. However, space is much more than what we see around us. Already in the narrow segment that can be reached by relatively limited human senses, space is far more complex, layered and dynamic. As Brantz (2007: 201) puts it: "[a]n environment is determined by sounds, smells, sights, temperatures and material conditioning of a given locale." Direct contact with the environment is conveyed by all human senses, thus always resulting in multisensory cognition – apart from what can be

² Tuan (1990) also notes that, in the course of everyday living, human perception is determined by a scale, namely a range of scales. Both very small and very large objects are out of human perception, he believes: "... we see sand but not its individual grains. ... No matter how often one has traversed the breadth of the United States, it is not possible to see it in one's mind's eye as other than a shape, a small-scaled map." (Tuan, 1990: 15). Human beings can perceive relatively small fragments of the overall energy in the environment. Therefore, many forms of energy as well as characteristics of the environment even remain not apprehended – radiation, odour of certain toxic and other gases, as well as a large portion of the light spectrum and sound spectrum, notes Polič (2007).

³ For example, Cullen (1990: 7) claims, in the preface to *Gradski pejzaž (The concise townscape)*, that environment is apprehended almost entirely through the eyesight.

seen, it also includes that what can be heard, smelled, touched (i.e. felt through the skin), tasted, or sensed otherwise.

These non-visual characteristics carry great significance for at least two reasons. Firstly, not only do they provide a more profound understanding of space, spatial relations and orientation (Casey, 1993; Gardiner and Perkins, 2005; Kitchin et al., 1997; Rodaway, 1994)⁴, but they can also provide key information on the current situation that cannot be apprehended by the eyesight. They can, for instance, provoke a timely reaction, influencing thus the avoidance of accidents, injuries or even affecting the chances of survival. An illustrative example is a nearby fire, which might not be clearly seen or heard, but will be detected by the smell of smoke. In an urban environment – everyday surroundings of the rising number of people – sounds contribute to a more complete and more precise estimation of traffic circumstances and, consequently, the safety of movement. The information gathered from the environment through other senses complement spatial cognition in various ways and allow the identification of space, by organizing it into a meaningful whole and creating a sense of order, and, consequently, the sense of safety (Golledge, 1992).

Secondly, other senses (apart from the eyesight) are significant to the visually impaired and the blind, whose spatial cognition and orientation are partially or completely dependent on messages received from the environment through the sense of hearing, touch and smell (Gardiner and Perkins, 2005). Notwithstanding the differences in physical (dis)abilities, legibility of space is vital to humans, and, as Lynch (1960: 3) claims, is accomplished through the usage of various cues, which include “the visual sensations of colour, shape, motion, or polarization of light, as well as other senses such as smell, sound, touch, kinesthesia, sense of gravity, and perhaps of electric or magnetic fields”. It is likely, he believes, that spatial orientation is rather the result of a consistent usage and organization of specific sensory information from the environment, than of the reaction of instincts.

However, non-visual sensory experiences do not only contribute to a better understanding of the spatial structure and order, but they can also, to a certain extent, shape the aesthetic (Hough, 1990; O’connor, 2008; Tuan, 1990) and emotional experience of space (Hough, 1990; Moore and Whelan, 2007; Rodaway, 1994; Tuan, 1977, 1979, 1990). In other words, sounds, smells or tactile sensations can influence the formation of the overall impression of a place, thus reducing or increasing its comfort level. Numerous examples demonstrate the influence of the aforementioned phenomena over the contemporary sensory space. Though these naturally vary from place to place (regardless of the scale taken), there are experiences that are probably familiar to most people.

For instance, it might be stuffy in a place or one can sense an unpleasant odour (stench) of dampness and mould in it; toilets might have an unpleasant odour as well; sewer or (factory, traffic) smog odour can be sensed in cities, etc. On the other hand, a smell can be pleasant as well: walking by a bakery will, for instance, bring the smell of freshly baked

⁴ Casey (1993: 250-252) describes an interesting concept of *being-guided*, which implies spatial orientation (in his case this refers to the wilderness) based on the reliance on various sensory characteristics of the environment at a given moment. Thus, the guidance he discusses comes from the environment: “As in the case of steering by the wind or stars, the guidance is from without.” (Casey, 1993: 251).

goods. Many places have a specific smell – such as hospitals or dental offices, which characteristically smell of medicines and disinfectants; beauty salons, which smell of various cosmetic concoctions; libraries and even certain books have a distinctive smell of old paper, etc.

Furthermore, acoustic environment is, depending on its location, characterised by the sounds of traffic, people conversing, birds and other animals chirping or machines and other devices (radio, television, telephones, cell phones, etc.) operating. Thus, the sound of a dental drill is expected at the dentist's, just like the sound of children squealing is common around and at kindergartens and schools. Sometimes it is almost possible to hear the silence. Common tactile experiences refer to air temperature, humidity, wind, but also to walking surfaces and everything we touch. A man notices all of these sensations in his or her everyday life, however rarely reflects upon it. Probably the most well-known story of how spatial impressions are brought to life through various unexpected sensory stimuli is Marcel Proust's novel *In Search of Lost Time* and his reminiscences of childhood. He points to the importance of understanding non-visual stimuli and their connection with the space they originate from.

Although sensory signs from the environment do not play a decisive role in human survival nowadays, or at least not to the same extent and in the same way as hundreds or thousands of years ago, the dysfunction or damage to only one of the senses represents a severe deficiency in the perception of the surrounding world, leading not only to a number of potential life dangers, but largely impoverishing everyday life as well. Therefore, though many sensations are purely of informative and aesthetic character for an average contemporary civilized man, they are equally important for them: imperceptibly influencing their behaviour, choices, wishes and feelings, at the same time partially forming their personality. It is precisely these aspects of sensations that are in the centre of interest of this doctoral thesis.

Everyday experiences of our environment may be largely determined by what we see, but they are significantly complemented by sounds, smells, tactile sensations and even tastes we encounter. Therefore, if the role of environmental sensory characteristics is acknowledged in both existential and experiential sense, it becomes clear that environment cannot be regarded as a visible physical surrounding – a scene. In addition to visual, the environment necessarily implies auditory, olfactory, tactile and gustatory component as well. Even the apparent absence of stimuli from a certain sensory domain carries the information for itself and shapes an experience. The absence of smell does not imply the absence of olfactory experience, but is solely considered a neutral olfactory experience – a neutral smell (neither pleasant nor unpleasant). Similarly, silence is considered an auditory experience and can be very distinguishable. Due to the diversity of features that shape it at a particular moment, the environment can be perceived as a dynamic multi-dimensional medium. Experiences formed in it represent a composition comprising impressions from different sensory spheres that constantly overlap and complement each other. In Brunswik words, the environment 'scatters its effects' (Gordon, 2004: 58), so that all our experiences of the environment are multisensual and integrated into a holistic experience (Hersh and Johnson, 2008; Pallasmaa, 2005; Rodaway, 1994).

A man's living space is a broad concept and can be observed in various scales and contexts. Given the nature of human way of life, the often mentioned elementary spatial dialectic, suggested in the above examples of sensory characteristics as well, implies its division into interior (enclosed or built) and exterior (open) space. Though it is sometimes convenient for analytical purposes to observe the two separately, one should keep in mind that both types are strongly interrelated on various levels. Pallasmaa (2005: 41) describes the interrelation of the interior and exterior space as follows:

Architecture is essentially an extension of nature into the man-made realm, providing the ground for perception and the horizon of experiencing and understanding the world. It is not an isolated and self-sufficient artifact; it directs our attention and existential experience to wider horizons. . . . It concretises the cycle of the year, the course of the sun and the passing of the hours of the day.

Hence, everything that happens in the exterior space determines, to a certain extent, the character of the interior space, and likewise, interior, built spaces influence the environment they are set in. This reciprocity can be found everywhere the two converge.

For instance, the outside world influences the interior of buildings people live and work in mainly through openings (windows, doors, etc.). Through them, the changing scenes of the external world become a part of an interior; natural light reveals the weather (sunny, cloudy) and the time of day. In addition, they allow the air and evaporable smell particles the air brings to enter the interior; the regulation of the indoor temperature is interdependent with the outdoor one (so that it sometimes requires additional heating or cooling); and audio matrix of the surrounding exterior is rarely completely kept out, so that it, depending on the location, brings in the sounds of traffic, birds, church bells, people and their activities, rain, wind, etc.

Similarly, dynamics of an open space is modified by the buildings and other human artefacts either in terms of their arrangement, which creates shades or lee, allows air flowing, makes an area (non-)acoustic, or in terms of what is taking place in them – music coming from shops and cafes, the smell of food coming from restaurants and homes. Beside the aforementioned, there is a number of transitional areas between the exterior and interior, believes Casey (1993: 123), such as porches or winter gardens, in which a person comes across “. . . in *in* the out . . . or an out *within* the within . . .”

Given the above, Casey (1993) and Bachelard (1994) are right in claiming that it is difficult to border the two, for they are inseparably intertwined in many aspects. However, each of them has its specific qualities and follows its own functioning patterns. In terms of the sources generating the sensory structure, interiors allow a higher level of control, whereas exterior is more susceptible to the influence of natural phenomena.

Notwithstanding the dualism and undisputable interdependence of the interior (enclosed) and exterior (open), the aim of the thesis is not to research human living space in general. It focuses on landscape as an open space, an integral part of which are often built structures such as buildings, roads, non-verdant urban areas (e.g. squares, streets, promenades, markets) and many other. Regardless of where they live, people live within the landscape,

which forms a significant part of their everyday experience, whether they are standing on a balcony of a tenement house, a roof garden, at a bus station, on a square, in a park, a village garden or in the complete wilderness. Thus, landscape is not perceived here as a solely natural, rural area or an urban landscape. To the contrary, it is understood as a comprehensive whole – as a set of various manifestations of external space.

Each landscape is dynamic, characterised by diversity and interaction between inanimate matter and living organisms and various phenomena. Even in the most desolate landscapes, phenomena such as day to night change, weather conditions, clouds, winds, temperature changes or humidity can be observed. Constant change is an intrinsic characteristic of landscape, and human beings, being a part thereof, represent one of the most influential factors inducing these changes. Many human activities drastically change the visible landscape; however the change of other sensory characteristics occurring simultaneously with it is rarely mentioned. The construction of a road is such an example – a road changes the visual context, but influences the auditory and olfactory environment as well, changing the existing acoustic scenery into the noise of traffic and increasing the smog level. Thus, landscape is undergoing a constant change and, as such, represents an inexhaustible source of various sensory possibilities.

What we observe partially determines how we feel, what we think, and, consequently, the way we behave. Thus, not only does the man change the environment, but the environment also shapes the man, and it is hard to say where this process starts. However, the relation of the two is based on their continuous interaction, which Piaget (1960) depicts through the concepts of assimilation, accommodation and adaptation⁵. Precisely these processes can be said to form the basis for the identification of the man with the space he lives in. The identification, Kučan (1996: 1) notes, “has its ontological roots in what Heidegger understands as residing – a process by which people change the places they live in into their homes, which is based, at least partially, on the sensory experience of the world.” Through residing, or even a short dwelling at a place, it becomes a part of a person’s identity, which applies simultaneously to diverse spatial levels – from a room to a state. John Donat (1967: 9, cit. by Relph, 1976: 29) holds the same opinion, and this notion is, Relph believes, crucial for the understanding of the concept of space itself:

Places occur at all levels of identity, my place, your place, street, community, town, county, region, country and continent, but places never conform to tidy hierarchies of classification. They all overlap and interpenetrate one another and are wide open to a variety of interpretation.

⁵ Piaget depicts the ‘communication’ between the man and the environment through the abovementioned concepts. He uses the term ‘assimilation’ to describe the effects an organism has on the surrounding objects and claims: “. . . every relation between a living being and its environment has this particular characteristic: the former, instead of submitting passively to the latter, modifies it by imposing on it a certain structure of its own.” (Piaget, 1960: 7–8). ‘Accommodation’, on the other hand, is the effect of the environment onto an organism, Piaget (1960: 8) says, “. . . it being understood that the individual never suffers the impact of surrounding stimuli as such, but they simply modify the assimilatory cycle by accommodating him to themselves”. Lastly, he defines ‘adaptation’ “as an equilibrium between the action of the organism on the environment and vice versa.” (Piaget, 1960: 7).

Taking into account the aforementioned intertwinement of interior and exterior space, landscape can be said to exist within all these levels to a certain extent, thus forming a significant part of the identity of both an individual and a society. Therefore, identity is manifested at various levels, from a personal to collective and from a local to national level, and perhaps beyond. Landscape thereby holds a significant position in the minds of people living in it. It does not only present a mere physical space in which individuals and society make their living, but appears as a mental construct – a symbol – which occurred as a result of attributing special significance to certain landscape characteristics, as it is often noted in the literature (Cosgrove and Daniels, 1989; Kučan, 1996; Ndubisi, 2002; Nogué and Vicente, 2004).

The knowledge that the human experience of each environment, including that of landscape, is polyvalent in sensory terms, is therefore not new. The subject debate is therefore based on the concept of multisensoriality, according to which the current experience of a landscape is always constituted as a combination of sensory information received from various areas of sensory modality. However, it is important to note that, despite the always present uncertainties of the wider scientific community regarding the number and types of senses, this thesis observes the landscape in terms of five traditional human senses⁶ – sight, hearing, smell, touch and taste. A passing reference might be made to other senses as well, in terms of additional explanations or if these have occurred in the research process. Besides the physiognomy of landscape – the layout of relief, vegetation, water areas, inhabited areas and other structures, and their spatial distribution, other sensory landscape characteristics – primarily auditory, olfactory, tactile and gustatory⁷ – are a distinctive characteristic of a landscape as well, and this assumption has been taken as the starting point for the research. The research will try to reveal whether these sensory aspects are present in everyday human experience and perception of landscape, and whether people distinguish among landscapes based on their non-visual characteristics. This doctoral thesis represents a search for sounds, smells, tactile sensations and tastes that complement the visual experience of a landscape and analyses the role of individual senses (i.e. sensory characteristics perceived by them) in shaping the identity of a landscape.

1.1 FRAMEWORK FOR THE OPERATIONALISATION OF THE WORK TASK

The starting step in planning the research on non-visual landscape identity is the introducing of the issue to be researched, which is followed by the defining of work hypotheses and finally the setting of objectives. In addition, the work framework allows an insight into the methodological approach through the overview of selected methods. In

⁶ The term *traditional* is used here in the sense of the division of human senses provided by the famous Greek philosopher Aristotle, which was generally accepted and used until recently (Keeley, 2011), whereas nowadays it is considered incomplete (Gibson, 1966: 48).

⁷ It should be noted that the focus of attention lies on those landscape characteristics within the reach of human senses, for there are visual, auditory, olfactory, tactile, gustatory and various other landscape phenomena that the man is not able to perceive due to the lack of a relevant sense or because these do not reach the lower limit required to stimulate a sense. Landscapes are distinguished by such phenomena as well, but in terms of everyday experience these are non-perceptible to the man and are therefore not relevant here.

order to concretize the researched subject, the research itself shall be conducted in the form of a case study, with the Croatian region of Dalmatia as the selected test area.

1.1.1 Research starting point

Primary, fundamental understanding of a place arises from dwelling, being in it. Being-in-the-world, the notion introduced by Heidegger (1988), is a prerequisite of any sensory experience of oneself in the world and the world around oneself. To experience a place means to feel it through a layered matrix of vistas, sounds, smells, tactile sensations and tastes, and often other sensations as well.⁸ Therefore, Hough's (1990: 5) claim that the "understanding of places begins with feelings" seems a reasonable starting point for the discussion on landscape perception.

The often mentioned dominance of the visual⁹, particularly strong in Western culture, greatly hinders a more complete understanding of landscape and, consequently, the planning, formation, management, usage and preservation of landscape values. For such a long time has the sight been the most significant form in gaining the knowledge of the world, that the ability to perceive with other sensory mechanisms seems to be stunted or has simply become less necessary, secondary. However, man is constantly surrounded by a rather vast array of stimuli and information, so that other senses just need to be revived, and the identification and evaluation of non-visual environmental signs 'relearned'. The significance attributed to the sight is manifested, among other things, in various definitions of the term landscape, most of which relate to visible forms of space and visible manifestations of various processes in landscape. Though correct, such a description of landscape is far from complete, for it does not cover – and therefore does not evaluate – a variety of non-visual components immanent in landscape and more or less permanently present in it. Both in related researches and scientific and professional literature they are still relatively rarely dealt with. To sum up, both in theory and practice landscape is generally considered as 'what we see in the open space'.

Though the multimodal character of the environmental perception is well-known and accepted, more detailed conclusions on sensory characteristics, their role in the overall impression, their quantity and the patterns and time of occurrence in an area, sources generating them, the impact on the evaluation of an area (especially its characteristics), etc. are limited. Consequently, the concept of place identity is still limited to the visual field, and the syntagm itself is often identified with the notion of visual identity. Precisely this fact represents the fundamental starting point for this research. Though the awareness that sounds, smells, tactile sensations and tastes might be significant distinguishing characteristics of a certain area is discernible in some subject-related works (Hough, 1990;

⁸ Alongside the usually considered five senses, there is a number of other ways people perceive and react to the environment, Tuan (1990: 6) claims, such as persons who are extremely sensitive to humidity or atmospheric pressure.

⁹ The preference of visual perception over other senses, or as some call it – ocularcentrism, characteristic especially of Western culture, has been emphasized in literature, mostly in the field of cultural anthropology and ethnology, but in other branches of science as well (Borthwick, 2000; Classen, 1990, 1997; Everett, 2008; Lefebvre, 1991; Macpherson, 2006; Pallasmaa, 2005; Paterson, 2007, 2009; Rodaway, 1994; Sui, 2000; Tuan, 1990; Turin, 2007).

O'connor, 2008; Schafer, 1994), none of them aims at systematically researching them as dimensions of place identity. Humboldt's definition of landscape as the overall character of a region opens the door for the extension of landscape and landscape identity issue to auditory, olfactory, tactile and gustatory aspects.

Already the definition of sensory landscape identity itself, according to which it consists of at least five categories, determines it as complex. The complexity of sensory identity can be observed in two directions: horizontally and vertically. In horizontal sense, the complexity presupposes the diversity of characteristics within one sensory category (e.g. various landscape sounds, both natural and anthropogenic, belong to the auditory category). Vertical complexity can be understood as a cross-section of all categories together, that is the total diversity of landscape stimuli. It is difficult to determine sensory complexity of Dalmatian landscape, since there are no reference values to compare with (e.g. sensory complexity for other landscapes). Nevertheless, this thesis aims at analysing sensory diversity of landscape that could be used as a basis for comparison with similar research of other areas.

The man and the landscape are interconnected both on existential and psychological level. The connection is multi-layered and reciprocal, so that one shapes the other (Kučan, 1996). People leave their trace in landscape and landscape is at the same time the reflection of the society inhabiting it. Just like in the case of building a relationship with another person, people come to know the landscape, get closer to it, live with it (in it) and, through all this, identify themselves with it. Hence, landscape becomes an integral component of man's identity. The identification with space is a phenomenon occurring simultaneously on the individual and collective level, and is realised in the form of a mental image which includes both oneself (an individual – *I* and the society – *we*) and space. Thereupon, social perception is not a mere sum of individual perceptions, but rather the product of their filtering and integrating into a new common construct. Furthermore, it is never definite, but should be understood as a cross-section in a continuous process, dependant on the current cultural and technological level of a society's development.

Social perception of space, as Kučan (1996) has shown, is not based on space as a whole (e.g. national, regional, local), but is composed of individual regions, areas and landscape characteristics to which special meaning is attributed. Starting from the assumption that people recognize and value landscape through all sensory modalities, and that within each of them there are characteristics acting as identifiers of the Dalmatian region, the central work task of this thesis is to come to understand whether social perception of landscape is affected by non-visual landscape characteristics as well.

The research into the role of auditory, olfactory, tactile and gustatory landscape components in the perception of the identity of Dalmatia aims at inciting a broader way of thinking about landscape, especially in professions closely related to it. Conclusions about the sensory structure of landscape and landscape identity, set in the context of practical requirements and decisions in landscape planning and design, should indicate whether the concept of landscape values and environmental aesthetics are to be redefined. Though it is known that perception of space is simultaneously multimodal, the idea of landscape aesthetics is reduced to impressions created by scenes and vistas. Therefore, methods

commonly used in the assessment and measurement of aesthetic preferences in landscape, in order to define its qualities, preserve valuable areas or make design decisions, largely refer to criteria for the evaluation of visible spatial forms (Ndubisi, 2002). Such a reduction of landscape, according to Hough (1990), undoubtedly disregards passing, momentary phenomena which, in fact, strongly affect overall experience.

This research is closer to humanistic approach, which is essentially phenomenologically oriented. The focus, therefore, lies with subjective experience of landscape and the meanings that landscape, its elements and its characteristics carry for an individual and a group, with the aim of comprehending how human beings connect and identify themselves through individual sensory modalities with landscape and evaluate it.

1.1.2 Research area

For the research of sensory landscape identity, the Dalmatia region was chosen. It is the Mediterranean part of Croatia, situated on the central eastern Adriatic coast. It is an area with very distinctive regional identity within Croatia and, in terms of tourism, one of the most interesting and vital regions. The characteristics of Dalmatian landscape are a frequent subject in everyday communication of its inhabitants: they comment on the weather, the heat, landscape beauty and the like. They are also often mentioned in the media, in TV or radio commercials and are common elements of Dalmatian folk and pop songs. All this creates the impression of landscape diversity of Dalmatia and a remarkable attachment of the local people to their environment through all sensory modalities. It arises from the specific geographical and climatic conditions of the locale and translates into a recognisable lifestyle, inherent, as Radica (1971) and Mišetić (1997) point out, to Dalmatians as well as to people of other Mediterranean regions, especially those living by the sea. Radica (1971: 50–51) captured the essence of such living in the following words: “Sunny winter afternoons turn the entire Mediterranean coast into a great terrace, where people discuss, protest, build, and destroy, but mostly lament and complain. The sun, which kills these nations in summer, gives them strength and hope in winter.”

The identity of a region, in addition to national and local identity, is one of elementary levels of place identity, and perhaps the major basis on which landscape determines inner homogeneity on the one and comparative difference on the other side.¹⁰ Dalmatian identity belongs to most powerful regional identities of Croatia, which largely results precisely from the specificity of the area. The man has learned to live with and within possibilities and limitations imposed by nature by intervening in space and creating a cultural landscape. The interesting and appealing in cultural landscape largely depends on the vernacular – everything that resulted from everyday lives of ordinary people, their existential needs, behaviour and socialising, believes Hough (1990). The long present

¹⁰ National space can spread across more regions differing in their geography and landscape. At the same time, individual sites within a geographically homogeneous region will differ less in the natural landscape features, and probably more in cultural and other factors which contribute to the development of local specificities. This, however, is not true of regions with abstract boundaries not visible in space (administrative, economic, etc.). In terms of the adequacy of the regional level in space and landscape planning, Lyle (1985: 45) concluded: “At higher levels than the region, details are lost and the landscape becomes an abstraction, whereas at lower levels, detail can obscure the larger picture.”

culture and tradition in Dalmatia are so intertwined with the natural landscape that these two characteristics are sometimes not easily separable. All sensory aspects of Dalmatian landscape are abundant in their uniqueness and diversity, resulting both from natural resources and cultural expressions.

Due to its geographic and cultural characteristics, Dalmatia is a tourism-oriented region. Thus, besides in the consciousness of its inhabitants, the identity of Dalmatia is also shaped in the consciousness of tourists. According to Casey (1993: xiii), human beings identify themselves with each place they come across: “. . . the place we occupy, however briefly – has everything to do with what and who we are (and finally, that we are).”

However, landscape perception of a tourist (visitor) is always somewhat different from the one of a local inhabitant (native). It is largely conditioned by the time factor – the more time someone spends at a certain place, the better they get to know it and gradually develop emotional ties (either positive or negative) towards it. Accordingly, natives have deeper knowledge of the landscape of the region they live in. They have gotten to know it in all its manifestations, all seasons, under various weather conditions and through the prism of undertaking various activities within it – hence, they possess the knowledge that could hardly be acquired through a short sojourn. Therefore, they do not comprehend the landscape as the environment experienced in a single day or a week, but as a dynamic, changeable whole. Their current experience is always immersed into a considerably wider and more permanent context of landscape values and meanings. In Hough's (1990: 18) words: “The markers, reference points, boundaries, and other symbols of everyday experience may be unseen or not understood by outsiders. But for those who live there these things are what gives a place its meaning and relevance.” One of the questions this thesis poses refers to the identification of landscape characteristics determining landscape identity of Dalmatia as seen from the perspective of local people and of tourists, and to what extent (if at all) do these two perspectives coincide. Characteristics identified by both groups can be considered the strongest elements in the identity of the region and thus indicate which elements should be preserved and emphasized in tourism promotion.

1.1.3 Research hypotheses

The very essence of landscape identity lies in the distinctiveness of landscape characteristics that distinguish it from other landscapes, and even more importantly, in the unique combination of those characteristics. Relative continuity of landscape characteristics is yet another significant factor. However, it does not necessarily imply their constant presence in landscape, for they can be manifested in landscape in a regular cyclic pattern. In the time of advanced communication possibilities and increasing globalisation, unlimited supply and availability of goods and services, as well as of space,¹¹ the search for uniqueness and identity have been increasing in importance. As Hough (1990: 19) indicated, contemporary cities, as well as the old ones that are experiencing exceeding developing since the 20th century, are the most obvious examples of globalisation and the

¹¹ Due to contemporary transportation means that have been allowing travel at relatively affordable prices for some time now and today's way of life in which everyday travel both for business and private purposes is not rare, people are nowadays generally given a greater opportunity to meet new, different places.

‘loss’ of identity, but its influence can be felt even in the regional landscape. Thus, the issue of identity has always been equally topical in social studies.

Hypothetical framework of the thesis is built around following assumptions:

- **first**, that landscape identity is, in addition to visual, generally composed of auditory, olfactory, tactile and gustatory characteristics of a place,
- **second**, that the landscape of Dalmatia is perceived as diverse in terms of sensory characteristics,
- **third**, that various non-visual qualities contribute to the overall perception of space and affect the sense of place, and
- **fourth**, that the notion of Dalmatian landscape is based on visual as well as non-visual characteristics both for local people and for visitors. Although the basic characteristics in perception of the region between the two groups are expected to be congruent, some differences might occur primarily in the perception of finer layers of landscape structure, which are usually detected only if living in or very frequently visiting the place.

The basic hypothesis this thesis is centred around is that landscape identity, its diversity and uniqueness are apparent not only in material, visible elements, but can also be manifested in distinctive sounds, smells, tactile sensations and tastes. There can happen, of course, that one or more landscape characteristics, belonging to a certain perceptual area, are dominant, but landscape identity can be, and very often is, a multidimensional phenomenon based on impressions arising from a combination of various characteristics of the environment. In other words, visual specificities of an area are just one component of its landscape identity, alongside auditory, olfactory, tactile and gustatory characteristics.

It is widely accepted nowadays that human experience of a place or landscape has a holistic character; at any given moment it is made up of individual impressions from different sensory spheres, interwoven into a unique experience. The following hypothesis is based on the belief that non-visual landscape characteristics are present to a considerable extent in the overall experience of Dalmatia, and thus greatly contribute to the distinctive sense of place, both of its local inhabitants and visitors, and are a distinct component of the place attachment.

1.1.4 Research objectives

The main objective of this research is to determine whether sensory landscape identity exists as phenomenon at all, that is, whether properties such as sounds, smells, tactile sensations and tastes participate in the creation of landscape identity. In the chosen area of Dalmatia it shall be explored which sensory modalities constitute regional landscape identity and to which extent. In that context, answers to the following shall be sought:

- whether the landscape of Dalmatia is sensorially diverse, more specifically, whether this diversity is manifested across all sensory modalities (i.e. vertically) as well as within a single modality (i.e. horizontally; for instance, diversity of characteristics within the auditory realm)

- to what extent specific sounds, smells, tactile sensations and tastes complement the overall experience of Dalmatia, do they affect the sense of place and the overall conception of Dalmatia,
- which particular sounds, smells, tactile sensations and tastes are integrated into the landscape identity of the region, and
- is the notion of Dalmatia of both local people and visitors built on visual and non-visual features and similar landscape properties, or do visitors, due to the time factor, perceive Dalmatia through different set of landscape characteristics (perhaps more visual).

The analysis of (the perception of) Dalmatian landscape shall arrive at conclusions about the selected research area, though some of the obtained results may refer to general conceptions about sensory landscape identity. In this regard, an important aim set by this thesis is to provide a ground for the redefinition of the concept of landscape (and place) identity, which shall consequently define it as a multisensory phenomenon. Should the hypothesis be confirmed, thus gained knowledge should change the understanding of landscape identity and possibly direct further research toward characteristic experiential categories of landscape on one side and a comprehensive observation of identity on the other.

1.1.4.1 The applicability of the obtained results

Conclusions and knowledge thus gained can be applied in various areas of human life and activity. This primarily refers to landscape design, within which activities could be directed by the knowledge of sensory qualities towards a more intuitive sensory design, but also give a new dimension to landscape planning. Furthermore, the awareness of typical characteristics of a certain landscape would be reflected in the approach to nature and environment protection as well, possibly introducing new criteria into decision making in this field. One of the most obvious applications refers to tourism sector, in terms of destination branding and promotion, creating the image of an area, which can contribute to the economic development of a region. In addition, the fact that many landscape characteristics might have a healing and relaxing effect on humans should not be disregarded. Natural environment provides infinite benefits to people, Polič (2007) notes; attractive in itself, natural environment allows distancing from everyday life and duties, invigorates and relaxes. Due to therapeutic character of their landscape, some areas are recommended for recovery from stress, allergies, respiratory and heart diseases and other health problems, and this kind of ‘recovery’ is known as climatotherapy. In addition to such a direct influence of landscape to the psychophysical condition of a person, there are other, less direct mechanisms through which benefits are obtained – various natural concoction, products and devices with integrated natural elements.

1.1.5 Methodological approach

In the empirical section of the thesis an eclectic approach to the research problem has been taken, whereat quantitative and qualitative methods have been combined, which – both individually and conjointly – focus on the following three basic questions: 1) are there any non-visual characteristics of Dalmatian landscape which act as landscape symbols of the

regional identity; 2) to which extent do these shape the social conception of Dalmatia and 3) which sensory characteristics (sights, sounds, smells, tactile sensations and tastes) have the strongest connection to the Dalmatian region in the collective consciousness.

The research aims at deepening the understanding of the sensorially multi-layered interdependence between the man (both as an individual and as a society) and the physical environment by investigating through which sensory landscape dimensions the collective place identity and place attachment are achieved. The research on the phenomenon of sensory landscape identity presupposes gaining an insight into subjective sensory experiences, starting from an individual as a member and representative of a group. Thus, the research subject is the social conception of landscape rather than 'objective' landscape elements and characteristics. The focus on perception – both as a sensory and cognitive process – places the research, in methodological terms, somewhere between phenomenology and social studies.

Since non-visual sensory aspects of landscape identity have been scarcely researched hitherto, most appropriate methods within this area are yet to be defined, which allows freedom but at the same time poses a challenge. The empirical section of the thesis has included three distinct methods representing individual studies that continue and complement one another.

The research commences with a survey questionnaire, conducted so as to identify the characteristics upon which the relation between the landscape of Dalmatia and the regional identity is built in the current social consciousness. The questionnaire is followed by fieldwork (sensory walk), through which shares of individual perceptual modalities in the direct experience of landscape (i.e. of the modal structure of environment experience) are determined, and perceived characteristics are evaluated with regard to their typicality. The final step is content analysis, through which the presentation and concept of Dalmatian landscape are further investigated within two chosen types of social communication - promotional tourist materials and lyric poetry. The research has thus been integrated into a well-known scientific methodology, but certain procedures had to be adjusted to meet the specific needs of the task.

1.1.5.1 The questionnaire

The questionnaire has been used here as one of the two methods employed in the direct investigation of the current social conception regarding the researched subject matter. It is primarily intended as a means of determining the extent to which each of the five observed sensory modalities shape the concept of regional space. Further, vistas, sounds, smells, tactile sensations and tastes that are perceived as distinctive symbols of Dalmatia are identified in the endeavour to define the structure of the landscape identity and the significance of individual landscape characteristics in the social value system. In addition, the questionnaire seeks to further determine whether there were any (and if so, what kind of) differences in the way Dalmatian landscape is perceived by local inhabitants (i.e. those either born or living in Dalmatia for a long time) and visitors as well as whether the perception and evaluation of typical landscape characteristics of the latter group is

influenced by the frequency of their visits to Dalmatia. The questionnaire results may be useful in the preparation and implementation of the two following methods.

1.1.5.2 Sensory walk

Sensory walk is a fieldwork method used to investigate the sensory character of an everyday bodily experience of the physical environment gained through walking. It is carried out in a variety of forms and contexts, but in general it involves a group of people describing or noting down their sensory impressions of the environment during and/or after a visit to a chosen location. The method appeared in the 1970s, just when the interest for ecological perception was on the rise, and perceptual geography, humanistic and phenomenological approach to sensory and cognitive human experience of the environment emerged. Henshaw, Adams, and Cox (2009) believe that it stems from the feminist and ecological epistemology and has developed as a primarily qualitative method. R.M. Schafer, who introduced and applied the concept of soundwalking as a means of exploring soundscapes (Schafer, 1994), is considered the pioneer in this type of fieldwork.

Here, sensory walk has been adjusted so as to meet the specific requirements of the research task. It has involved participants' walk over chosen locations of typically Dalmatian landscape, during which they noted down their observations through all sensory modalities. In contrast to the questionnaire, which calls for the recollection of impressions about landscape, here the subject matter is the direct perception of landscape and the evaluation of the identity (the typicality of characteristics) *in situ*. The method is utilised for the following purposes: (1) to determine features of Dalmatian landscape identity and compare the results with the results of the remaining two methods; (2) to investigate the share of each individual modality in the direct perception of landscape; and (3) to test whether the method can be applied in the research of (sensory dimensions of) landscape identity, for the method has not been used with this aim thus far.

1.1.5.3 Content analysis

In the interest of understanding how the society apprehends landscape, it is useful to look at some areas of social creation. Unlike the previously mentioned methods, which directly investigate into attitudes toward the research subject matter, the review of certain products of human creation allows an insight into the 'non-stimulated', spontaneously expressed social conception of a particular phenomenon. The search for visual landscape identity, understandably, relies on various forms of visual communication, as Kučan (1996) has shown in the research into the visual landscape identity of Slovenia. In the system of visual communications (pictures, photographs, posters, postcards, brochures, book illustrations, television commercials, etc.) usually those characteristics are used that are typical of a particular area; which make it distinguishable, with which people easily identify and which represent them as a group. However, visual media rarely convey impressions of non-visual nature, although these may be present in a suggestive, synaesthetic way (e.g. an image of lavender can trigger olfactory associations, that of a Dalmatian *klapa* or the sea acoustic associations, etc.).

Verbal expressions, both written and oral, are more appropriate for an indirect illustration of sounds, smells, tactile sensations and tastes¹². Just like visual motifs which are dominant or significant for a certain area are used in the visual presentation thereof, it is only logical to assume that textual descriptions of an area contain its typical characteristics as well, however from all sensory modalities. Precisely for this reason shall two forms of textual content be analysed in the thesis: promotional (mostly tourist) materials and Dalmatian regional poetry. The very nature of tourism advertising implies the promotion of a destination. Regional poetry on the other hand reflects intimate experiences of those emotionally attached to a region. These media reveal a mosaic of landscape characteristics that have been filtered through the society's thought and become symbols of the region.

Content analysis seeks to examine the share of non-visual landscape characteristics in experiencing and presenting Dalmatia, whereas the detection of most numerous characteristics or types of characteristics shall additionally substantiate which characteristics form the landscape identity. A cross section of the results of the above three methods shall reveal roles of individual modalities in the perception of Dalmatia as well as most prominent symbols of its identity.

1.1.5.4 Difficulties in the research into non-visual landscape characteristics

Conducting a research into non-visual landscape characteristics and perception thereof means facing problems usually not found (or found, however to a significantly lesser extent) in researches into the perception of visible characteristics. The visible environment can be measured, defined and objectified more easily, in the process of which photographs, maps, satellite images, orthophotographs, site plans and field data are useful. However, it is more difficult to measure and classify invisible aspects of the physical environment. Investigation of experiences of these aspects is faced with the same challenge.

Sounds, smells, tactile sensations and even tastes are in essence ephemeral, transient and elusive. They occur occasionally in space and often depend on current conditions. Due to their inconsistent nature, their presence, type (character), (micro-)location, quantity, intensity, duration and other characteristics constantly change at one and the same place, thus making their detection, measurement, identification and systematization more difficult.

Non-directed (non-conscious) perception of certain aspects of the environment or taken-for-grantedness poses yet another problem. In everyday life, in which many actions and interactions are a daily routine (Seamon, 2012c), human perception is selective and consciously registers only a part of environmental stimuli. Non-directed attention seems to

¹² In his perception theory, Gibson (1986: 147) distinguished between direct and mediated perception. The first, he illustratively explains, is seeing Niagara Falls and the latter seeing a picture of the falls. In this sense, textual descriptions of sensory experiences represent mediated perception: direct perception would be *hearing* a sound, *inhaling* a smell, *feeling* a texture or temperature etc. However, it should be noted that pictures, photographs, sketches and similar are, though mediated perception (a reproduction of reality), in a sense, more direct, realistic than texts (Barthes, 1990, cit. by Kučan, 1996: 76). Looking at a photograph, one does not see the photograph but what it represents, Kučan concludes (1996: 77) from Barthes' discussion on photographs (cf. Warren, 2012: 112).

be especially pronounced in non-visual modes of perception. Directing perception is a skill to be learned (van Ede, 2009: 65; Gordon, 2004: 156), so that humans are, especially in Western, ocularcentric culture, better ‘trained’ at looking than listening, smelling, feeling through skin and tasting, relying primarily on sight in the everyday usage of space. The aforementioned fact that visible space elements are less changeable and transient probably contributes to it, so that they act as a sort of spatial constants.

In the culture in which the concept of space is mostly understood through the prism of sight, reminding the research participants in advance to include all senses is crucial in conducting a research of non-visual landscape character. This requires caution in drawing the research design so as to avoid suggestiveness.

Technological possibilities for measuring and gathering actual spatial data on the visible environment are far more numerous and accurate than those for recording sounds, smells, tactile sensations in the environment and especially tastes, which are, in the sense of environmental information, least available and most intimate. Henshaw et al. (2009) have mentioned the problem of measurement, quantification and qualification of smells as well: “Electronic olfactory recording devices lack the range and sophistication of the human nose”, which can distinguish among over 10000 smells, as Laura López-Mascaraque (Grup de Recerca en Epistemologia i Ciències Cognitives, 2013) notes. This is why, as Henshaw et al. point out, there have rarely been any investigations into smell throughout history. Studying non-visual characteristics of landscape is difficult or even impossible to support by media that could be used as a source of information or supporting (secondary) data, unlike with photographs, various images (e.g. satellite) and maps, which can be used to read and document the condition and changes of visual landscape characteristics.

Difficulties related to the detection and measurement of non-visual landscape characteristics have resulted in the need to develop and take a humanistic, phenomenological and sociological approach and related methods, in which the man and their senses are still the most accurate instrument.

1.2 THESIS STRUCTURE

The thesis consists of six main sections. In the introduction, the research topic, the research starting points, the hypotheses, the objectives and the researched area are defined and the selected methodology briefly set forth.

As a second section, conceptual framework provides a theoretical ground and an insight into the standpoint taken with regard to the subject-relevant terms and concepts, such as landscape and perception. The fundamental theoretical theses, necessary to understand the phenomenology of landscape in the context of sensory experiences and place identity, have been introduced here. It also includes important recent findings on (individually) auditory, olfactory, tactile and gustatory perception of the environment, and a brief overview of relevant knowledge on concepts such as place identity, place attachment, sense of place and topophilia, as well as a reference to the existing knowledge on non-visual landscape characteristics as integral elements of landscape identity.

The third section offers somewhat more detailed overview of the research area with the emphasis on its geographical characteristics. The fourth section, methodology, provides an explanation on why certain methods were selected and how they have been previously applied.

The next section is empirical, consisting of three individual but complementing methods. The results of all three research processes are presented, together with a discussions of method-specific issues. The research commences with a public opinion survey, which, apart from the share of individual senses in experiencing Dalmatian landscape, should provide a rough picture of the prevailing attitudes with regard to sensory properties of Dalmatian landscape. The field method called sensory walk follows it, with a primary aim to determine the share of non-visual perception in direct, immediate contact with the environment and the evaluation of typicality of certain experiences. Further, the content analysis of two selected types of materials – promotional materials and lyric poetry – is given. It looks into the individual shares of sensory modalities and certain landscape characteristics within them in these forms of social communication, indicating thereby their role not only in the experience but also in presentation of Dalmatia, thus revealing the elements of the regional landscape identity.

The final section comprises a final discussion of the overall three-part research process, the comparison between the results of applied methods, their advantages, shortcomings and possible improvements. The important findings are also put in context of some previous studies in the field. The conclusion summarises the most important findings and discusses implementation possibilities of the gained knowledge on sensory (primarily non-visual) characteristics of landscape. The role of non-visual characteristics is considered in the context of landscape design, landscape planning, development of regional identity and tourism and the possibilities for health tourism.

2 CONCEPTUAL FRAMEWORK FOR THE RESEARCH OF LANDSCAPE IDENTITY

In a broader sense, the thesis deals with place identity and related phenomena, such as place attachment and sense of place. Within this referential framework, in the focus of interest are landscape, landscape characteristics and values as well as landscape identity, seen through the prism of the selected five human senses. Theoretical and hypothetical hypotheses shall be concretized primarily through the analysis of non-visual landscape characteristics of Croatian Mediterranean region called Dalmatia. It is assumed that, if they are socially recognized as being a distinctive characteristic of a certain place and if they determine (to a certain extent) the *genius loci* of an area, then they present a part of its place identity and, as such, have their place in the semiotic system of the region.

In order to set a high-quality basis for the research of landscape identity, it is primarily necessary to define a clear and coherent terminology, which will direct the research right from the beginning, provide the guidelines and milestones. Some relevant concepts have, depending on the branch within which they are applied and a specific context, a wide range of meanings. It is therefore important to single out precisely the meaning that brings them into connection with the subject of this research. Thus, here shall be given a more detailed description of the selected point of view as well as the interrelation and the meaning of key terms – landscape, natural versus cultural landscape, perception and sensation – within the context of this thesis.

2.1 RESEARCH OBJECT: THE MEANING AND SCOPE OF THE TERM LANDSCAPE

The usage of the term *landscape* was not homogenous in the past. Even nowadays it can often be ambiguous and has diverse definitions and connotations. Though its etymology is complex, two of its usage changes have shown to be more conspicuous than others.

Jackson (1984) gives a relatively comprehensive overview of the usage of the word *landscape* throughout history.¹³ The word seems to be rather old and, as Jackson notes, its origins can be traced back to an old Indo-European idiom¹⁴ brought to Europe, where it was adopted in almost all modern (European) languages. It is a compound, formed of two components (syllables) – ‘land’ and ‘scape’, both of which have had several different meanings, some of which are long forgotten. In brief, the word ‘land’ denoted a (mostly agrarian), defined space that had borders: “. . . always implying a space defined by people, and one that could be described in legal terms” (Jackson, 1984: 6–7), whereas the second syllable *scape* stood for a composition of similar objects or an organisation, a system of certain spatial elements. Therefore Jackson (1984: 7) notes that the original meaning of the word landscape (in its various forms) might have described a sort of an organization or a

¹³ An interesting description of the concept of landscape is given by Ingegnoli (2002: 3–8) as well. He does not take the etymology of the word as the starting point, but explains the genesis and development of the concept that at different times was named differently in different cultures. The understanding of landscape as a mosaic of interconnected natural elements originates, Ingegnoli believes, from the early Holocene.

¹⁴ According to Jackson, the idiom comprises the components of the word ‘landscape’ and was brought to Europe from Asia thousands of years ago.

system of rural farm spaces, "... a small fraction of rural environment" and that it in most cases included the notion of an administrative entity – an area of jurisdiction or ownership (cf. Gregory et al., 2009: 409; cf. Tuan, 1990: 133), but it definitely had little in common with the present meaning of the word.

As the term was reintroduced into English language in the 16th century¹⁵, deriving from a Dutch painting style, it got a different meaning, so that it referred to a picture depicting landscape images, mostly natural or rural, whereas somewhat later it started to denote a direct view of an observer in real space (Green, 1996: 12; Gregory et al., 2009; Landscape, 2006). It was defined as "a portion of land which the eye can comprehend at a glance" (Jackson, 1984: 3). Thus, in contrast to the previous, primarily utilitarian meaning, aesthetic connotations were attached to the word. As Jackson (1984) notes, in this sense the term tightly interconnected two fields of human activity – landscape painting and landscape design (in the 18th century landscape gardening and later landscape architecture), which used to apply similar principles to achieve artistic impression, one in a two-dimensional and the other in a three-dimensional composition.

However, these two activities, as Jackson (1984: 4) further observes, started to diverge in the first half of the 20th century, changing, each in its respective domain, their approach to landscape, so that "... the two disciplines which once had a monopoly on the word – landscape architecture and landscape painting – have ceased to use it the way they did a few decades ago" This might be considered the second milestone in the development of the term 'landscape'. With the development of society, technology and new knowledge, it has gained multiple meanings and is being used more and more frequently in various disciplines dealing with the exterior space (e.g. geography, ecology, environmental psychology, urbanism and regional planning, landscape architecture etc.). Each research on landscape further transforms the meaning of the word, leaving a new layer of cultural representation (Cosgrove and Daniels, 1989).

It seems that semantic dilemmas over the term 'landscape' have been on the rise lately. Seen from the etymological point of view, the term has been developing continuously since the time it denoted a collection and organization of agrarian entities to a picture depicting landscape images or an image itself. In the 20th century, the scope of the term increasingly started to go out of the visual sphere and encompass a whole spectrum of landscape aspects, material and immaterial, visible and non-visible, from natural phenomena to social processes, thus in fact indicating a complex system of natural and man-shaped open environment.¹⁶ Jackson (1984: 4) is not the only one who points out with disapprobation

¹⁵ "The English word landscape is a borrowing of the Middle Dutch word *lantscap*, Modern Dutch *landschap*, which in turn derives from the common Germanic *land* and the suffix *schap* meaning 'constitution, condition', while both the Old English *landscipe* and the Old High German *lantscap* had the connotation of 'region, tract'. Specifically the Old High German *lantscap* became in Modern German *Landschaft*; the Middle Dutch *lantscap* became in Modern Dutch *landschap*; the Old English *landscipe* became in the 16. century *landskip*; in the 17. century *lantskip* and now *landscape*." (Makhzoumi and Pungetti, 1999a: 3)

¹⁶ The usage of the term for the common designation of the appearance and character of a landscape did not emerge in the 20th century. On the contrary, it had developed gradually up until the late 18th century and during the 19th century, partly due to industrialisation and increased urbanisation (Ingegnoli, 2002), whereas in the last one hundred years it has experienced a boom. Ecology gave the initial impetus to it, and since 1940 especially landscape ecology – one of the recently arisen scientific disciplines in the area, which emerged as

that the usage of the syllable *scape* “. . . as if [it] meant a space, which it does not . . .” has led to the creation of a variety of new terms (e.g. roadscape, townscape, cityscape, seascape) that endeavour to define specific types of open space (cf. Azaryahu, 2000: 104). Moreover, in addition to the literal meaning, which is often insufficiently precise and variable, a number of metaphorical meanings has been formed (e.g. political landscape, landscape of dreams, landscape of thought), whose usage Jackson considers inappropriate, for he sees landscape as a concrete, three dimensional reality.¹⁷ However, figurative usage is not necessarily bad; it certainly does not deprive a term of its literal meaning or degrades it. On the contrary, a metaphorical usage can contribute, on many different levels, to the better understanding of the literal meaning of a word and help reveal its complexity, for the usage of a term, regardless of its form or context it is used in, implies the understanding of its literal meaning at the least. Moreover, composing new terms based on the original term ‘landscape’, though possibly questionable in the linguistic sense, has proven to be very useful in practice. Namely, by combining a word with the suffix *-scape*, various compounds have been formed, thus identifying various types (wildscape, farmscape, streetscape) or character (soundscape, smellscape) of a landscape with a single word, the description of which would otherwise in most cases require more than one word. In this sense, landscape could even be considered an umbrella term, covering all types and aspects of open space.

The search for a clear definition is often induced by the intertwinement or even identification with similar terms (e.g. space, environment, surroundings, area, country or countryside, terrain, scenery, topography, nature and some other terms)¹⁸, which is closely connected with the problem of diverse definitions the term ‘landscape’ has in different disciplines. For instance, the term ‘environment’¹⁹ can be conveniently used to explain landscape as a totality of organisms, phenomena and processes, but is not entirely suitable. Namely, the scope of the term environment is somewhat wider, so that it can refer not only to exterior but also to interior space (e.g. hospital environment), and, as Brantz (2007) notes, in terms of human environment it is sometimes associated with the concept of milieu or circumstances, which carries rather social than physical (spatial) connotations. Landscape, on the other hand, explicitly suggests an open environment. Similar might be said for the term ‘surroundings’. Some of the other aforementioned terms only refer to a part of land surface, namely only to the visible aspect thereof (e.g. terrain or scenery). Many studies represent landscape precisely this way – as a visible reflection of natural and/or social processes in space (Brantz, 2007; Cosgrove and Daniels, 1989; Jackson,

a result of the aspiration to unite central ideas of two disciplines – spatial structures as elements of geography and natural processes as elements of ecology (Burel and Baudry, 2003: 6; Farina, 2006: 1) and biology respectively (Zonneveld, 2005: 331).

¹⁷ In metaphorical sense, he claims, “. . . *landscape* serves the same useful purpose as do the words *climate* or *atmosphere* . . .” (1984: 4). While recognizing the necessity of having a term that would indicate the type of environment, surroundings or circumstances or the background of events, abstract processes and relationships and which would give them a tinge of reality, he however believes that the word should not be used to describe a private world – one’s own microcosm.

¹⁸ The main differences in the scope and usage contexts of the above terms can be compared in *Oxford Learner’s Thesaurus: A dictionary of synonyms* (Lea et al., 2008). The meanings of some of these have changed over time (Tuan, 1990: 132–133).

¹⁹ “The term environment, which derives from French ‘environ’ (meaning ‘to surround’), captures the physical phenomena that surround a living organism.” (Brantz, 2007: 201).

1984; Makhzoumi and Pungetti, 1999a; Nogué and Vicente, 2004). However, it is important to realize that landscape does not merely represent the visual quality of space (beautiful, picturesque, etc.). Landscape is a(n) (exterior) space.

Despite the presence of a large number of terms, 'landscape' has been widely used, but not as a substitute for other terms, for its scope implies many aspects that other terms lack in order to describe the layered system of exterior space. This holistic understanding of landscape has its roots, among other things, in its etymological genesis:

Originally, the term 'landscape' referred primarily to the workaday world, to an estate or a domain. From the sixteenth century on, particularly in the Netherlands and in England, landscape acquired more and more of an aesthetic meaning; it became a genre of art. Limited to the functional or utilitarian perspective, the concept of 'landscape' is redundant since the more precise terms of estate and region already exist. Limited to the aesthetic perspective, 'landscape' is again redundant since the word 'scenery' offers greater clarity. But we do have the word 'landscape' in addition to the other terms, and it is being used because we have learned to recognize a special ordering of reality for which a special word is needed (Tuan, 1979: 90).

Indeed, in certain contexts only the term *landscape* concretizes the fundamental idea, which can be well illustrated/demonstrated by an example from geography. Namely, when Rodaway (1994) talks about the sensory experience of exterior space, he calls it 'geographical experience', thus suggesting a geographical space as the object of experience, though it actually refers, as Rodaway himself notes as well, to the experience of landscape – the central subject in geographical researches. Although there is nothing necessarily incorrect with the above syntagm, it would be far more logical to name it *landscape experience*. The 'special' word which Tuan refers to, has been made a common platform for a number of scientific and technical disciplines, ranging from natural to social (geobotanics, geoecology, ecology, geography, ecological psychology, environmental aesthetics, landscape architecture and planning, etc.). Each of them has contributed, within the given scientific framework, to the better understanding of individual landscape components from a certain perspective. Notwithstanding the definition still given in many dictionaries – landscape as a view or a landform – the term has implied the synergy of various characteristics of an exterior environment for quite a long time²⁰ – both visible (material) characteristics and phenomena, processes, organisms and occurrences present in it, either permanently or temporarily (Farina, 2006; Forman and Godron, 1986; Green, 1996; Ingegnoli, 2002: 3; Wiens, 2005: 366). The redefinition of the word landscape therefore seems to be taking precisely that direction – the integration of all aspects and denotation of a dynamic, living landscape. However, the inconsistency between the interpretation and usage of the term *landscape* can still be found both among disciplines and within them (Farina, 2006; Forman and Godron, 1986; Ingegnoli, 2002: 3).²¹ As

²⁰ As opposed to interior space, built or natural (e.g. a cave).

²¹ Discrepancies in the interpretation of the term do not vary only through disciplines and over time, but also from country to country. In North America the emphasis is on natural, pristine areas, whereas in other countries (e.g. Great Britain) it often implies a synthesis of natural and human elements (Green, 1996: 14; Jackson, 1984: 5; Lewis, 1979: 11–12).

Jackson (1984: 3) states, “[t]he word is simple enough, and it refers to something which we think we understand; and yet to each of us it seems to mean something different.”

Given the large number of different perspectives, devising a unique, scientifically utilizable formula seems quite a challenge (if possible at all). “Landscape, like culture, is elusive”, Tuan (1990: 89) remarks, “and difficult to describe in a phrase.” What is needed is a definition that is flexible and broad enough to enable observing a chosen segment (aspect) of landscape as an element of a complex mechanism, within the common framework. Interestingly, the breadth the contemporary usage of the term requires is best depicted by the first scientific definition of the concept of landscape (*Landschaft*) – the one given approximately 170 years ago by the German geographer Alexander von Humboldt, who said that landscape is the overall character of a region²² – *Der Totalcharakter einer Erdgegend* (Farina, 2006: 1; Ingegnoli, 2002: 7–8; Solon, 2005: 11; Wiens, 2005: 366), “meaning both the perceptive and the natural aspects”, as Ingegnoli explains (2002: 8).²³ Unlike many other definitions, this one is general enough to encompass all aspects of landscape.

However, suggesting a general definition of landscape is neither the aim nor the objective of this thesis – the above conclusions represent a semantic framework for the subject research.

2.1.1 Natural and cultural landscape

One of the fundamental dichotomies in landscape researches, which emerged due to the broader application of the term in the last hundred years, is the one between natural and cultural landscape.²⁴ While the image of landscape during the last three centuries had suggested a picture and depiction of a completely natural or possibly rural area, since the early 20th century landscape has been more and more understood as an exterior space with elements of human activity. This approach has particularly marked the sphere of human geography²⁵, which has been created as a tendency within geography that strived to incorporate relationships between people and physical space (climate, soil, vegetation, landscape forms, etc.) into geographical researches. Landscape, comprehended as the reflection of interactions between human culture and natural environment it is set in, has been made the central concept of human geography and Appleton describes it as “. . . what

²² Region, in terms of conceptual spatial unit, does not presume a particular criterion and therefore can relate to places of various sizes.

²³ In this context it is interesting to observe Norberg-Schulz’s (1975) brief interpretation of Aristotle’s theory of place – topos. He was the first one to develop the theory of place within spatial philosophy, defining space as a sum of all places, “a dynamic field with directions and qualitative properties.” (Norberg-Schulz, 1975: 10). Though qualitative properties are not further explained, it is clearly indicated that it has not only quantitative (geometrical, numeric, etc.) but also qualitative characteristics.

²⁴ The dichotomy of the interest in natural and man-made space, reminds Appleton (1975), has always been present to a certain extent. However, the tendency to separate the two approaches is new, for it was triggered by the development of geography at the end of the 20th century.

²⁵ In *The Experience of Landscape*, Appleton (1975) gives an overview of the development of geography as a new scientific discipline since the beginning of the previous century, whereat he mentions the post-war (WW2) division into two main directions – physical geography, which focuses on landscape as natural environment and natural processes, and human geography, which focuses on cultural and social processes and traces of human life in a natural environment.

people have made of their environment after nature has handed it over to them.” (1975: 9). In other words, landscape has been understood as a social and cultural product, so that it has been referred to as – cultural landscape.²⁶ American geographer Carl Sauer was one of the main advocates of cultural landscape, who claimed, as Wylie (2007: 20) remarked, that “Landscape is ‘cultural landscape’.” Sauer’s position is probably best summed up in his often cited claim: “Culture is the agent, the natural area is the medium, the cultural landscape the result.” (Gregory et al., 2009: 409; Wylie, 2007: 20).

Human geography has been further developed around the concept of landscapes as man-made spaces and, later on, as a setting of cultural symbols and social values. The focus on the anthropogenic component can be seen in the contemporary landscape ecology as well, which is, believes Farina (2006: 5), “inevitable due to the widespread distribution of human populations across the earth.” Many authors have accepted the paradigm (Gregory et al., 2009), but it is only partially correct, whereat the correctness thereof is based, Jackson (1984) believes, on the original meaning of the term. However, if landscape is solely cultural landscape, what is an entirely natural, uninhabited environment then? Is it not a landscape as well? Paradoxically, for many laymen (those not dealing professionally with landscape) the term, Lewis (1979: 12) notes, still “evokes images of snow-capped mountains and waves beating on a rock-bound coast.”

The discrepancy between the perception of landscape as nature and the perception of landscape as a cultural product should be bridged. Theoretical grounds for it may be found within some philosophical works as well as phenomenology and they are actually an extension of the old dialectic of the relationship between body and mind. The difference between the natural and the cultural is abstract for Merleau-Ponty (1968: 253), because: “. . . everything is cultural in us (our *Lebenswelt* is ‘subjective’) (our perception is cultural-historical) and everything is natural in us” Casey (1993: 252) finds this claim ‘controversial’, adding that “everything is at once natural and cultural, not only ‘in us’ but *in the natural world* as well.” The main idea behind these viewpoints is, at least for Casey, that the man, through the mere cognition or imagination of a pristine landscape (wilderness), projects their presence in it, thus giving it a cultural dimension. Accordingly, Casey (1993: 237) argues “that ‘we cannot identify’ such a first acultural place.”, implying hence the omnipresent unity of natural and cultural landscape.

For the purposes of understanding individual elements of culture and nature, taking the analytical approach might be beneficial, however, in order to understand their complex relationship, one needs to observe them synthetically. The environment provides the prerequisites for the development of culture, culture in turn changes the environment and consequently adapts to it. This is a perpetual process; both the man and the environment are at the same time the product and the producer. Gibson (1986: 130) notes the following on the environment as a result of human life and activities:

This is not a new environment—an artificial environment distinct from the natural environment—but the same old environment modified by man. It is a mistake to

²⁶ According to Appleton (1975), the term ‘cultural landscape’ was borrowed from German in the early 20th century and it defined a natural landscape modified by man.

separate the natural from the artificial as if there were two environments; artifacts have to be manufactured from natural substances. It is also a mistake to separate the cultural environment from the natural environment, as if there were a world of mental products distinct from the world of material products.

The perception of landscape as being solely a man-made or a natural space is nowadays considered partial; the integration and synergy of these aspects is a far more accepted notion (Appleton, 1975; Hough, 1990; Lewis, 1979; Makhzoumi and Pungetti, 1999a; Meinig, 1979b; Lukermann, 1964, cit. by Relph, 1976). Even relevant international as well other institutions and organizations whose interests include landscape agree nowadays upon the definition of landscape as a compound of natural and cultural (anthropogenic) components (Council of Europe, 2000; UNESCO, 1992; US/ICOMOS, 2004). Though the two components are not present everywhere to the same extent, landscape generally consists of the both – somewhere it is the result of only natural processes and somewhere of both natural and social, so that it is reasonable to unite them under one name.

Certain influences of the man on the world's landscape are global and felt even in completely uninhabited areas (e.g. the sound of an airplane or the greenhouse effect, acid rains, etc.). Therefore, the man can be said to influence, in a way, the entire landscape of the Earth, and that, in this sense, all the landscape is both natural and cultural. "Few environments, if any, . . . can be viewed in isolation from humankind", claims Hough (1990: 32). However, cultural landscape is not observed here from this standpoint, but as a space in which the influence of the everyday life of people inhabiting it can be perceived. Hence, landscape is defined as a result of natural and social processes, "except in wholly unpopulated areas" (Appleton, 1975: 8), where it is shaped by natural processes. The dialectic of natural and cultural is thus bridged and landscape is defined as the unity of natural and cultural (where these are present) characteristics of exterior environment.

2.1.1.1 Components of cultural landscape

An inhabited landscape represents, as previously mentioned, the reflection of the way of life (culture) on space. "Every society . . . (i.e. all those societies which exemplify the general concept) – produces a space, its own space" (Lefebvre, 1991: 31), so that it cannot be observed simply as an a priori given location. The way of life, habits, values and customs are all inscribed into a landscape and can be read (Kučan, 1996; Lewis, 1979). From the perspective of the multisensory landscape experiencing, it is of extreme importance for this thesis to determine on which of its sensory aspects culture is reflected and how. The assumption is that, if cultural landscape has a visual category, it is likely that there exist other sensory categories of cultural landscape as well.

Most studies on cultural landscape have primarily focused on tangible, visible structures and objects, which are the result of human intervention in a space and act as visual symbols. Such a reduction of the importance of culture is, however, unsatisfactory. In terms of the presence and influence of civilisation over life environment, culture should not be observed as something that is manifested solely on its visual expressions. The complexity of life and development of a society in space and time is always accompanied

with specific sounds, smells, tactile sensations, tastes and various other phenomena generated by that society.

When it comes to distinctive visual landscape forms of the Croatian coastal region of Dalmatia, one often refers to vineyards and olive groves. In everyday conversations, numerous brochures, regional plans, written records in literature or music, they are accepted as visual symbols of Dalmatia (or at least of its certain parts). Just like stone houses, dry stone walls and tumuli, which are also distinctive visual landscape components, they are the result of the man-made modification of natural environment – cultural landscape.

Similarly, auditory or olfactory environments are also culturally determined, though in a slightly different way, mainly as a side effect of everyday activities. So is for instance life by the sea in modern (contemporary) era marked by the sounds of boat engines and sirens, smells of ships and its machine oils, the smell of fish markets, whereas bells tolling from numerous church towers reveal the Christian cultural heritage. Could these characteristics then not be considered a cultural (socially conditioned) component of landscape? A comprehensive analysis and a detailed description of how the development of society has modified the characteristics of auditory environment over time has been given by Schafer (1994: 3), who claims right on the first pages of his book that “modern man is beginning to inhabit a world with an acoustic environment radically different from any he has hitherto known.”

People modify visual space they live in and the result of this modification can be understood relatively easily, for it is visible. However, they simultaneously modify, though certainly less consciously, all the other aspects of their environment as well. It should therefore be noted that anthropogenic (cultural) landscape is, in sensory terms, structured not only by visual, but also by auditory, olfactory, tactile and gustatory manifestations of human presence in the environment.

Culture, however, is a broad term²⁷ that implies various phenomena and accomplishments of a society, both material and non-material. The manner in which each of them is related to space varies – from the attachment to an area only by belonging to a society that inhabits it to the direct integration into the landscape matrix. The first relates to the elements of culture that are a characteristic product of a social group but do not shape the experience of the landscape the group lives in. These include everyday objects mainly used in enclosed spaces (e.g. crockery, furniture), jewellery, various works of art, knowledge, values, etc.

²⁷ Definitions of culture can be found in a large number of texts, one of which is: “Culture consists of all the products of a society that are created over time and shared by members of that society. These products may be tangible or intangible. The term *nonmaterial culture* refers to all the nonphysical products of society that are created over time and shared: knowledge, beliefs, customs, values, morals, symbols, and so on. Nonmaterial culture also includes common patterns of behavior and the forms of interaction appropriate in a particular society. It is a ‘design for living’ that distinguishes one society from another. . . . *Material culture* includes the physical artifacts that shape or reflect the lives of members of a particular society: distinctive clothing, buildings, inventions, food, artwork, music, and so on. Some of the most important elements of material culture are technological achievements, which are the ways members of a society apply knowledge to adapt to changing social, economic, or environmental conditions.” (Newman, 2008: 93).

On the other hand, there are certain elements of culture that directly complement the character and experience of landscape, both visual and non-visual, such as buildings, agricultural patterns, roads, typical transportation means²⁸, various other structures and objects such as *kozolec* (hayrack) in Slovenia²⁹; sounds of traffic, machinery and tools, music, people, etc.; and anthropogenically conditioned smells and other characteristics. Here it is an intention to point that certain accomplishments of a society, which are usually referred to as cultural artefacts, can also be considered distinctive landscape characteristics.

Traditional singing of a *klapa* (a group of singers singing folk songs *a capella*) in Dalmatia can be taken as a good example thereof. It is a symbol of cultural identity of Dalmatia (Povrzanović, 1991), a cultural product of the people of Dalmatian region.³⁰ The relation of such folk singing to Dalmatian landscape is reciprocal. Landscape characteristics can frequently be found in a *klapa*'s folk singing and are integrated into the concept thereof in various ways, Povrzanović (1991) points out – through lyrics, names of a *klapa*, slides and other visual elements that make up the scenery of many stage performances (e.g. olive trees, stone houses, dry stone walls, ships, etc.), acoustic effects such as seagull calls and the murmur of the sea, thus enhancing the conveyance of the experience of Dalmatian atmosphere in recorded materials (gramophone records, cassettes, CDs, video recordings) – and vice versa, the singing of a *klapa* is an element (characteristic) of the landscape. It is a component of the landscape for it takes place in it, and that not only in interior spaces – wine cellars, halls, theatres. Dalmatian *klapa*'s folk songs are recognizable precisely for their being performed in the open – on the streets, squares, in alleys, on waterfronts. As they are sung in an open space, they became a part of acoustic landscape and its symbol.

Similarly, various characteristics of landscape can be frequently found in patriotic literature (both poetry and prose) and painting, however, as opposed to the above singing, there is no such reciprocity. Literature is a cultural artefact of the society and a cultural symbol of Dalmatia, but it is neither an element nor a symbol of a real, actual landscape.³¹ Seen from sociological perspective (of sociologists, anthropologists, ethnologists, ethnomusicologists, etc.), *klapa*'s folk songs belong to the cultural heritage and cultural identity of the region, but from the geographical perspective (i.e. the perspective of geographical experience) it is an element of the landscape and, potentially, a characteristic of the landscape identity. A similar example, though in a different context, is given by Vukosav (2011), who claims that fundamental characteristics of a cultural landscape,

²⁸ David E. Sopher (1979: 138) takes a San Francisco cable-car as an example: "A consensus that a particular component of the landscape stands for a place—let us use the example of the San Francisco cable car—may develop through a complex interaction between the different views of insider and outsider." (cf. Tuan, 1990: 247). In Dalmatia, such significance can be attached to ships, especially traditional ones.

²⁹ See Sopher (1979: 138–139) and Kučan (1996)

³⁰ Citing UNESCO's definition, Južnič (1993: 179) claims that, in order to understand the concept of cultural identity, culture has to be understood as a "dynamic value system of learned elements, with assumptions, conventions, beliefs and rules permitting members of a group to relate to each other and to the world, to communicate and to develop their creative potential."

³¹ Tuan (1979: 97-98) has also noted that individual art types influence human perception differently. Comparing literature with architecture and landscape design, he points out: "A poem or an essay is not itself an important element in our surrounding. By contrast, a building is. A designed landscape is indeed an all-encompassing milieu. Architecture, unlike literature, can affect our senses directly. It influences us by simply being there. . . ." and adds: "Words . . . are abstract rather than concrete symbols. . . . Buildings and landscape gardens, on the other hand, are a physical environment as well as a system of symbols."

formed through the interaction of natural-geographical, historical and socio-geographical factors, can be identified in a number of traditional characteristics of both material and non-material nature, referring, among other cases, to the characteristic linguistic dialect. Taking into consideration the aforesaid, *klapa*'s folk singing, dialects, human activities in open space, festivities and crowds, food smells coming from restaurants and houses and hovering in the streets, even the traditional dishes themselves, which are in many ways conditioned by the environment (Harrington, 2005, 2008) – provide evidence that cultural practices of a society modify the non-visual landscape and create a multisensory experience.

The above comparison speaks in favour of Tuan's (1990: 59) claim that the concepts of 'culture' and 'environment' are largely interfused, just like the concepts of 'man' and 'nature' (cf. McHarg, 1992: *The Plight*). Vineyards and olive groves, stone houses and dry stone walls, Dalmatian folk singing (*klapa*) and dialect can be taken as examples of how certain cultural artefacts (accomplishments) that represent the cultural identity of an area (location, region, country, etc.) at the same time represent, through their manifestation in a landscape, landscape identity as well, confirming that this principle applies to various sensory modalities. In the area where culture and landscape overlap, they create cultural landscape – a mosaic of visual as well as auditory, olfactory, tactile and gustatory components.

2.2 PERCEPTION – OUTLINES OF THE CONTEXT

The study of perception belongs to one of the oldest activities of the mankind, Ittelson and Cantril (1954) point out. Perception is an omnipresent and necessary phenomenon in the life of man (and animals as well), for it allows self-consciousness and consciousness of the world around us, as well as our behaviour and actions taken with regard to that consciousness. Perception is a continuous activity – it takes place all the time, regardless of what we do, remaining active, as recent researches have shown, even during sleep (Tononi and Massimini, 2008; Wright, 2009).

Though the questions related to human perception were in the past discussed within philosophy, especially epistemology, with the emergence and development of psychology as a separate scientific branch, perception has been given its own place as an individual scientific task, which significantly intensified researches into that phenomenon (Perception, 2012). Within this framework, various theories have been developed since (e.g. Gestalt, behaviourism, structuralism, empiricism, etc.), each of which has cast new light on individual mechanisms and nature of human perception.

Human perception is yet another elusive concept with neither a simple nor a single definition. The very word, which is of Latin origin, carries a double meaning and includes the sensing as a observing or receipt of impressions as well as the understanding and comprehension thereof (Klaić, 2002). Given the *a priori* suggested dualism within the word, it is not surprising that in various disciplines it implies various types and levels of sensory and intellectual processes and activities. Hence, the definition of the word perception differs depending on the theoretical framework within which a given problem is observed, but generally it can be said that there are two main approaches.

The first one understands perception as a stimulus received from the environment, a sensation created as a result of the stimulation of sense organs' receptors, whereas for the second approach perception is a cognitive process, the organisation and interpretation of received information, often in relation to previous experiences, memories, expectations, etc. (Rodaway, 1994). Within the latter approach, perception implies the process of understanding, which distinguishes it from sensations, which are seen merely as inputs needed for its realisation. This dichotomy corresponds with the discussion as to the differences between sensation and perception that has been present for a few centuries (Gibson, 1966). As a result, a hierarchy has been created, in which sensations, as basic input data, and reflexes have been considered lower mental process which are therefore inferior to perception – higher mental processes of organizing information and mental synthesis (Gibson, 1986: 255; Rodaway, 1994: 12).

The issue of the difference between sensation and mental processes has been addressed parallelly with various other issues within numerous theories of perception. For a long time perception was researched within various disciplines of psychology (Rodaway, 1994; Wood, 1970), and most of the knowledge on the phenomenon has been gained here. Methodological approaches were based mainly on laboratory tests, under controlled conditions, and most of them were conducted in the field of visual perception. However, it slowly became clear that the study of human perception in such conditions misses in many ways the problems of perception in real life environment and its changing conditions. This has led to the emergence of various theories which emphasized the necessity of observing perceptual processes in complex situations in which they normally occur. A significant contribution to the so-called 'ecological' perspective has been given by E. Brunswik and J. Gibson, who pointed out that the understanding of the environment and ecological processes are a prerequisite for the understanding of perception.³² The main idea behind Brunswik's probabilistic functionalism³³ has been summed up by Gordon (2004: 57): "Only if we observe perception under complex, life-like conditions will we discover how it functions under these conditions."

Consequently, this has gradually led to a change in the conditions under which perception was observed – rather than under controlled conditions, it was now observed in the real life environment. In the mid-20th century yet another – geographical approach to perception was developed as a reflection of the need for a systematic research of the relationship between the man and their (geographical) surroundings.³⁴ Hence, a new subdiscipline of human geography called perceptual or behavioural geography (Rodaway, 1994; Wood, 1970) has been established. It focused on human experience of the complex everyday environment; spatial relations, socio-economic and cultural contexts, and especially on behaviour, decision-making and human activities in the open environment that are

³² Norberg-Schulz (2009: 33) claims that E. Brunswik was the first to "formulate a psychology which integrates the organism with its environment."

³³ A discursive review of Brunswik's theory of perception is given by Gordon (2004: 3)

³⁴ The issue of perception and experiencing of the environment is dealt within psychology of perception, which has been developed on an experimental basis since the late 19th century (Norberg-Schulz, 2009). Since the mid-20th century, apart from geographical psychology, various other disciplines have been developed which have focused on the systematic research of individual aspects in the relationship man-environment and the experiencing thereof (i.e. environmental perception). Hence, the issue has become interdisciplinary, Bunting & Guelke (1979) point out.

conditioned by these experiences. Human geography, which implied mostly cultural geography (especially in North America) and studied the influence of culture on the way individual groups of people experience and evaluate their environment, has experienced a turn through the introduction of certain psychological concepts (e.g. perception, behaviour, taste), Tuan (2003) believes. Under the influence of cognitive behaviourism, the study of perception has moved its focus from geographical perspective to individual experience of the environment (Bunting and Guelke, 1979; Rushton, 1979; Tuan, 2003), in contrast to collective experiences and attitudes that prevailed in cultural geography. The basic hypothesis behind this approach is that the basis of human behaviour in the environment are rather subjective impressions, arisen from previous experiences, education, expectations and socially conditioned attitudes, than objective knowledge. Such an idealistic starting point largely reflects the individual and utter subjectivism, Rodaway (1994) believes, defining perception as a primarily subjective experience of a mostly passive observer.

One of the major disadvantages of studying individual experiences was the impossibility of drawing general conclusions out of the knowledge thus gained (Tuan, 2003). Moreover, many researches in perceptual geography were generated by the positivist stream (Couclelis and Golledge, 1983; Rodaway, 1994), which uses objective quantitative methods to sample population in order to draw generally applicable conclusions on attitudes and evaluation of a geographical space. The starting point was the disputable assumption that man is a rational observer (Bunting and Guelke, 1979; Rodaway, 1994). In addition, various qualitative aspects of human experience, particularly significant from the perspective of geographical perception and behaviour, could not have been detected by such methods (Rodaway, 1994).

The most notable period in perceptual geography were the 1960s and early 1970s (Bunting and Guelke, 1979; Rodaway, 1994; Tuan, 2003). The tendency was generally characterised by the study of the human experience of environment, primarily in terms of values, preferences, attitudes, beliefs, behaviour and decision-making influenced by these, as well as spatial analysis and mental maps. Due to the aforementioned subjectivism, since the 1970s the discipline has turned again to the study of collective experiences of the environment, however with a greater emphasis on psychological aspects (identity, personality, self-respect) (Tuan, 2003). Indeed, since then, perceptual geography has lost some of its significance for a number of reasons – the criticism regarding the absence of a coherent and empirically valid theory, greater focus on sociological issues and theories in geography and the new, phenomenological approach to human geography. Precisely this new phenomenological approach to human geography, which was developed in the mid-1970s, has become the platform for the revival of studies focused on individual experiences within geography, Rodaway (1994) notes, however paying this time particular regard to cultural differences in perception.

Despite the significant contribution of psychological models, such as transactional, gestalt, and especially behavioural and cognitive, Rodaway (1994) considers Gibson's ecological theory a more appropriate alternative for the understanding of perception in the geographical context.

2.2.1 The theory of direct (ecological) perception

Due to the manner in which sensation and perception, their correlation as well as relation to the perceived environment are depicted in most theories (e.g. behavioural, cognitive, gestalt), Gibson (1966) considers them incomplete and such an approach unconstructive for a comprehensive understanding of the phenomenon of perception. Hence, he proposes his own, rather radical theory, with which he manages to bridge the above discrepancy between the perception as a reaction to a stimulatory impulse (response–stimuli) and as a process of mental fusion of data (cognition). Furthermore, he rejects the notion of perception being a composite two-stage process, first of which is the receipt and registering of meaningless stimulatory messages (sense data), and the other interpretation and conceptualization of these data into stable representations (cf. Ingold, 2002: 158–9). Direct or ecological perception, as he called it, is one of the recent and certainly intriguing theories. Unlike many other, it does not study perception under controlled laboratory conditions and with controlled variables, but in actual, life-like situations in which the observer (a man or an animal) and the environment are active participants, thus creating a constantly changing context.

This theory was preceded by a different way of perceiving sense organs which, by registering stimuli, support perception. Contrary to the notion that organs (e.g. eyes, ears, nose, skin, tongue) are channels of sensation – receptor organs that send impulses to brain centres – Gibson (1966) has introduced a yet completely new concept of five perceptual systems: basic orientation system, auditory, haptic, taste-smell system and visual system. It is typical of these systems that they do not involve just the basic organ through which the stimulus energy (mechanical, optical or chemical) is received; namely, the very word ‘system’ implies the participation and cooperation of multiple organs and body parts of a man or an animal. Hence, visual system consists of eyes, which are a relatively passive organ that detects changes in light energy in a certain field of sight; a head, which turns left-right, up-down and even sideways; and an entire body, which moves in space, thus allowing active perception of the environment. Were it not for the moves of the head and body, what we see would be very limited. The way we look, allowed by body movements and coordination of its parts, is active looking, which Gibson (1986: 205-207) calls ‘looking around’ and ‘getting around’, as opposed to ‘looking at’ which is allowed by eyes, and parallelly with it, he distinguishes between visual field and visual world.³⁵ The same principle applies to all the other perceptual systems as well. Therefore, according to Gibson, a sense organ acts as a passive recipient of stimuli, whereas a perceptual system is an active apparatus that explores the environment.

Another interesting hypothesis of the Gibson’s ecological model, which further changes the perspective on the correlation of sensation and perception, is the understanding of the phenomenon of stimulus. As said before, the prevailing view was that sensation is a piece of information from the environment – either as a stimulus that generates perception and

³⁵ Visual field refers to the segment of the environment visible when the body, head and eyes are fixed in position. It has boundaries that are set by the position of eyes in the head. The visual world, on the other hand, is a syntagm Gibson uses to describe a continuous visual reality, the presence of which we are aware of even if we do not see it with our eyes (e.g. when it is behind our back). Unlike the visual field, which is clear in the centre and vague on the periphery, the visual world is everywhere equally clear (Gibson, 1986).

possibly a reaction (in behavioural models) or a raw input data processed in the brain, whereas the process represents perception (cognitive models). However, Gibson (1986) believes both to be misleading, for a stimulus is neither that what is perceived nor a piece of information processed by the brain. The interpretation he gives is based on the explicit distinction between two concepts he introduces: stimulus energy (a stimulus) and stimulus information (a stimulation flow).³⁶ Stimulus energy stimulates passive receptors of a sense organ (i.e. light energy, mechanical or chemical energy), causing the correspondence of an individual energy with relevant receptors – photoreceptors (light), mechanoreceptors (sound and touch) or chemoreceptors (smell and taste). The energy stimulating receptors does not provide any information about its source; it can be felt, but it does not constitute perception. Gibson (1986: 55) explains:

Just as the stimulation of the receptors in the retina cannot be seen, so the mechanical stimulation of the receptors in the skin cannot be felt, and the stimulation of the hair cells in the inner ear cannot be heard. So also the chemical stimulation of the receptors in the tongue cannot be tasted, and the stimulation of the receptors in the nasal membrane cannot be smelled. We do not perceive stimuli.

Precisely this notion stands behind Heidegger's interpretation of perception, who explains on the example of a Bach's fugue that what is perceived (heard) are not only sound waves striking against eardrums, but a melody (Heidegger, 1996: 47). According to Gibson, perception is actually based on stimulus information contained in the structured array of the environment.³⁷ Information is structured by the environment itself, it is always present in the environment and available to an observer in the unlimited field of energy that surrounds it. Through active perceptual systems, the observer extracts (picks up) information from the ambient (i.e. luminous, mechanical and chemical) energy. "The available information in ambient light, vibration, contact, and chemical action is inexhaustible", claims Gibson (1986: 57). In the dynamic and constantly changing stimulation flow, the factor which allows the observer to experience the environment as stable and permanent – that what is constant within the changing – are stable characteristics of the environment or, as Gibson calls them, invariants. Brunswik has also pointed out stability as the key characteristic of perception (Gordon, 2004: 58). The environment consists of elements that are constant (invariant) as well as of those that are changing (variant), which in turn means that "the essentials become evident in the context of changing nonessentials" (Gibson, 1986: 73). The observer extracts invariants of the

³⁶ Gibson (1986) distinguishes between the terms stimulus (or stimuli) and stimulation (i.e. stimulation flow) (cf. chap. 4 and 9). Stimulus or stimuli denotes an impulse of energy that stimulates organs' receptors. It must exceed the sensory threshold in order to trigger a sensation (and a possible reaction) and it is momentary (i.e. it has its beginning and end). If stimulus lasts longer, he explains, it leads to sensory adaptation. Once it comes to an end (or immediately after), sensation ends as well. The concept of stimulation flow is something completely different for Gibson. It is a continuous flow of this energy an organism is immersed into and thus "[it] is not momentary" (Gibson, 1986: 58). Accordingly, perception is endless, continuous as well, due to the constant presence of information constantly available to the active perceptual system.

³⁷ It should be noted that Gibson's 'information' is not information in the usual sense, which is transmitted from a sender to a recipient (orally or the way a picture transmits information to an observer), for this would imply communication between the environment and the observer. Gibson (1986: 62–63) however uses the term in a completely different sense – to him, information is something that is picked up from the environment.

environment structure from the stimulation flow, observing at the same time the flow itself. The extraction of invariants that allows the experience of permanence is a non-modal characteristic of perception – common to all perceptual systems and achieved through their interconnection, Gibson notes (1986: 208). Information about the continuous presence of something, he explains, can be available not only visually but also through a touch, sound or smell. For instance, when objects cannot be seen in the dark, they can be touched; the same information about the environment is given in a different form – in the form of mechanical instead of light energy.

The above described process of active exploration of the environment Gibson (1986: 147) calls ‘information pickup’. “This is quite different”, he explains, “from the supposed activity of getting information from the inputs of the optic nerves” Perception is immediate, direct; it is not mediated by the processing of nerve impulses generated through the stimulation of receptors. According to Gordon (2004), Brunswik also advocates the idea of direct perception – he believes that the behaviour of an observer is not guided by a pattern of stimuli on the receptors, but by the real world present in the background.³⁸ Gibson admits that stimulus energy carries stimulus information, in terms of enabling their extraction from the environment (for an example he takes the inability of visual perception in complete darkness), but points out that energy itself is not sufficient for perception. In favour of this speak extreme situations of looking at a very bright source of light (e.g. the sun), or the case of dense fog. In such cases photoreceptors register the light energy as well, but the visual system is not able to extract information from the environment, in the first case because of the blinding beam that overloads the photoreceptors, and in the latter because of a homogeneous, unstructured ambient light in which reflection from surfaces is not possible.³⁹ Such a light does not provide information on the environment so that perception does not take place, despite the stimulation of receptors. “The ambient light in this respect”, he explains “is no different from ambient darkness. An environment could exist behind the fog or the darkness, or nothing could exist; either alternative is possible” (Gibson, 1986: 52–53). In other words, visual perception can fail to take place both due to the absence of stimulation energy (in the dark) as well as due to the absence of stimulus information (in homogeneous ambient light).

Briefly put, a man does not perceive their environment as a set of random individual stimuli, but as a variable, however stable and continuous reality, whereupon a constant stimulus is not required for the experience of invariance, for ‘perceptual awareness’, as opposed to ‘sensory awareness’, is based on the information about the environment and not on the current impulse and, therefore, is not dependant on its duration. As explained above, information is relatively stable, while a stimulus is temporary.⁴⁰ To put it differently,

³⁸ Zube, Sell, and Taylor (cit. by Ndubisi, 2002: 206) also stated that “the value of the landscape is part of its stimulus property, external to the individual and invariant. This value can be perceived directly without cognitive processing.”

³⁹ Structured ambient light, which is, in contrast to radiant light, scattered in all directions, is the key prerequisite for visual perception, says Gibson (1986). It is structured by the surfaces in the environment – those which emit and those which reflect light. The reflection of ambient light on various surfaces (their colours, arrangement, textures and other characteristics) provides the visual system with information about the environment.

⁴⁰ The continuity of information should be comprehended relatively – once it is picked up from the environment, it is present for a certain period of time in the consciousness of the observer; even when the

perception is not based on having a sensation, but on detecting stimulus information contained in it. Stimulus information and the perceptual awareness connected therewith are the key to direct perception. By virtue of this principle, a person is aware of their environment behind their back, though they cannot see it.

Perception conceived as an 'information pickup' cannot be understood as a reaction, an induced impression or a reflex, but as an act of attention, an achievement; it is a psychosomatic act of a living observer, explains Gibson (1986); a selective and creative process of reading signs of the environment (Tuan, 1977: 10). Heidegger (1996: 47) stresses that "We hear, not the ear.", and referring to his philosophy, Wilberg (2003) says that the ability to perceive is a lot more than the function of a sense organ to receive a stimulus and transform it into nerve impulses that are transmitted to the brain. To support his claim, he gives an illustrative example: "Just as a pen cannot write, nor does the eye or brain itself possess the capacity to see. That capacity is exercised by an aware being not a bodily organ" (Wilberg, 2003: 40). Norberg-Schulz (2009) uses the term 'intentionality'⁴¹ to refer to attention (consciousness or directedness) – a person perceives that what they are being directed towards at a certain moment, whereas the experience of some other characteristics of the environment are then reduced. He too rejects the notion of perception as a passive reception of impressions, and sees it, just like Tuan (cf. 1990: 4), as an active direction towards individual characteristics of the environment at a certain moment.

Gibson's theory of direct or ecological perception is based upon experiments and conclusions drawn from the functioning of the visual system, which is specific in many ways and differs from the other sensory systems. Still, many principles can be equally applied to the mechanisms of other four perceptual systems.

2.2.2 The classification of senses

Perception – the consciousness and knowledge about oneself and the surrounding world – would not be possible without senses. It is vitally important, for it enables organisms to adapt to and select conditions of the environment, whereas in the case of man, who is also called *animal symbolicum* (Cassirer, 1992) for their ability of abstract thinking, it has a far more complex meaning. Human senses, through means of which we obtain information about the world, are an important element in the mechanism of perception.

The first thing that comes across one's mind in everyday speech at the mention of senses are the five well-known and generally accepted senses: sight, hearing, smell, touch and taste. This classification – the first classification of the senses – is the legacy of Greek

stimulation stops, information stays, which allows us to be perceptually aware of something even after the stimulation ends. However, information cannot be absolutely permanent, for it either disappears from the memory or is replaced by another in reality (e.g. a tree can be seen through a living room window; if the tree is cut down, the information about the tree is replaced by the information about the non-existence of the tree, the 'emptiness').

⁴¹ In the sense of direction, the term was already used by Brunswik to stress the active character of perception (Norberg-Schulz, 2009: 32). Intentionality is also one of the fundamental concepts of Husserl's phenomenology, which indicates that 'being conscious' always simultaneously means 'being conscious of something'. In that context, sensory experience, Rodaway (1994) notes, is always the consciousness of something, direction towards an object or a phenomenon and the relation to it.

philosophy, namely Aristotle and his *De Anima* (Ittelson and Cantril, 1954; Lawrence, 2011; Macpherson, 2011; Paterson, 2007). Though, as Macpherson (2011) notes, the number and kinds of senses have been disputed throughout history, Aristotle's scheme served for a long time as the ground for researches on the role of senses and human perception.

The fact that the body is a perceptual 'organ', a system, and that bodily experience has a significant role in perception was long disregarded and rather unknown, at least to the general public. It was only relatively recently, in the first half of the 19th century, that new knowledge shed yet another light to categories of sensory experience, thus taking researches into a completely different direction. Some scientists remarked that, apart from the five known senses, there exist other, previously disregarded senses of the position, movement and condition of muscles, joints and limbs (Cole and Paillard, 1998; Stillman, 2002; Storks, 2012).⁴² Charles Bell described the limb position and movement sense along with other senses caused by muscular contractions as 'muscular sense'; he was succeeded by Bastian, who used the term *kinaesthesia*, primarily to denote the feeling of movement, but also limb position and muscular resistance and weight (Stillman, 2002; Thorwesten, 2010).

However, the time for the reopening of the debate on the number and kinds of humans senses was not ripe in the full sense of the word until 1906, when English physiologist and Nobel laureate Sir Charles Sherrington presented his classification of senses, in which one of the greatest novelties was the introduction of 'the sixth sense', which he called proprioception. Broadening Bastian's notion of kinaesthesia, he used the word to define the sense responsible for the perception of condition and changes of deep tissues (i.e. subcutaneous structures such as muscles, joints, bones, etc.), the position and movement of the muscular-skeletal system, and the sense of balance.⁴³ Stimuli are received by proprioceptors – receptors which are believed to be found in muscles, tendons, joints and skin (Macpherson, 2011; Storks, 2012). Deriving from Latin words *proprius* – one's own and *percipio* – to perceive, grasp, realise, proprioception literally means consciousness and knowledge of oneself, the perception of oneself. O'Dea (2011: 308) gives an illustrative description of this sense: "It is how you know, when you close your eyes, where your arms and legs are." In addition to proprioception, the radical novelty of Sherrington's categorization is the division of senses with regard to the source (origin) of a stimulus, which gave rise to several new concepts; primarily teleception, exteroception and interoception. Ever since, his classification has been widely accepted in physiology (Stillman, 2002), and the concepts have been used in all disciplines dealing with human perception.

Accordingly, new knowledge and perspectives that have been developing in the field for the last hundred years, have led to more questions than answers, two probably most

⁴² Literature reveals that already in 1557 Italian humanist and physicist Julius Caesar Scaliger described the consciousness of the position and movement of the body as a 'sensation of locomotion' (Thorwesten, 2010).

⁴³ The concepts of proprioception and kinaesthesia appear in literature alternately as definitions of the sense of position and movement of the body and its parts as well as the force required to initiate it. In certain contexts they are used as synonyms, whereas in others proprioception refers more to the consciousness of the position of the body and limbs, while kinaesthesia primarily describes the experience of the body movement.

important of which refer to the quantity and identification of human senses. The increased interest in these questions and numerous conducted studies have resulted in complete disagreement in terms of the number of senses, so that it, depending on the scientific discipline, the criteria and the context, ranges from six to over twenty (cf. Chu and Begole, 2010; Human sensory reception, 2012; Sense, 2008; Gold, 1980, cit. by Rodaway, 1994; Starbuck, 1921). Some of the 'new-found' senses are the vestibular sense (the sense of balance), several types of skin senses (temperature, pressure, pain, vibrations), internal pain or nociception, the sense associated with the awareness of hunger and thirst and various others. One of the main reasons behind the disagreement is the debate over elements which constitute a sense, so that something classified as a sense within one discipline is not a sense in the other and vice versa. Depending on the chosen definition of 'sense', scientists distinguish among various kinds and number of senses. According to the subject literature, scientific community has still not managed to find a common ground for these issues, so that classifying senses seems to never have been more difficult (Macpherson, 2011).

In the ever-broadening interdisciplinary context in which perception and sense have nowadays been researched, various criteria and methods for the classification of senses have been developed. One of the most common among them, and particularly significant for disciplines dealing with human experience of the environment, is the division into so-called internal senses or interosenses and external or exterosenses – which was taken from the mentioned Sherrington's innovative model (Stillman, 2002: 668; Storks, 2012) and differently developed. Given the aforementioned disagreement of scientists over the number and kinds of senses, classifications differ significantly with regard to this seemingly simple criterion. In broad outline it can be said that internal senses are those with which an organism recognizes the condition and changes (within) its own body, whereas external senses are the ones with which the external world is experienced, thus the stimulus comes from the outside. Internal senses mostly refer to the ability to perceive stimuli from inside of the body, primarily from internal organs, such as pain, hunger, pressure and the like. This kind of perception is called interoception. The five 'classic' senses – sight, hearing, smell, touch and taste – are on the other hand usually understood as exteroceptive – developed to 'read' information about the outside world and not about oneself (Bermúdez, 1998; Delaney, 2008; Leder, 1990; Rogers, 2012). However, a more detailed observation discovers that such a division is too simplified, for senses such as proprioception or equilibrioception (balance or vestibular sense) do not fit into such a simply defined framework.

Proprioception is sometimes put into a separate, third category, although the concept is rather vague nowadays, for it has been interpreted in various ways. Though Sherrington distinguishes between proprioception as the position and movement of the body and its parts and interoception, in which he included only visceral senses (those that develop in the intestines) such as pressure, internal pain and stretching of internal organs, not all authors follow the classification – some include proprioception into the interoceptive senses' category (cf. Hersh and Johnson, 2008: 52; Leder, 1990: 39; Macpherson, 2011: 15–16; Rogers, 2012: 96–98) and other believe that proprioception encompasses the cognitive dimension as well, the consciousness, feeling and thought about oneself in the physical, mental and spiritual sense (cf. Audi, 2004: 57; Storks, 2012). In addition, it is still not

clearly defined whether proprioception is a single sense or, as Sherrington described it, a series of interconnected senses (i.e. position, movement, posture, balance).

Gibson has dealt with the deep theoretical confusion regarding proprioception as well, offering his solution for the above issue. In the context of the idea of perceptual systems, he believed all perceptual systems to be actually simultaneously exteroceptive and proprioceptive – while providing information about the environment, they at the same time provide information about the body (Gibson, 1966, 1986). So for instance changes in visual or sound structure of the environment may indicate the movement of objects in space, the movement of the observer, or both. A particular position and activities of an organism determine its unique experience of the environment and itself at a certain point in time. By moving, an observer triggers the exchange of the visual context of the environment, but they also see themselves; they hear various sounds in the environment, but at the same time produce and hear the sounds of themselves moving (footsteps, clothes, etc.); feel the characteristics of the surface they are moving on (its texture, relief) as well as the moving of their own body. Seeing, hearing and experiencing the environment tactilely presupposes the perception of where and how one is positioned and where and how one moves in space. Two kinds of information coexist – about one's own body and the surrounding world and one does not exist without the other, claims Gibson (1986: 141), adding that “to perceive the world is to coperceive oneself” A great philosopher of the 20th century, Merleau-Ponty (1978: 219) has come to the same conclusion: “External perception and perception of one's own body vary together because they are two sides of a single act” This axiom applies to all sensual modalities (with the obvious exception of interoceptive experiences).

There is yet another sense which cannot be said to categorically belong to either external or internal senses – the vestibular sense or the sense of balance. It provides information on the position of the body in relation to the surface it stands on, how it is positioned (horizontally, vertically) and its movement. The activity which includes the registering of and response to such stimuli from the environment is called equilibrioception, a term that was introduced relatively recently and has not even entered many dictionaries yet. The vestibular sensory system is based on the detection of acceleration, which occurs in the form of gravity, rotation or linear movement (Equilibrioception, 2008; Rudge, 2012), and the receptors for relevant stimuli are located in the inner ear. It allows an organism to maintain proper balance in relation to a surface and organize motoric activities needed for a proper reaction of the body to the forces involved in its movement (Rudge, 2012). The sense of balance or equilibrioception is very tightly connected to proprioception as well as to some other sensory systems (e.g. visual, auditory and tactile). Though Sherrington included it into the proprioceptive senses' category, it is nowadays often considered an exteroceptive sense (Equilibrioception, 2008; Macpherson, 2011: 16–17). Seen from the perspective of spatial experience, this assignment to exteroceptive senses is indeed acceptable, for the vestibular sense gathers and reacts to a large amount of information from the environment – it allows one to perceive the slope of the surface, the relief complexity of the surface (e.g. uneven or even), its firmness (e.g. walking in the snow,

sand, mud as compared to walking on hard asphalt or stone)⁴⁴ and stability (e.g. when in a rolling ship) and allows one to adapt itself accordingly through appropriate actions.

Proprioception and equilibrioception might be referred to as 'bodily' senses⁴⁵, in the sense that there are no organs for these two forms of perception, but information is 'gathered' throughout the whole body through specific receptors located, as already mentioned, in muscles, joints and tendons as well as in the inner ear. Scientists are not unanimous with regard to whether these receptors are to be considered sense organs, as well as whether the existence of a specific sense organ is a prerequisite for the existence of a sense (Macpherson, 2011; O'Dea, 2011). Whatever the case might be, O'Dea (2011: 308) has pointed out an interesting fact – the said experiences lack the feeling that a sense organ is used at all, which he explains with the following example:

whereas to look is to *use* your eyes, to propriocept is not to *use* anything, at least . . . not consciously. You are simply *aware* of the position of your limbs . . . Similarly with the sense of balance; you do not need visual, tactile, or any other cues to know which way the ground is. However, there is no part of the body that we are aware of using to find that information out. If my account is correct, it makes sense that these were never counted as sixth or seventh senses.

Macpherson (2011: 16-17) on the other hand concludes that the receptors governing these senses might be considered a sort of sense organs and are hence legitimate senses.

As can be inferred from the aforesaid, internal and external senses are no absolute categories, but their contents depend on the context of research and set criteria. From the perspective of landscape experience, the division of senses into internal and external is useful in so far that it provides a framework for the research of the sensory structure of landscape, defining the totality of senses shaped by external phenomena and occurrences. In that sense, the exteroceptive category includes five traditional modalities generally accepted as external: sight, hearing, smell, touch and taste, to which the sense of balance should be added, for it allows yet another important form of acquiring knowledge on the person's environment.

Precisely on these six directional modalities Gibson (1966) has based five perceptual systems (taste and smell form a single system – gustatory-olfactory), one of which is the basic orientation system, which governs the maintenance of balance. However, Gibson has always insisted that senses, conceived as perceptual systems, are not passive recipients of stimuli or channels of sensations, as they are sometimes referred to, but active mechanisms for the exploration of the environment.⁴⁶ The word 'sense' is semantically dual, for it can

⁴⁴ Observation of a surface's firmness relies on the 'feeling' of its material structure and includes the combination of both tactile and balance perception. A slippery ground, for instance, is a piece of information conveyed simultaneously by the tactile and balance system, which requires a particular reaction in order to maintain the balance of the body.

⁴⁵ Stillman (2002), for instance, gives a tabular overview of Sherrington's classification, according to which proprioception (together with the sense of balance) is assigned to somatic senses.

⁴⁶ Gibson (1966, 1986) believes that, if senses are understood solely as sense organs, they cannot be anything but passive recipients of stimuli from the environment. However, if they are conceived – as he suggests – as perceptual systems, then they are in fact sensory systems which include both sense and motor organs, thus

refer both to 'having sensations' and 'detecting'. The first meaning connotes passive reception of stimuli; a sense is here conceived as a channel of energy impulses directed towards a relevant centre in the brain. The notion of perceptual systems Gibson however develops on the latter – the detecting of stimulus information, which suggests the activity of the whole system in which the body has the crucial role. He believes the role of sensory systems is not only to see, hear, smell, feel (with skin) or taste, but rather looking, listening, smelling, touching and tasting – active search and exploration.

Within exteroceptive group of senses, the division into distant and proximate senses can frequently be found. In essence, the distinction is based on the spatial character of each modality, that is, the spatial range within which observer's receptors can 'reach' a stimulus from its source. Assuming that sight and hearing both allow the perception of even those parts of the environment that are not in immediate physical reach of the observer, but are on a relative distance from his position, they are classified as distant senses. On the other hand, olfactory and tactile experiences, as well as gustatory are, based on the same criteria, considered proximate forms of perception, for they suggest the necessity of a direct bodily contact between the stimulus source and the observer, or at least their immediate proximity.

Similar understandings of the character of senses have resulted in the development of further analogous dichotomies such as higher and lower, bodily and intellectual, objective and subjective and distant and intimate senses. Visual and auditory experiences are in most cases classified as higher, intellectual, objective and distant, whereas olfactory, tactile and gustatory experiences are lower, bodily, subjective and intimate. Though acknowledging a certain logic behind these differences, Rodaway (1994) believes that they tend to oversimplify and opposes it, claiming that each sense, to a greater or lesser effect, includes both the intimate and distant level. To prove his point, he gives the example of a typically 'intimate' sense of touch. Though it is not possible to touch objects that are out of the reach of a hand (or some other body part), the tactile sense can register certain vibrations generated at a considerable distance in relation to the body and transmitted over various spatial media and substances.

Sight and hearing, Rodaway (1994) further explains, also have an intimate (close) dimension, for certain things can be seen and heard only from the close vicinity. In addition, the reach of a sense can be 'improved' through the usage of various aids available owing to civilization achievements (eyeglasses, hearing aid, sticks for the blind and other).⁴⁷ Rodaway is not the only one to claim that establishing such dichotomies between the modalities is, though on the one hand justified, still limited and does not depict the whole range of their possibilities. In fact, in the early 20th century Starbuck (1921) believed it necessary to correct the distorted image created by the division of senses into higher (sight and hearing) and lower (other). He explained that all senses are, to a greater or lesser extent, at the same time objective and subjective, and that the so-called lower senses,

developing into an instrument for the active exploration of the environment. "A system has organs", Gibson (1986: 245) explains, "whereas a sense has receptors. A system can orient, explore, investigate, adjust, optimize, resonate, extract, and come to an equilibrium, whereas a sense cannot."

⁴⁷ Various aids represent a sort of technological 'extension' to the human body, Rodaway (1994) believes, so that they mediate perception together with the body, as a part of it.

contrary to the general belief, are also reliable in the gathering, structuring and organisation of objective spatial information and relations. Therefore, he suggests that senses are reclassified, however not into two categories, but rather in the way that they all include two kinds of sensory processes – defining and intimate – both of which are present in each individual sense to a certain extent.⁴⁸ The aforementioned dual concepts correspond only partially with the actual nature of senses and are rather simplified categorizations of a complex human sensory apparatus. In the context of research on landscape experience it is less significant whether a stimulus is distant or close, objective or subjective, than the fact that the stimulus is ‘observed’ as a quality of landscape and thus included in the creation of a multidimensional sensory composition.

The senses addressed in this thesis are defined as externally oriented, yet it is necessary to emphasize two facts – first, Gibson’s discovery that the mentioned exteroceptive experiences are in their nature also proprioceptive, and thus dependant not only on the environment but on an observer as well and second, if it is taken into consideration that the current mood and the way a person feels or generally their physical and emotional state affects their experiences, even interoceptive sensations (pain, tiredness, high/ low blood pressure etc.) can be said to participate in the creation of a landscape experience. However, this thesis does not focus directly on the perception of oneself in a landscape or the correlation between the experience of a landscape and various mental and physical conditions of a person, so that proprioceptive and interoceptive aspects of experience shall not be particularly considered. The thesis is primarily interested in the general collective perception of landscape, which aims at illustrating the extent to which individual senses structure overall experience.

The selected ‘external’ senses shall represent the framework for the research on landscape experiences. Within this framework, special regard shall be paid to four types of perception – auditory, olfactory, tactile and gustatory. Equilibrioceptive experiences, though not disregarded, shall not be researched separately, but they might occur within research results. Visual perception is not of primary interest in this research as well, but shall be used for comparative and supportive purposes in the process of defining the share of non-visual modalities in overall experience, whereat the term ‘non-visual’, as opposed to visual (visible) characteristics of a landscape, shall denote collectively all other sensory characteristics – primarily sounds, smells, tactile sensations and taste, as well as other characteristics a person might perceive with their senses in real time and which constitute landscape experience.

⁴⁸ For Starbuck (1921: 132), defining sensory processes are those enabling a sense to identify objective characteristics of an object and spatial relations, such as eyesight, hearing, kinaesthesia and pressure, whereas intimate sensory processes designate the tendency of a sense to directly interpret objects and their qualities without prior objectification thereof: “. . . [these] senses are concerned with the interpretation of objects and of their qualities immediately without defining them or setting them into spatial and temporal orders, or relating them in anyway schematically.” These processes are predominantly found with so called lower senses (smell, taste, touch in terms of temperature, the sense of balance, visceral or inner sensations such as pain etc.).

2.2.3 Common characteristics of senses

Individualization and isolation of senses – focus on individual senses and their specific character, functionality, mechanisms and relevant stimuli – which is particularly characteristic of Western science (Storks, 2012), has tossed into the background a perhaps more significant fact that perception is never uniform (unimodal) in everyday life and dynamic world but is based on the interconnectedness of sensory systems (Mason and Davies, 2009; Rodaway, 1994) and multiple sensitivity of each.

It was long held that each sense corresponds solely with one form of energy (stimulus), consequently implying that each sense governs a certain aspect of spatial experience, Rodaway (1994) notes. In that sense, sight depends upon light energy and the eye, as a sense organ, reacts solely to that kind of energy. Likewise, the ear is an organ which reacts only to sound waves within a certain spectrum (frequency), the tongue and nose are stimulated by chemical molecules, and the skin is a sense organ which detects mechanical energy (touch and vibrations). However, such a ‘division of duties’ of sense organs has been considered a misconception for some time now. Namely, a sensation can result from a single stimulus, but this is not necessarily the case, for each sensory system can register more kinds of energy.

Though only light (more precisely ambient light) allows the reading of visual information, other kinds of energy applied to this organ will also provide certain information about the environment. For instance, eyes are, in addition to the light, also extremely sensitive to temperature (i.e. very low and high temperatures) as well as to mechanical energy (e.g. blows, dust, wind). They will also register changes in the chemical composition of the medium in which they are located, which can be noticed for instance during sea-diving, when the salinity of sea water causes the irritation of eyes. Likewise, the auditory apparatus gathers sound information as well as those about the surface and movement of the body, that is, the balance. The tongue is responsible for the sense of taste, but it is a tactile organ as well, for it reveals various characteristics of food and liquids, such as texture, density and temperature. The nose is also sensitive to temperature, humidity and density of air and to material particles such as dust, and the skin, in addition to touch, allows the perception of temperature, humidity, pressure, vibration, and even pain. Rodaway (1994: 28) notes that the tactile sense is simultaneously “a sense of surface and form, texture and temperature, pressure and movement.”, and Tuan (1977: 11) gives an example from the primarily gustatory area: “Taste, for example, almost invariably involves touch and smell: the tongue rolls around the hard candy, exploring its shape as the olfactory sense registers the caramel flavour.” It is well-known that smell and taste are two strongly intertwined modalities (Gibson, 1966), just like some other, as for instance visual and balance or auditory and tactile (air vibrations).

Though senses are, for the purpose of acquiring deeper knowledge on a single modality, still often observed in isolation, it has been largely accepted nowadays that they are interconnected and that their cooperation supports multisensory experiences of the environment (Gibson, 1986; Hersh and Johnson, 2008; Howes, 2006a; Macpherson, 2011; Merleau-Ponty, 1978; Rodaway, 1994). At least three ways in which this is manifested can be distinguished:

- 1 Multisensoriality of a perceptual system. Every sensory system is sensitive to various kinds of energy or stimuli. Hence, it can gather various types of information and a current experience is a product of diverse cues from the environment.
- 2 Overlapping. Sensory systems functionally overlap; each of them bears specific information, but the same information might be picked up by multiple senses, for example, fire can be seen, felt as a heat, heard as a characteristic crackling, its smoke can be smelled, etc. (Gibson, 1966: 54). In the given example, all perceptual systems, though through diverse kinds of energy, provide the same information (the proximity of fire) creating a sort of information excess.
- 3 Cooperation of perceptual systems. Sensory systems complement each other, providing specific information necessary for a coherent and correct understanding of the environment. Tuan's (1977) example, which shows that, in addition to the sight, body movement and sensing objects, sound significantly enriches the cognition of space as well, demonstrates that every piece of information about the environment complements and additionally explains a person's sense of space and one's position within it. Another significant aspect of cooperativity is that, in the case of temporary or permanent failure of one system to provide information, other system(s) will probably overcome this problem more or less successfully and enable the flow of information through alternative paths. This characteristic is extremely significant to people with physical or sensory disabilities, as often mentioned in the related literature (Gardiner and Perkins, 2005; Hull, 1990 and Wright, 1990, cit. by Rodaway, 1994).

In the light of the knowledge about the multisensoriality of each sense and their interconnectedness, the assumption 'one kind of stimulus (energy) – one particular sense' seems rather banal and too simplified. Sensing and perception do not function as a set of independent sensors located in or on the human body, each of which detects energy-specific impulses and reads information which is later integrated in the brain as the central operating system, creating a mosaic called experience. On the contrary, perception is a result of the synergy among sensory systems at various levels, their variability and flexibility in the process of collection, extraction and combination of information about the environment. The phenomenon that Gibson (1966) contradictorily describes as 'sensationless perception' supports this assumption. The syntagm connotes the possibility of perception without being conscious which exact organ reacted. Gibson (1966: 2) elaborates on this seemingly confusing notion:

this does not mean that perception can occur without stimulation of receptors; it only means that organs of perception are sometimes stimulated in such a way that they are not specified in consciousness. Perception cannot be 'extrasensory', if that means without any input; it can only be so if that means without awareness of the visual, auditory, or other quality of the input. An example of this is the 'obstacle sense' of the blind, which is felt as 'facial vision' but is actually auditory echo detection. The blind man 'senses' the wall in front of him without realizing what sense has been stimulated. In short, there can be sensationless perception, but not informationless perception.

Hence, sensationless perception clearly reflects the close interconnectedness of senses. Human intuitive recognition of the described intertwinement is further confirmed through the frequent usage of metaphors in language expressions of sensory experiences, where one sensory quality of the environment is described with the terminology belonging to another perceptual modality (e.g. grass *looks soft*, a dish *smells tastefully*, that yellow colour *screams*, the smell *is heavy* and similar) (cf. Hensel, 1998: 79).⁴⁹

Although each modality has its specific character and function, the diversity and complexity of the combinations of sensory cooperation exceeds the effectiveness of each individual sense in the process of discerning details from the environment, Rodaway (1994) believes. He also notes that, besides the positive interaction of senses, which increases the accuracy of perception, there can come to negative interference as well, when information obtained by various senses are contradictory and decrease the clarity of spatial experience. In addition to cooperation, Rodaway distinguishes four further characteristics which he believes to be common to all senses: hierarchy, sequencing, threshold and reciprocity.⁵⁰ Since knowledge of characteristics common to all senses helps better understanding of human sensory experience and its influence on mental spatial representations, these shall be briefly described here.

Within a multi-layered and multisensory experience a certain characteristic of the environment often protrudes from the other. A sense can, either apparently or actually, be predominant in the creation of the overall sense of space, in the way that “[it] may take a lead in initiating an experience or in establishing a general framework for geographical understanding which is followed through, filled out and clarified by the other senses.” (Rodaway, 1994: 36). Depending on a given situation, the dominant role can be taken by various senses. This characteristic of human perceptual apparatus Rodaway calls the hierarchy of senses.

The next characteristic he introduces is sequencing, though he does not explain in detail the way it functions. According to Rodaway (1994), while creating a spatial experience, senses can be ‘turned on’ one after another in a certain sequence, whereat none of the senses is dominant. Sequencing seems to refer to time, that is, to chronology of information ‘pickup’ from the environment. The variability of ‘stimulus threshold’ is yet another characteristic common to all senses. The activation of a sensory system depends upon a stimulus exceeding or not exceeding the stimulus threshold, but the sensitivity of a threshold has a crucial role, for it, Rodaway notes, is not always equal – it does not only vary among individuals but also within an individual, depending on a specific situation and the participation of other senses in a certain experience. He also points out that the threshold is not only biologically conditioned but also culturally implanted. “Habituation is an important dimension of sensuous experience.” Rodaway (1994: 37) explains; being

⁴⁹ Using comparisons (metaphors) is closely related to the fact that each language disposes of an unequal pool of terms (i.e. vocabulary) available for the description of experiences from individual modalities.

⁵⁰ He ascribes these five characteristics to four senses he deals with in his *Sensuous Geographies* – sight, hearing, smell and touch, both individually and in connection to one another. It is pointed out here that other external senses that participate in the creation of landscape experience (i.e. taste, the sense of balance) show these characteristics as well.

habituated to certain phenomena in everyday life can increase the threshold, whereas the unknown and new attracts the attention even at lower levels of stimulation.

Further, each kind of sensation implies certain reciprocity as an element of relation between the observer and the environment. Its existence can be most easily shown on the example of touch, where touching something automatically means being touched by it. In the sphere of olfactory perception, reciprocity, as Rodaway names it, is less direct, but possible – the proximity which allows us to smell somebody, allows being smelled at the same time as well. However, he notes that reciprocity is not a necessary but a potential characteristic of a sensory experience, which can be noticed in the example of distant senses – sight and hearing: a person might see without being seen (Appleton, 1975; Gibson, 1986) and hear without being heard, Rodaway concludes (1994).

Finally, in the context of environmental experience it should be noted that senses are spatial – a characteristic pointed out by Merleau-Ponty (1978) in his work on perception. Every perception, primarily visual, auditory, olfactory and tactile,⁵¹ has its spatial range – spatiality. Unlike visibility and tactility, which generally relate to fixed or relatively stable components of the environment, spatial manifestations of sound and smell are significantly different, for they are more fluid, inconstant. However, sounds and smells can provide a spatial information which is out of current range of sight or touch. For example, the sound of chatter will discover that an adjoining street is crowded or an event is being held there, although it cannot be seen in the given moment: likewise, food smell can suggest the proximity of a restaurant. Sound and smell are not limited by spatial boundaries characteristic of sight or touch. Hence, space is multi-dimensional, and the unity of space can be achieved through the cross-section of all sensory areas (Merleau-Ponty, 1978: 236).

2.2.4 Perception – a conscious or an unconscious activity?

The richness of landscape experiences largely depends upon the process of perception. In addition to the aforementioned factors, there arises a physiological question as well – is perception solely a conscious activity or it happens even on unconscious levels, regardless of one's own will?

As shown above in this thesis, when it comes to the cognition of the external world, it is often emphasized that perception is an activity which implicitly includes conscious directedness on the currently present characteristics of the environment (Gibson, 1986; Norberg-Schulz, 2009; Bender, 2006 cit. by Tilley, 2006; Tuan, 1990). It can easily be concluded that perception is generally believed to imply a conscious state of an observer. The logic behind such belief is that a person perceives that which they are focused on, which has attracted their attention. When one is not focused on them, all the other things that happen or exist at the moment will remain unnoticed – perceptually ignored or blocked, although they are present.⁵² However, does the focus of attention to certain

⁵¹ Gustatory experience of space is more of a symbolic than direct character (i.e. certain tastes symbolize an area), for through this sense one directly experiences food or beverages and only indirectly, through them, the area they relate to.

⁵² Norberg-Schulz (2009) mentions selective directedness several times. For instance, he explains: "When we hurry to or from our place of work, the buildings we pass by only form a relatively neutral background. This

characteristics mean the current non-perception of other characteristics of the environment? If so, how does it reflect on experiences? In the background of this dilemma is the confusion over the issue of the existence of unconscious perception, which has been debated over primarily within psychology and philosophy, but also within some other areas of human activity (Ainsworth, 1989; Dretske, 2006; Merikle, 2007). The basic terminology includes semantic differentials such as explicit-implicit, supraliminal-subliminal and conscious-unconscious perception (Dretske, 2006). The second parts of the mentioned pairs imply the perception of something without the awareness that it is perceived. According to Ramsøy and Overgaard (2004: 1), this phenomenon has been considered intriguing within cognitive science for a while, particularly because “it challenges the intuitive notion that consciousness is necessary for perception.”

The demystification of unconscious perception requires a profound understanding of two concepts: ‘perception’ and ‘awareness’, which Dretske (2006: 149) summed up in the following sentence: “If psychologists can really identify something that deserves to be called perception without awareness, they must have an operational grasp on not only what it takes to perceive something, but on what it takes to be conscious of it.” It is generally accepted nowadays that a lot of human decisions, behaviour and attitudes are guided by conscious (unconscious or subconscious, whichever term is appropriate) cognitive processes (Norman, 2010; Westen, 1999). However, it is still unclear whether perception is one of these processes.

Many scientists believe that the perception of subliminal signs from the environment – those one is unaware of – largely affect human behaviour and attitudes, thus suggesting that a large part of one’s ‘feeling’ and ‘knowledge’ of the world are based on the so-called non-conscious perception. According to some neuroscientists there are several levels of consciousness and not all of them are available to our cognitive processes, point Rubidge and Stones (2009). However, they note that: “The fact that the *se* [*sic*] modes of consciousness are not overtly accessible to reflective consciousness does not negate their role in our sense of the world within which we live.” (Rubidge and Stones, 2009). Various researches into visual perception have offered evidence about perception and influence of non-consciously perceived stimuli on human behaviour, note both Merikle (2007), and Hilsenrat and Reiner (2009) whose experimental work has confirmed the significance of subliminal information in the sphere of tactile experience. Besides the fact that non-directed perception has been experimentally confirmed in various studies, for the understanding of environmental experiences is also important a very plausible assumption that non-directed perception is always, and that to a great extent, present in everyday situations:

In many respects, studies of the perception of unattended and unnoticed stimuli provide a better experimental analog of how stimuli are perceived without

does not mean that they are irrelevant, only that we content ourselves with the perception of some of their properties. . . . In other words, we direct ourselves according to the *Aufgabe* [*purpose*] of the situation.” (Norberg-Schulz, 2009: 217). Our directedness can significantly vary if one is a tourist or an architect, he notes. Similarly, Tuan (1990: 4) says that perception is “both the response of the senses to external stimuli and purposeful activity in which certain phenomena are clearly registered while others recede in the shade or are blocked out.”

awareness in the natural environment than is provided by studies in which awareness is controlled by degrading the stimulus or viewing conditions. Rarely are people confronted by situations where the viewing conditions are so poor that it is impossible to become aware of an object even when attention is focused at the spatial location of the object. In contrast, it is very common in the natural environment for people to be in situations where there are many unattended stimuli outside their immediate focus of attention that are not consciously experienced (Merikle, 2007: 518).

In the natural unfolding of everyday life, Seamon (2012a, 2012b) agrees, there are many things one does not pay attention to but takes for granted. The phenomenon named 'taken-for-grantedness' correlates with an important phenomenological concept of 'lifeworld'⁵³, which denotes a complex, intersubjective, shared world in which humans live in the constant interaction with one another and the environment they share. It can be understood as a life context, a continuous flow of occurrences and experiences, encompassing both the usual and less usual – the background of occurrences and conspicuous events within it. Perceptual taken-for-grantedness is a characteristic of lifeworld that is scientifically intriguing, Seamon (2012a) points out. Due to daily routine and usual rhythm, most of the time life just happens, even though human beings do not pay conscious attention to it, so that many events happen without conscious direction of perception (Seamon, 2012a, 2012b). Tuan (1975: 157) also agrees with this, giving, *inter alia*, an example of everyday urban habits:

Chatting with neighbors on the stoop, going to the drugstore for a milk shake, emerging into the glare of sunlight from the dark cavern of a movie house or bar, fresh neon color in a wet night, and the thick Sunday newspaper - these experiences are too commonplace to sit for portraits.

Even though non-conscious perception is far from being considered a fact, it seems untimely to dismiss the possibility of non-conscious experiences, for it would suggest accepting the idea that current non-directedness to certain qualities of the environment means non-perception thereof, and consequently – that they do not affect experiences in any way. To avoid terminological confusion around the concept of consciousness, the term non-directed might be used instead of non-conscious perception. It is, however, undeniable that not everything can be perceived equally clear at a certain moment; it is not possible to be equally focused on all characteristics of the environment at the same time. The focus of attention is selective. Tuan (1990: 4) and Norberg-Schulz (2009) are right to claim that a part of each experience remains hidden, though it might be more appropriate to use Tuan's term 'shadowed' (or some other metaphorical term such as hazy, blurred). Thus, such observation would be an antipode to directed perception, for it is not conscious but does happen.

Rodaway (1994: 35) might also be said to indirectly advocate non-directed perception, for he claims that "[W]hilst it is possible to identify the apparent dominance of a specific sense

⁵³The term comes from Husserl's phenomenology and is semantically close to Martin Heidegger's concept of *being-in-the-world*.

in a given situation, on closer analysis all geographical experiences are made up of a complex of sensuous information” Similarly, talking of elements constituting place identity, Relph (1976: 46) also supports the holistic character of an experience, noting that not individual spatial components are important for the experiential whole, but the “fullness of their combinations”, and that “our experiences of places are direct, complete, and often unselfconscious” These examples demonstrate that, though it seems to be generally believed in the phenomenology of space and landscape that conscious directedness towards an observed object or phenomenon is a necessary prerequisite for perception, a more profound consideration reveals the omnipresent, though often implicitly expressed, view that experiences of the environment are partially constituted by non-conscious gathering of information.

Distancing itself from the psychologically and philosophically correct and consistent usage of field-specific terms (i.e. subliminal, unconscious perception, etc.), the starting point of the research presented here is the assumption that experience of the environment, or in this case of the landscape, is based both on the directed and non-directed observations of its properties, that is, on the directed (focused) and non-directed (unfocused) perception. In other words, it is believed that the experience and the pleasantness of a place and, generally, the opinion on that place, are influenced by the focused as well as unfocused attention to the environmental stimuli. Perception, as understood in this thesis, reflects the fundamental dichotomy, encompassing two complementary components concurrently: directed (focused, conscious) and non-directed (unfocused, non-conscious).

However, in the empirical part of the thesis focused and unfocused attention to environmental characteristics has not been researched *per se* and it does not influence the research questions or results. Nevertheless, it is important as a theoretical basis, for it can account for the subtle nuances of the environment, largely composed of non-visual properties, which are usually less ‘obvious’ and ‘intrusive’ but unquestionably enrich an experience.

2.2.5 Direct perception of landscape

The understanding of human perception is a necessary prerequisite for the research of landscape. The considerations and arguments set out above represent a broader context of the understanding of the activity. In the following passages these are summarized and a few significant aspects, which articulate every environmental experience, are mentioned. Perception as an integrative process, which is manifested in several ways, has been a sort of leitmotif.

Perception as an activity that always includes and connects two participants – an observer and the environment. Perception would not be possible, in ontological sense, either without a person who observes or without the observed. Accordingly, both components are crucial to the act of perceiving. As the environmental conditions and the observer change by the second, each perceptual experience reflects a unique tripartite relationship: observer – environment – moment. Should Gibson’s theory of direct perception be accepted, the concept of ‘communication’ between an observer and the environment would automatically be rejected, for it would imply the mediation of information in the form of

sender (the environment)-recipient (observer), through a channel, in the form of messages and signals to be interpreted (Gibson, 1986). On the contrary, the observer and the observed should be comprehended as an adhesive functional whole; one without the other does not exist. Creating an impression of the environment is a two-way interactive act, whereat the environment provides distinctions and relations, and the observer – in accordance with their intentions – selects, organizes and enriches the perceived phenomena with the meaning, thereby demonstrating notable flexibility (Lynch, 1960).⁵⁴

Perception as an integrative process of sensation and cognition. As Rodaway (1994) noted, perception should, from geographic perspective, include both dimensions. In the sense of *sensation*, perception is a direct relation with the environment via stimulus energy (light, mechanical, kinetic, thermal, chemical) which stimulates sense organs. The sensitivity of sense organs is biologically determined and differs from person to person, so that it can be said that senses determine the ‘feeling’ or the ‘notion’ of the surrounding world – that is, perception depends upon the sharpness of senses. Energy impulses (stimuli) carry environmental information, picked-up and directly recognized by active perceptual systems. It is not unrelated and non-organized, but structured, and its structuring defines perception as an act of cognition. The gathered information seeks its place in complex mental schemes of each individual; hence it is not imprinted onto a clear surface, but is integrated through cognitive processes into a multi-layered matrix of existing and long developed attitudes, expectations, memories, desires, assumptions, etc.

In brief, each individual has their own history, a specific psychological profile and their own system of values which new impressions should fit in. Thus, perception is always individually coloured. In everyday situations, perception is an imperceptible synthesis of these two aspects; sensation, which reveals information about the environment in the surrounding energy field, and cognition, which articulates the meaning thereof. It happens in a spatial-time context, whose dynamics is recognized by a freely moving body.

Perception as a continuous multisensory activity. It is apparent from the above that to perceive does not mean to observe characteristics of the environment one at a time. To the contrary, gathering several diverse pieces of information with a single sense as well as of a number of information with all senses simultaneously always happens concurrently. This intersensory world, as Merleau-Ponty (1978) calls it, is not constituted as a mere sum of individual sensations, but results from their profound fusion: “. . . if perception reunites our sensory experiences in a unique world, it is not in the manner that scientific colligation gathers together objects or phenomena, but rather in the manner that binocular vision grasps a single object.” (Merleau-Ponty, 1978: 244). Sensory experience of the world implies a simultaneous and synergistic activity of all perceptual systems (including the body) at any moment.

Since the surrounding world is extremely complex due to the diversity of objects, phenomena, events, and their infinite variations, it produces an infinite number of sensory messages, many of which are, according to Brunswik, often confusing and unreliable for

⁵⁴ Lynch’s claim refers primarily to the creation of visual images of the environment, but it can analogously be applied to other perceptual modalities as well.

perception (Gordon, 2004: 56–58). In other words, not only can one misinterpret a sign from the environment, but the sign itself may be unclear (ambiguous).⁵⁵ The notion that the environment itself is uncertain is pointed out by Gordon as one of Brunswik's major contributions to the theory of (ecological) perception. The infinite field of various kinds of energies creates, in Rodaway's (1994: 11) words, "sensuous abundance, ambiguity and redundancy", from which, in most cases, a valid representation of the environment is successfully derived, as Brunswik's probabilistic functionalism suggests (Gordon, 2004: 3). Thus, the cooperation of senses on the general everyday level can be said to have more often a positive than a negative effect on the understanding of the environment.

Perception as a highly sophisticated activity integrating various body parts, organs and the whole body. Perception does not only result from the activity of sense organs. Were it so, it would represent passive registering of stimulus energy, as Gibson (1986) noted, emphasizing the difference between the passivity of organ receptors and the activity of perceptual systems.

It is often noted that the body has a significant role in experiencing the world (Casey, 1993; Heidegger, 1988; Lefebvre, 1991; Merleau-Ponty, 1978; Pallasmaa, 2005; Rodaway, 1994).⁵⁶ The mobility of the body is the factor that makes perception active. However, one should not disregard that the body is not merely a 'place' sense organs are located at, carrying them through space. The body itself is a sense organ, capable of registering the environment not only by the senses of sight, hearing, smell, taste and touch. Even without these five senses, one feels their own body in space; with eyes and ears closed, a person detects the position of their limbs and the body in general, knows the distinction between up and down, front and back, whether they are in a horizontal, vertical or some other position (Tuan, 1977: 35–36). Hence, orientation in space rests upon bodily consciousness, which also provides the feeling of one's own weight, the weight and resistance of various objects and substances, and movement in which the musculoskeletal system has a crucial role. Regardless of the five perceptual systems, the body itself functions as a 'separate' sensory mechanism, providing a unique kind of information about itself and the environment. Within the hierarchy of interconnected segments (i.e. receptors, organs, organ systems and the body as a whole) and specific functions that each of these levels of the system has in the process of perception, it is apparent that perception integrates both the passive (registering of stimuli from the environment) and active (constant exploration of the environment) component into a single process.

In addition, the body defines yet another significant aspect of perception – the measure. Tuan (1977: 36) claims that the very presence of a man imposes a schema of space, which

⁵⁵ In order to illustrate it, Gordon (2004: 58) gives the example of perception of edible fruit: "Let us assume that edible fruit is in fact generally (a) darker, (b) redder, (c) softer, and (d) sweeter. Obviously, darker and redder are visual cues, softer is tactile, and sweeter is gustatory: the environment is scattering its effects. And these cues, the only ones available, are all imperfect – all carry some risk. Not all ripe fruit is red, neither is all red fruit edible. Sweetness often indicates edibility, but some poisonous fruits are sweet. Some fruit is more edible when soft; some soft fruit will be rotten."

⁵⁶ Merleau-Ponty (1978: 217) says: "One's own body is in the world the way that a heart is in an organism... it innerly nourishes and fills one with life and builds a single system with the spectacle" and goes on to add: "My body is ...at least in relation to the perceived world, the general instrument of my 'comprehension'" (Merleau-Ponty, 1978: 249).

he is not aware of most of the time, and adds that the human body is literally “the measure of direction, location, and distance.” (Tuan, 1977: 44); or ‘a yardstick’, as Rodaway (1994: 31) calls it. However, distance, height, depth, and width are spatial relations of the tangible and visible environment, but they are certainly not the only domain in which the body sets the perceptual scale. The rule applies to other units as well, such as mass, force, speed, density, intensity (e.g. of a sound, smell), etc. Thus, human experience of the acoustic environment depends upon the spatial range within which one can hear sounds of a certain volume, but also upon the range of human voice (i.e. the distance at which human voice of a certain volume can be heard). The speed and direction of body movement affect the orientation in the acoustic space as well. Similarly, in the state of idleness it can often easily be identified from which direction (in relation to the body position) a sound is coming. If one wants to smell a flower, they must come to a distance at which his sense of smell is capable of sensing the smell of that intensity (the body must be close enough) – otherwise, their experience of space is devoid of that olfactory quality.

Body dimensions and its abilities are instruments a human being measures their world with. “We behold, touch, listen and measure the world with our entire bodily existence” Pallasmaa (2005: 64) said. Just like Casey (1993) and Rodaway (1994), he believes that, in perceptual sense, the body functions as a centre of one’s world, whereat, Rodaway adds, immediate environment is reached with mere physicality, in addition to which the senses of sight, hearing, smell and touch bring closer that what is more or less outside of the immediate reach of the body (Rodaway, 1994: 32). Therefore, perception is, in its essence, physical (bodily). Proper understanding of the environment relies on the integration and coordination of three key elements: sense organs, the brain and the whole body.

Perception as a compound of biological and cultural dimension of a human being. Knowledge of the world of each individual is said to depend upon their biological ‘constitution’, physical (dis)abilities and sharpness of sense organs’ receptors. However, this is only a first prerequisite for successful perception. Human beings (at least the majority of them) do not live isolated, and their relation to the environment is culturally conditioned in two ways: first, the society – people around an individual – are an integral component of the environment, and secondly, the people with whom an individual is directly (family, friends, acquaintances) or less directly (others living in the same neighbourhood, town, country etc.) connected shape their mental preconceptions and schemata – attitudes and behaviour. Cultural standards of a society strongly affect perception, attitudes and the environmental evaluation of an individual (Tuan, 1990: 246). New knowledge constantly changes the existing system of notions and attitudes, either by fitting into them or by leading to a contradiction, Piaget (1960) notes. However, each new perception, a problem, idea or situation gradually fits into already established preconceptions,⁵⁷ Piaget (1960: 39) explains, in the way that the answer to it (behaviour,

⁵⁷ Piaget (1960: 39) describes the process as follows: “...the gradually constructed frameworks, classificatory and serial and spatial, temporal, etc., come to incorporate new elements smoothly; the particular section to be found, to be completed, or to be made up from various sources, does not threaten the coherence of the whole but harmonises with it.”

attitude)⁵⁸ does not require a thorough reconstruction and re-evaluation of the system, but “the solution to be found is attained simply by extending and completing the relations already grouped . . .”

Precisely due to the fact that a man from their birth lives within a certain culture, learning socially acceptable attitudes and behaviour, reactions and answers to situations, it is difficult to determine the boundary between the personal (biologically predetermined) and collective (socially and culturally conditioned) component of perception. It is, however, quite certain that experiences arisen through the interaction with the environment cannot be observed in isolation from the socio-cultural context a person comes from. The understanding of cultural forces (historical development, social, economic, geographic and other) is essential in the understanding of the spatial cognition. Even the way senses are used is inseparable from the culture it belongs to (Lawrence, 2011; Lynch, 1960; Mason and Davies, 2009; Merleau-Ponty, 1968; Pink, 2009; Rodaway, 1994; Tuan, 1979). Accepted cultural principles and habits do not only affect the understanding of gathered information, but largely determine sensory approach to life situations (i.e. the focus of attention). For instance, in contrast to Western civilization, in which the sense of sight is considered the most significant and dominant in the perception of the environment, in some other cultures the classification (hierarchy) of senses is completely differently organised, so that some other sense is considered dominant in gaining the knowledge of the environment (Storks, 2012).⁵⁹ In other words, cultural background regulates the way people observe and evaluate sensory characteristics. Rodaway (1994) also notes that the ability to observe, acquired at birth, is largely directed by assumed cultural schemata (i.e. learned behaviour, habits, generally accepted understandings and ideas), so that cultural dimension sometimes even seems to be a more significant factor of perception, enriching perception, he believes, with creativity and qualitative variability rarely suggested in strict stimulus-response models.

Perceptual sensitivity is for the large part learned through socialisation; visual, auditory, olfactory, tactile and gustatory experiences are filtered through the sieve of social milieu within which a person has become socialised, educated and familiarised, Rodaway (1994) concludes. It should be noted that culture is determined both by space and time, so that cultural matrixes are not only space-specific, but change within the same space over time. The correspondence of sensory information and the legacy of cultural practice create a sense of security and adaptedness, but should the information provided by senses and that which is suggested by the cultural system be in conflict, there comes to a misunderstanding and, consequently, information is either ignored and dismissed as a sort of illusion or it stimulates different ways of thinking, thus generating new ideas, habits and practices (Rodaway, 1994: 145). Due to changes in cultural routines or technological innovations,

⁵⁸ According to Norberg-Schulz (1975), attitude and behaviour portray Piaget's schemata, which can be defined as typical reactions to a certain situation, formed through the interaction of the environment and an individual during their mental development.

⁵⁹ Storks (2012) describes the integrative concept of sensory experience characteristic of Anlo-Ewe people of Ghana, which is expressed in the term 'seselelame': "It incorporates various sensations and actions such as aural and hearing; balance and equilibrium; walking and kinesthesia; visuality and seeing; tasting; smelling; vocality and talking. In short, seselelame expresses a sensory order inherently different from the Western five-sense model."

the acceptable mould of sensory experiences is constantly being redefined, which Rodaway calls the 'transformation' of senses.⁶⁰ In that sense, each culture is a unique space-time phenomenon.

To sum up, perception is a phenomenon which integrates the observer and the environment, sensation and cognition, simultaneous cooperation of all senses, coactivity of sense organs, the brain and the whole body, as well as the biological and cultural dimension of a human being. As such, it represents the essence of the relation with and towards the world.

2.3 PLACE IDENTITY AND LANDSCAPE SENSORIALITY

The concept of *identity* is wide and a common research topic in a number of social sciences and humanities. Since it is established on manifold levels and connected with numerous aspects, it is difficult to provide a single generally applicable definition of identity, for it is context-dependant to a certain extent. The term itself is derived from the Latin *identitas* (a form of *idem*), meaning 'the same', defined in Oxford Dictionaries Online as "the fact of being who or what a person or thing is" (Definition of identity..., 2014). The Longman Dictionary, on the other hand, looks at the concept from a sociological perspective, defining it as "the qualities and attitudes that a person or group of people have, that make them different from other people" (Identity, 2009). Although identity in general is not a topic of this thesis, it is worth noting its certain intrinsic aspects given by Kaymaz (2013: 742):

- Uniqueness of a thing or a person is central to the identity concept.
- Identity requires comparison between things of [*sic*] individuals.
- Meaning and experience play an important role in perception of the identity.
- Identity is never a stable construct; on the contrary it is a continuously evolving and dynamic phenomenon.
- Identity involves interaction with others.

In addition to the above aspects, continuity and difference represent yet two further significant aspects of identity (Južnič, 1993: 108; Kučan, 1996: 12). According to Južnič, both seem to imply temporality, since characteristics of something (a person, an object, space, a phenomenon) remain coherent over time (continuity) in spite of concurrent changes (difference).

2.3.1 Place identity

This doctoral thesis focuses on place or rather landscape identity. It assumes a continuous interaction of the man as an individual and a society, and its environment. The concept of 'place identity' has been introduced by Proshansky (1974: 551), arguing that the behaviour and experiences of an individual are, among other factors, conditioned by their interaction with the environment. In an abstract to one of his articles he defines place identity as:

⁶⁰ Rodaway (1994: 146-147) gives a detailed analysis of forms of senses' transformation by describing four basic and related processes: symbolisation, association, abstraction and re-assignment.

those dimensions of self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, feelings, values, goals, preferences, skills, and behavioral tendencies relevant to a specific environment (Proshansky, 1978: 147).

Space has a significant identification role for the man, Južnič (1993: 146) believes. He considers territory a key factor in defining a collective identity, whereat its boundaries do not only limit the physical space but the space of social interactions as well. Characteristics typical of each landscape, such as its relief, vegetation, waters, openness or closedness of space and natural resources, shape the way of life and human activities, thus influencing the character of a society, Južnič notes. Place identity, or territorial identity as he calls it, is among the most stable ones, due to the emotional relationship of the man and place. The identification with a place happens at multiple levels of place:

a living room is a particular *place*, a place for living. The same is true of other, more encompassing places, which you are simultaneously occupying at this very same moment: the apartment or house in which your living room is lodged, your neighborhood, your city, your state. Although their fit is looser, you are also distinguished by these places. . . . They too are living rooms. They serve to implace you, to anchor and orient you, finally becoming an integral part of your identity (Casey, 1993: 22–23).

Regional identity, which this thesis addresses, usually implies the distinctiveness of a certain region within a national territory. Some authors consider it rather significant in the process of national identity establishment and preservation (Brace, 1999).

Place identity is created on individual and collective level as well, constantly balancing between the two. Characteristics of a place become carriers of symbolic messages when a majority of a group (society) has a uniform attitude about their meaning (Kučan, 1996: 12; Stobbelaar and Pedroli, 2011: 324). In this shaping of the social perception of a place, a society acts as the message creator and an individual as the message recipient (Kučan, 1999: 261). At the same time the individual, with their personal identity and attachment to a society, partake in the establishment, reinforcement and preservation of collective identity (Južnič, 1993: 179). In the context of place identity, Kučan (1996: 14) explains continuity as a time dimension in the sense of preserving the meaning (i.e. symbolic message) of characteristics of a place from one generation to the next, while difference implies a comparison of a group with the other groups. Within a group, on the other hand, an individual seeks to identify themselves with others.

Collective place identity is not attached to a specific bounded territory, but to various landscape areas which are significant to a society (*topos*), landscape types and individual landscape elements and characteristics (Kučan, 1996). The symbols of collective identity that arise from the landscape are preserved for a longer time than those arising from socio-historical contexts, which change more rapidly over time (Sever, 2010).

The idea of place identity is closely related to a number of other phenomena such as place attachment, *genius loci*, sense of place and topophilia, all of which describe certain aspects

of the relationship between the man and the place. The concept of place attachment, precisely like its designation says, refers to emotional attachment of a person to a place, which is strongest to the one the person lives in, but exists with other places as well. A research by Hernández et al. (2007) has revealed that place identity and place attachment are distinct however interconnected phenomena.

Genius loci or ‘the spirit of place’ is a term which designates the distinctive character of an ambiance, the tone or atmosphere pervading a place or landscape. Many experts in this field consider it inherent to a particular place and existing regardless of our experience (Casey, 1993; Relph, 2012; Seamon, 2012b; cf. Merleau-Ponty, 1978: 295–96). The sense of place, on the other hand, might be defined rather as a personal experience generated in an individual by their interaction with the environment. In this sense, it depends on external parameters, but is partially conditioned by aspects of one’s personality (preferences, expectations, attitudes) and the current mood and state. Although *genius loci* and sense of place have been often used synonymously, Relph and Seamon insist that they are different. Relph (2012) has tried to explain it in terms of an everyday experience, suggesting that by shaping the environment a spirit of a place can be changed, but that a man’s sense of place, just like their memories, cannot be designed. Finally, Tuan (1990) introduced the concept of topophilia, defining it as a complex sensory and emotional relationship with a certain place.

2.3.1.1 Place identity from the perspective of natives and visitors

Place identity is often associated with the sense of belonging to a territory and to the society inhabiting it (Hernández et al., 2007; Južnič, 1993; Paasi, 2003: 479; Stobbelaar and Pedroli, 2011). However, this does not mean that conception of place, based on its distinguishing characteristics, exists only for natives. Stobbelaar and Pedroli note that many scientists distinguish between place identity seen from the perspective of people inhabiting it (some of the terms used here include existential identity, place identity, regional identity of the inhabitants) and identity from the perspective of others (called spatial identity, landscape character, identity of the region) (cf. Paasi, 2003). The first includes primarily emotions, the sense of belonging and a deeper knowledge of a place, all of which develop if one lives within it, while the latter is seen rather as the ability of those coming from ‘the outside’ to recognise a place by certain characteristics. The results of the study by Hernández et al. (2007) show that natives develop a more intense attachment to place and place identity than non-natives. The authors have also found that the researched aspects of place identity and place attachment strongly correspond in case of natives, while in case of non-natives first the affective attachment and then place identity is developed.

Natives and visitors necessarily understand one and the same place from different perspectives. The feelings one has towards their homeland, the period of residence at a certain place, the frequency of visits and the like all encourage the development of emotional ties and define the ways a person perceives, experiences and evaluates a place’s characteristics. Certain landscape characteristics might have a deeper, symbolic meaning for natives, while they can be only new or distinguishing for visitors, or on the other hand, may remain unnoticed at a superficial glance. A place may be recognised even by those that have never visited it. So are for instance the Eiffel Tower and French chanson music

visual and auditory symbols of Paris or even whole France, even for those that have never been there. Establishing such widely known conceptions, or as it is often referred to – the image of a place – has nowadays been made possible through advanced technologies and multimedia.

According to Paasi's (2003: 478) distinction, here the landscape identity of Dalmatia is seen as a composite of the identity of a region (i.e. the distinctiveness of its characteristics) and the regional identity or awareness (of those connected to the region and identifying themselves with it). The starting assumption of the research is that, although various aspects such as the period of residence or the frequency of visits have resulted in taking different perspectives, natives and visitors do not show considerable differences in terms of which landscape qualities carry the landscape identity of Dalmatia. These characteristics include primarily those that are distinctive and impose themselves as a specific feature of the place. It is primarily these features that natives identify themselves with, thus giving them an abstract dimension and making them common symbols which act as a cohesive factor within the group or a differentiating one in relation to the others. Visitors, on the other hand, perceive specific features of the place as a new and different experience.

2.3.2 Sensory dimensions and sensory landscape identity

In related sciences, landscape identity has been a hot topic, but there is still no coherent and clear interpretation that would encompass all its aspects (Stobbelaar and Pedrolí, 2011). This thesis does not seek to find such a definition, and, considering the often differing research perspectives and goals, this might not be possible or, even, beneficial. Therefore, not seeking to disentangle the extremely complex theory of place identity and related concepts, this doctoral thesis aims to research sensory landscape identity of the selected region, which is seen as its uniqueness contained in the dynamic intertwinement of distinguishing landscape characteristics. Uniqueness is considered one of the key aspects of identity and of the sense of place (Makhzoumi and Pungetti, 1999b: 52; Stobbelaar and Pedrolí, 2011: 322).

Recollections of a certain place, evoked either through reflection or an accidental stimulus, are sometimes stronger connected with auditory or olfactory experiences than with scenes. One of the best-known examples thereof is Proust's description of a series of involuntary memories of the main character in his novel *In Search of Lost Time: Swann's Way*, triggered by the taste and smell of a 'madeleine'. The author presents these sensory impressions as a strong connection to deeper layers of consciousness. It is, therefore, only logical to assume that one does not recognize, evaluate and remember a landscape solely by its visual characteristics, but that their relationship with landscape is defined through a variety of sensory experiences.

Due to the aforementioned dominance of the sight in Western culture, largely supported by existing technologies (Pallasmaa, 2005), almost all previous researches into landscape identity have addressed issues of visual identity, seeking and emphasising distinguishing visible landscape characteristics. In the last few decades, the interest in non-visual landscape characteristics has seen an increase in many scientific disciplines. Consequently, a variety of studies have taken place, which have proven the multisensory nature of human

perception of the environment as well as the importance of sensory characteristics of a place in various segments of human life. Most of the studies investigate into one particular modality. As a valuable contribution to the field, Rodaway (1994), Pallasmaa (2005) and Ackerman (1995), have given in their works a comprehensive overview of senses in geography, architecture and everyday life respectively.

This recent shift of focus to multisensoriality David Howes called a ‘sensory turn’ or ‘sensorial revolution’ (Howes, 2006b, 2012, 2013b). In this context, the understanding of the relationship between the man and the environment through the sensory paradigm is relatively new, but the growing number of related studies increases the understanding of its aspects. Researches on the topic predominantly include those into the diversity of sensory landscape characteristics, often urban ones, within one (or rarely more) modality. However, which of these characteristics are perceived as identity features of the researched place is an issue which has not been often dealt with. This doctoral thesis seeks to fill precisely this gap, assuming that landscape identity is established through distinctive auditory, olfactory, tactile, gustatory and, possibly, compound or multisensory characteristics.

2.3.2.1 Soundscape and auditory landscape identity

Alongside visible landscape, the sound has so far been the most studied sensory quality of the environment. Most often it is addressed in the context of noise pollution and the emphasis is put on urban soundscapes, while rural and natural ones are studied more rarely. The interest in environmental sounds has been on the rise, especially since the 1970s, when the World Soundscape Project was launched under the guidance of the Canadian composer and environmental expert R. M. Schafer (Schafer, 1994). In addition, a series of studies conducted under the Positive Soundscapes Project (Adams et al., 2008; Davies et al., 2013; Jennings and Cain, 2013) and Vivacity 2020 project (Adams et al., 2006; VivaCity 2020, 2013) in the UK have contributed greatly to the knowledge on urban soundscapes.

A valuable contribution to the field of auditory landscape identity is the project Sound Landscape and Intangible Territories⁶¹ and the papers arisen within it, which focus on the identification of typical sounds and soundscapes in Catalonia (Observatori del Paisatge de Catalunya, 2009; The Landscape Observatory of Catalonia, 2013). Another interesting study has been undertaken by Anzani (2010), examining how the chiming of the church bells in thirty villages of the municipality of Monte Stella in southern Italy (the province of Salerno, region Campania) creates the auditory landscape identity of the area. Although the bell sound has been singled out as a distinctive auditory characteristic of the locality, it does not mean that it is the only one. The auditory identity of a place may comprise a series of sounds typical of it.

⁶¹ The project was founded by Grup PaisatgesonorUB within the Department of Sculpture at the University of Barcelona School of Fine Arts, and supported by Landscape Observatory of Catalonia – an advisory body of the Government of Catalonia and Catalan society in general on matters of landscape.

2.3.2.2 Smellscape and olfactory landscape identity

The sense of smell is very significant for the man. Since it is mediated through inhaling, it is not possible to turn it off – we constantly smell what is around us. The experience of smell necessarily suggests the immersion into an aromatic medium, and is a very immediate and intimate way of environmental cognition. Laura López-Mascaraque and Diane Ackerman both argue that the man can distinguish among over 10000 smells (Grup de Recerca en Epistemologia i Ciències Cognitives, 2013; Ackerman, 1995). In addition, smells trigger emotional and physiological reactions rather than cognitive ones (thinking), for olfactory stimuli are not processed in the thalamus but are directly connected to the limbic system (Hoover, 2009: 237; cf. Porteous, 2006).

Aromatherapy has nowadays been widely known and accepted as a centuries-old activity and a skill of purposeful use of smells of plants' essential oils both for relaxation and stress reduction purposes, as well as for the prevention and treatment of various physical and mental ailments. Since aromatherapy has been established upon traditional experiences and information that are passed over from one generation to the other, in 1982, Annette Green introduced the concept of 'aroma-chology', which implies a new area of olfactory science, the aim of which is to scientifically determine smell components, mixtures thereof and their influence over the mood and emotions (Olfactory Research Fund, 2014). It is interesting, they note, that much knowledge from aromatherapy has been confirmed through these studies.

Just like other senses, smells are place specific and spatially defined. A smellscape is defined by a combination of spatial factors such as context (urban, countryside, wilderness), flora, fauna, climate, topography, seasons, industrialisation level, way of life and other, Drobnick (2002) argues. He also adds that smellscapes exist at various scales – from a continent, country, region, city, town, neighbourhood, house, room, to a drawer. For the man, smell represents a strong psychological connection with a place.

Although one easily adapts to smells they are surrounded with, so that they do not notice them sometimes (Martin, 2004: 249; Porteous, 2006), one's home always has a distinctive olfactory imprint, whether it is a house, a city or a region. A 1997 study conducted by Olfactory Research Fund, covering more than 350 participants, has shown that even 80% of participants used the environmental fragrances in their homes. Besides creating a desired atmosphere and mood, the use of potpourri, scented sprays and bedding refreshers gives a distinctive character, the identity to a living space (Olfactory Research Fund, 2014). This can be useful in real estate selling, for "[b]uyers are inclined to fall in love with the house simply because 'it smells like home.'" (Olfactory Research Fund, 2014: 22; cf. Ackerman, 1995: 56; Hoover, 2009: 238).

Modelled on Schafer's soundscape, Porteous (2006) introduced the concept of smellscape as an olfactory component of landscape. Just like Porteus, Drobnik (2002) has suggested a new research field, which he called toposmia (place + smell), whose central point of interest is the geography of smells and their connection with certain place concepts. His variant of the visual 'picturesque' is the concept 'odoresque', which he defines as "affective responses to place-specific smells that extend beyond the mere fact of noticing

its identification with a certain location.” (Drobnick, 2002: 33). However, compared to visual or even auditory diversity, olfactory diversity of ambiances has not been nearly as richly documented in the literature yet. In recent years, Victoria Henshaw and her associates have been extensively researching smellscape, primarily urban smellscape (Henshaw and Bruce, 2012; Henshaw et al., 2009, 2010). Taking a somewhat different approach, mostly through the analysis of literature, Dann and Jacobsen have described the smells of various world localities (Dann and Jacobsen, 2002, 2003). An additional issue that Classen has addressed is the absence of a uniform classification of environmental smells (Henshaw et al., 2009).

That places have distinctive smells, which give them a specific character and identity, most people know on the experiential, perhaps more emotional level, which is closer to the nature of smells, than on the cognitive level. “[O]dours are unique to their environment” says Hoover (2009: 237), and already back in 1977 Tuan noted that they “lend character to objects and places, making them distinctive, easier to identify and remember.” (Tuan, 1977: 11). Twenty years long research on the perception and evaluation of Dutch landscape has revealed that smell has a significant role for natives of various regions in identifying landscape (Coeterier, 1996). Describing smells in scientific and other literature can be very suggestive in the way that it sometimes gives the impression that these are typical of a considered location. However, it should be noted that not all detected smells are also characteristics of olfactory identity of a place. In fact, empirically supported data on olfactory identities of various places are rather scarce in the already limited body of literature on smells. One of the few examples is the study of Degen and Rose (2012: 3278), within which a participant recognised smells of fast food (chips, hot dogs and onions) as a characteristic of the identity of the city of Bedford. In brief, towns, cities, regions, landscapes all have olfactory identities, but which smells create it should be researched in detail.

2.3.2.3 Touchscape and tactile landscape identity

The sense of touch involves much more than mere touch (i.e. cutaneous contact). From neurological perspective it is an aggregate of various senses (Kabat-Zinn, 2013: 390; Paterson, 2007, 2009: 768) and consequently, as Rodaway (1994) argues a source of various kinds of relation to the environment. This sense includes experiences of shape, size, weight, density, texture and temperature of objects and surfaces in the environment (Pallasmaa, 2005; Rodaway, 1994), and experiences such as pressure and pain have been ascribed to it as well (Kabat-Zinn, 2013; Paterson, 2007, 2009; Rodaway, 1994). Although both Aristotle’s and modern hierarchy of the senses relegate the sense of touch to the last position (Paterson, 2007), tactile experiences are often described as the most intimate among senses (Paterson, 2007; Pocock, 2013), which arises from the immediacy of contact with the environment and the constant immersion into its dynamic medium.

Tactility is probably the landscape quality that has been least researched thus far. Physical, bodily contact with the environment one lives within seems to have been taken for granted, thus resulting in a lack of interest and need of researching a large number of various properties perceivable through that sense. Unlike soundscape and smellscape, the concept of touchscape has not taken hold in the scientific literature yet. It was only recently that

Kabat-Zinn (2013: 389) referred to it, calling it the landscape of touch, “the sensory field of ever-reciprocal direct somatic contact between ourselves and the world.” Tactile experience of the environment is both passive and active, Rodaway (1994) notes, for the man touches the environment, moves within it touching and sensing surfaces, objects and occurrences, but the environment touches him back as well:

Our skin traces temperature spaces with unerring precision; the cool and invigorating shadow under a tree, or the caressing sphere of warmth in a spot of sun, turn into experiences of space and place. . . . [W]e trace the density and texture of the ground through our soles. Standing barefoot on a smooth glacial rock by the sea at sunset, and sensing the warmth of the sun-heated stone through one’s soles, is an extraordinary healing experience, making one part of the eternal cycle of nature (Pallasmaa, 2005: 58).

It has been rarely noted that this sense allows the perception of the speed and rhythm of certain occurrences and objects in landscape, such as the speed of a wind, a stream or a river or the rhythm of sea waves when one sits at a beach with their feet in the sea. The diversity of tactile landscape characteristics (i.e. texture, temperature, density) has not been sufficiently researched. The absence of expressions suitable to describe them makes discussing on these even more difficult (limited terminology in this field). Consequently, tactile characteristics are scarcely observed as aesthetic or healing aspects in the shaping of new places. In this sense, Ong’s (2012) article on thermal characteristics as a factor of aesthetic experience of a place (or thermal aesthetics) is very valuable.

In the context of landscape identity, there have not been, so far as is known, any studies on tactile characteristics thus far.

2.3.2.4 Tastescape and gustatory landscape identity

Numerous books about gastronomy and culinary arts as well as cooking TV shows testify to the extreme interest for gustatory characteristics of places. The correlation between gustatory perception and landscape might be less obvious and direct, but it certainly exists. Foodstuffs available in the immediate environment and dishes made of them are conditioned by landscape characteristics (relief, climate and soil) on one hand and culture on the other, thus reflecting gustatory qualities and the character of a particular landscape.

Food, gastronomy and cuisine have been largely researched nowadays, especially in tourism-related sciences. It might be said that there is a consensus on the view that food cannot be observed separately from the geographic source, nature and culture it develops within (de la Barre and Brouder, 2013; Counihan, 1999; Harrington, 2005; Hashimoto and Telfer, 2006: 32). Visočnik (2005: 14), for instance, notes that the use of seasonal foodstuffs (*shun* or ‘now-in-season’) is one of the key principles of Japanese cuisine and the way the Japanese connect with the cycles of nature. Local foodstuffs reflect the local landscape, climate, farming and production practices and, therefore the lifestyle as well, and local tradition and heritage are enshrined in the food preparation. A particular combination of environmental and socio-cultural factors making overall experience of food

distinctive is sometimes referred to as ‘terroir’ (Bertella, 2011; Bessière, 2013: 16; Hoover, 2009; Quaranta and Salvia, 2011).

In addition to its being a gustatory expression of landscape, via food a multiple correlations with the natural and cultural character of a location can be established. Taking part in activities such as hunting and fishing (Hashimoto and Telfer, 2006), grape harvesting (Žaper, 2004: 237) or visiting family farms (Hjalager and Johansen, 2013: 419) may be a way of familiarising with and enjoying in a local landscape and a way of life (culture) for the purpose of gaining a full experience and the sense of place. In this context, traditional Dalmatian taverns are an integral element of the culinary experience, where the qualities of the ambience intertwine with and intensify the flavours of food and beverages. Landscape depictions on packaging also suggest the endeavour to connect characteristics of a place with food (Hjalager and Johansen, 2013: 419).

Just like in other fields, globalisation has led to the blurring of boundaries between groups and nations, breaking the ties with one’s ethnic origins and causing the loss of identity. Trade, transport possibilities and the exchange of knowledge and goods has allowed for a wide availability of once hard-to-obtain and unknown foodstuffs and of knowledge as to their usage and preparation. As a result, Visočnik (2005: 8, 16) explains, recipes are no longer passed through the experience of past generations but are found in cookbooks, and personal preferences rather than heritage prevail in the choice of food, so that food has become more and more detached from tradition and its original locality. However, it seems that precisely the global trend of travelling offers a solution to the preservation of gastronomic diversity. “It is the existing cultural diversity in conjunction with increased mobility which engenders value in local food, local stories, and local ways of life.” (de la Barre and Brouder, 2013: 215). Researchers and local communities observe more and more the significance of the regeneration of local, regional and national culinary and gastronomic specialities as mechanism for the identity preservation. Food and gastronomy have been emphasised in many recent works as not merely the driving force of tourism but also a reflection of the character of landscape and cultural identity of an area (Bertella, 2011; Bessière, 2013; Everett and Aitchison, 2008; Everett and Slocum, 2013; Harrington, 2005; Hashimoto and Telfer, 2006; Hjalager and Johansen, 2013; Sánchez-Cañizares and López-Guzmán, 2012; Sims, 2009; Visočnik, 2005).

The fun part of getting to know the gustatory character of a place is searching for and tasting various flavours directly in a landscape. Hjalager and Johansen (2013: 419) make reference to a study which has found that foraging for food in nature, such as mushrooms, berries, nuts, fruits and the like increases the meaningfulness and value of a visitor’s experience. Being a Mediterranean region, Dalmatia is abundant in edible fruits throughout the year – mushrooms, strawberry-tree (*Arbutus unedo*) berries, medicinal and aromatic herbs, carob, myrtle, asparagus, wild fruits, almonds, figs and, of course, various seafood, to name a few.

Food and culinary tourism can contribute to the development and reinforcement of a regional identity (Everett and Aitchison, 2008; Hashimoto and Telfer, 2006; Žaper, 2004). In this thesis, gustatory identity includes foodstuffs, products (e.g. prosciutto, cheese, olive

oil, salt-cured olives), local dishes and pastries as well as flavours available in the immediate landscape.

2.3.2.5 Multisensoriality in landscape experiencing

In everyday life, individual senses cannot (or very rarely can) be isolated from an overall experience. Each moment is a synthesis of various sensations, which merge into a continuing flow of perception. „Smell impressions cannot be restricted to the nose, just as sight, sound, touch, and taste cannot be restricted to eyes, ears, hands, and tongue respectively.“ (Stenslund, 2012: 641). The sensory pair smell-taste is probably most widely known, but other seemingly completely independent senses may be connected and interdependent (Dugan and Farina, 2012: 377–378; Howes, 2006a). Different types of stimuli often carry congruent, ‘redundant’ or contradictory environmental information (Howes, 2006a, 2006b).

A combination of modally different stimuli or a phenomenon when one stimulus causes also other sensory associations have sometimes been referred to as synaesthesia. Since synaesthesia is in medical terms a „very rare condition in which the stimulation of one sensory modality is accompanied by a perception in one or more other modalities.“ (Howes, 2006b: 162), outside the medical context it can be appropriately used only figuratively. Howes (2006b: 164) believes that it is more suitable to use the term ‘intersensoriality’ to describe the everyday experiential complexity and to clear up the confusion that has arisen through the usage of the expression ‘synaesthesia’:

intersensoriality need not mean a synaesthetic mingling of sensation. The strands of perception may be connected in many different ways. Sometimes the senses may seem to all be working together in harmony. Other times, sensations will be conflicted or confused. Either state may be employed as a social or aesthetic ideology.

This concept does not imply a particular order, hierarchy on one side or harmony and equality of senses on the other, Howes (2006b) claims, pointing that the hierarchy of senses is determined by the cultural context. Multisensoriality suggests diversity of sensation combinations which depend upon a situation, in which even the usual hierarchy of senses can be instantly changed.

It is assumed that landscape characteristics involving modally different sensations or those that may trigger different sensory associations shall be found within this research (e.g. lavender evokes the purple flower and an intense aroma). Experiences involving a combination of sensations are referred to as compound experiences.

3 THE REGION OF DALMATIA AS A RESEARCH AREA

A region is considered the basic spatial unit in geographical researches (Mirošević, 2011b). According to Lyle (1985: 45), regional scale is “. . . large enough to include full ranges of human and natural interactions but still small enough to allow us to perceive the details that give emotional meaning to the whole”. Since the term is semantically vague, it allows the flexibility of spatial determination within the framework of an individual task, in accordance with specific requirements and aims.

The key factor in defining the range of a region is the homogeneity of one or more characteristics, by means of which, despite the internal diversity of locations, it forms a coherent whole and distinguishes it from other regions.⁶² Nonetheless, each landscape, Lyle (1985) notes, is connected to other landscapes into a single network which extends throughout the Earth. Therefore, most regions, with the exception of administrative ones, do not have exactly defined borders, for the characteristics they are based on gradually change in space (be it for the gravitational force of the centre of nodal, economic or metropolitan regions, the alteration of plant communities towards other geographical region, etc.). Hence, it is difficult to exactly define the area of Dalmatia, for, based on historical, cultural, linguistic, landscape and other criteria it exceeds the borders it is set within nowadays. Dalmatia cannot be qualified as a homogeneous geographic region, but the combination of these elements and the way of life make it a space with an identifiable sense of place, both in and outside Croatia.

3.1 CONNOTATIONS OF THE NAME DALMATIA

Taking into account the turbulent history of this area, the name *Dalmatia* can be very vague and it often implies diverse borders to different people or groups. Namely, Dalmatia is the name for one of the oldest historical and geographic regions on the Adriatic coast, first mentioned, according to literature, between the end of the 2nd century B.C. (Dalmacija, 2001: 7; Faričić, 2003; Mirošević and Vukosav, 2010: 89) and 1st century A.D. (Dalmacija, 2005) as a horonym for the area inhabited by the Illyrian tribe of Delmata (or Dalmata). In Roman times Illyricum was divided into two provinces: *Pannonia* in the north and *Illyricum* in the south, but the name Dalmatia soon prevailed for the latter (Dalmacija, 2001; Mirošević and Vukosav, 2010). According to Mirošević and Vukosav (2010: 87), the name remained in European culture for a long time,⁶³ denoting “most of the antique province which encompassed the largest part of the Eastern Adriatic coast, including the vast hinterland.” Since then, spatial range of Dalmatia has significantly changed over history and within different social systems, but the name remained.

In the first half of 20th century (i.e. with the fall of the Austro-Hungarian Monarchy in 1918) Dalmatia ceased to exist as a political and organizational entity and has never been organized as such ever since. The loss of the status of an administrative entity and further fragmentation and manipulation with the territory within various political and territorial

⁶² Defining characteristics may be anthropogenic (cultural, economic, social, religious, ethnic) and natural (geological, pedological, climatic, biological – flora and fauna and many others), or a combination of the two.

⁶³ According to Mirošević and Vukosav, by the late Middle Ages

systems in the second half of the 20th century meant also the loss of organizational and territorial borders. Hence, the corresponding spatial range of the region cannot be clearly determined nowadays. One of the reasons behind this is the fact that southern Croatia does not have common natural and geographical characteristics based on which it could be defined as a geographical region; namely, natural conditions are very similar in the north-western (e.g. Kvarner Littoral, Istria), and south-eastern part of the eastern Adriatic (e.g. the coast of Montenegro). In addition, Dalmatia can hardly be considered a single economic region, Mirošević (2011b) claims, for, in that sense, the area functions better on the level of subregions gathered around major cities as economic centres.

According to Mirošević (2011b), contemporary spatial comprehension of Dalmatia is largely based on the borders it had during the last Austrian governance (1815-1918) under the name The Kingdom of Dalmatia (Fig. 1), and for the most part overlaps, even today, with the coast and hinterland area of Croatian central and southern Adriatic.



Figure 1: The Kingdom of Dalmatia at the time of Austro-Hungarian monarchy (Lučić et al., 1994: 40)
 Slika 1: Kraljevina Dalmacija v času Avstro-Ogrske (Lučić et al., 1994: 40)

According to the generally accepted division of Croatian littoral, recent literature (in the last 50 years) adds the area of the so-called southern Croatian littoral to the term Dalmatia, and northern Croatian littoral refers to Istria and Kvarner (Crkvenčić et al., 1974;

Dalmacija, 2005, Veliki atlas..., 2002; Magaš, 1998; Riđanović et al., 1975). Furthermore, General and National Encyclopaedia (Enciklopedija..., 2005) describes today's borders of Dalmatia – from Tribanj-Krušćica in Podvelebit littoral in the northwest to the Cape Oštro at the border with Montenegro on the southeast; the land border is defined by the chain of mountain ranges – the Velebit, the Dinara and the Kamešnica – and mainly coincides with the state border with Bosnia and Herzegovina; on the sea it includes the island of Pag and all other islands southeast of the Kvarner door (Fig. 2). Within these borders, Dalmatia encompasses an area of approximately 12000 km² (Dalmacija, 2001, Dalmacija, 2005). As shown on Fig. 2, Dalmatia is located somewhere between the former Kingdom of Dalmatia and today's county division of Croatia.⁶⁴

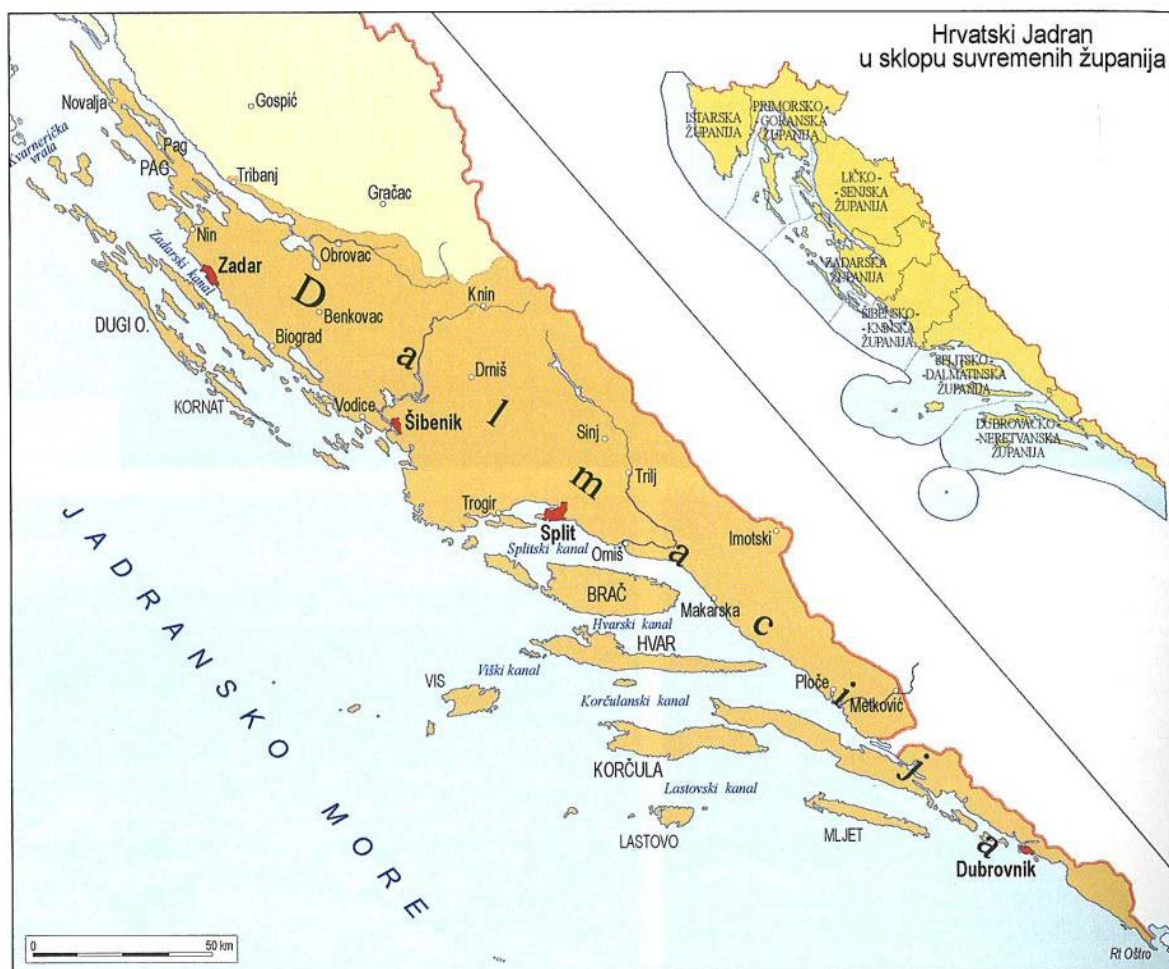


Figure 2: Dalmatian region today (Dalmacija, 2005: 294)
 Slika 2: Današnji obseg Dalmacije (Dalmacija, 2005: 294)

Namely, through the administrative division of the contemporary Croatian state territory, four counties have been formed in the area of Dalmatia (from northwest to southeast):

⁶⁴ There are certain discrepancies between the "Austrian" Dalmatia and today's county organization. Namely, the four today's 'Dalmatian' counties do not include the island of Rab, northern Pag, the fjord of Boka Kotorska and a part of the coastal area in Montenegro (Mirošević, 2011a: 59). On the other hand, the County of Zadar includes the area of South Lika and upper Pounje, which did not belong to the Kingdom of Dalmatia.

Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva. Their territory overlaps almost completely with the borders of Dalmatia indicated on Fig. 2, with the exception of the north-western border of the Zadar County, which excludes the north-western part of the island of Pag (beyond the municipality of Kolan)⁶⁵ but includes a part of the Velebit hinterland (a part of Lika and the surroundings of Gračac), which geographically and culturally do not belong to Dalmatia.

Notwithstanding the fact that all four counties are located in the historical and geographical area of Dalmatia, only one of them (Split-Dalmatia county) carries the name Dalmatia in it, for which there is neither a clear reason nor a support in relevant historical and geographical facts, argue Faričić (2003) and Mirošević (2011b). Capital cities of the counties – Zadar, Šibenik, Split and Dubrovnik, are larger urban centres of Dalmatia, all located on the coast. Their gravitational influence has led to one of the most common subregional divisions – northern (area of Zadar and Šibenik), central (Split area) and southern Dalmatia (Dubrovnik area) (Brozović, 2001).

Researching the contemporary spatial perception of Dalmatia with the aim of defining its spatial framework as a vernacular region⁶⁶ – the one established upon collective perception about common territory, culture and history, Mirošević (2011b) has conducted an interesting study into the extent to which regional Dalmatian identity is manifested on the area ranging between the last administrative territory of Dalmatia (the Kingdom of Dalmatia) and the four counties it implies in the contemporary organization of Croatian territory. With a particular emphasis on bordering areas, her aim was to investigate the existence, spatial distribution and intensity of the regional identity within given borders. The results indicate that the absence of administrative and territorial framework and clearly defined elements of regional identification have been causing a gradual fragmentation of the modern region of Dalmatia. As a formal type of cultural region (defined by common history and territory)⁶⁷, the nucleus of Dalmatia is formed by islands and coastal areas gravitating to Zadar, Šibenik and Split. However, the nucleus of the vernacular region is concentrated around Split, Šibenik and certain southern areas (Opuzen, Pelješac, Korčula). In brief, the central part of Dalmatia (mostly the territory of the County of Split-Dalmatia) is in the focus of Dalmatian regional identity; while the north-western and the south-easternmost part – the areas gravitating to Zadar and Dubrovnik – go beyond the boundaries of vernacular Dalmatia's nucleus.⁶⁸ Thus, territory is, as Mirošević (2011a,

⁶⁵ On the north-western border of the municipality of Kolan, the island of Pag is divided so that it belongs to two counties – its southern part to the County of Zadar and the north part to the County of Lika-Senj.

⁶⁶ A vernacular region is perceptual, based on the perception and experience of space by local inhabitants and other people – in other words, by average people (Jordan, 1978; Zelinsky, 1980). It has not arisen, they explain, as a result of a political division (hence, it does not have an administrative character), is not based on pre-set criteria (economic, ethnic, linguistic) and is also not a product of scientific geographical classification of space. In Jordan's word (1978: 293), "... [vernacular] regions are composites of the mental maps of the population." Therefore, vernacular region can be said to arise from the sense of belonging and identification of people with the area they inhabit.

⁶⁷ Mirošević defines the formal type of cultural region through the analysis of relevant documents (mostly historical and geographical, but also sociological, political, economic and other), while the knowledge on the range of vernacular region has been acquired through a questionnaire.

⁶⁸ Mirošević (2011b) has applied the intra-regional definition according to the model nucleus-range-sphere for the formal and vernacular type of cultural region.

2011b) suggests, one of the key factors of collective spatial identification, and political and administrative organization a further factor in constituting its levels (i.e. local, regional, national etc.).

Though Dalmatia does not exist in contemporary Croatia as an administrative, political and functional entity, the name, as well as the denomination Dalmatian (an inhabitant of Dalmatia) and the corresponding attribute Dalmatian (referring to Dalmatia), are still deeply rooted in the consciousness of local inhabitants and recognizable to others, both to people from other parts of Croatia and from abroad. In that sense, nowadays Dalmatia has the character of a historical and geographical and particularly traditional or vernacular region, Mirošević (2011b) claims. Its inhabitants identify themselves with its natural, geographical, historical and cultural characteristics, calling themselves and feeling to be Dalmatians.

Some of the main factors in the long-time creation of the strong connection of the inhabitants of Dalmatia with its space were historical and political processes, which often changed the face of Dalmatia on the map. In times of the absence of an administrative basis, the perception of Dalmatia survived in the form of mental images, that is, in the memory of the common territory, and precisely this keeps Dalmatia alive as region nowadays, Mirošević adds (2011b: 6). Namely, her research has shown that the identification of today's local inhabitants with Dalmatia balances between the memory of the territorial range of Austrian Dalmatia and the contemporary administrative frame of the four Croatian counties, with the focus of identity in the County of Split-Dalmatia. Likewise, she notes, a significant element in the regional identification is the long tradition of its name – the horonym *Dalmatia*, one of the oldest regional terms in Croatia (Crkvenčić et al., 1974), which is, alongside the common past and culture, the main element this vernacular region is established upon.

The territory of Dalmatia is often perceived through three characteristic subregions – the islands, the littoral or the narrow coastal strip and the hinterland, which is known under the toponym *Dalmatinska Zagora* (or *Zagora*).⁶⁹ Landscapes of these subregions show certain differences, primarily with regard to characteristics of their relief, climate (as microclimate or specific weather conditions) and vegetation. Moreover, the separation of the coastal area from the other two subregions, caused by natural 'barriers' – the sea separating the islands, and mountain ranges separating *Dalmatinska Zagora* – has further contributed to their characteristic historical, cultural and sociological shaping. Thus, differences in the way of

⁶⁹ The term *Zagora* is said to be derived from the term 'behind the hills' (Erceg, 2007) or, as Vukosav (2011: 263) puts it, "on the other side of the mountain". Some sources indicate that *Zagora* denotes a historical-geographical region in Croatia which includes a narrow Split-Šibenik hinterland (Vukosav, 2011; *Zagora*, 2012). The toponym *Dalmatinska Zagora* was introduced relatively recently, in Yugoslavia after the WW II and includes the land part of Dalmatia not directly on the coast, from the river Krka near Šibenik to the river Neretva (i.e. the hinterland of the northern and central Dalmatia) (*Dalmatinska Zagora...*, 2011, *Zagora*, 2012; Vukosav, 2011). The term has been widely used ever since, both by local inhabitants and in the scientific and non-scientific literature, as a historical and ethnocultural term for areas that had always been separate entities and had their own names – Kninska krajina, Drniška krajina, *Zagora*, Mučki kraj, Vrlička krajina, etc. (*Dalmatinska Zagora...*, 2011, *Zagora*, 2012). Vukosav (2011: 263) gives a good cartographic representation of the spatial range of *Zagora* and *Dalmatinska Zagora* (which is a narrower area), noting that both the toponyms *Zagora* and *Dalmatinska Zagora* do not exist as formal or administrative geographical entities.

life and habits, dominant activities and other social customs are consequently manifested in landscape characteristics, particularly that of cultural landscape. Despite the fact that the islands, the coast and the hinterland are separated and that different factors affect their development, and perhaps even due to the fact that they are located in a relatively narrow area and are hence interdependent, they show exceptional interconnectedness and can be observed as a single and functional entity – the region of Dalmatia. The results of Mirošević's (2011b) research confirm this as well, for they show that, though the elements constituting the regional identity are not homogeneous, but differ in terms of dialects, mentality, cultural practices, economic activities and the like, they are recognized as common Dalmatian characteristics, upon which its inhabitants as well as others outside the region of Dalmatia build the identity of Dalmatia.

3.2 THE SCOPE OF THE RESEARCH AREA

Today the name Dalmatia exists only as a historical horonym that has remained through a turbulent history of this area in the memory, consciousness, and identity of local and even wider population (Mirošević, 2011b). In order to facilitate the implementation of the methodology, the research area shall include the territory of the four counties with the exception of the northernmost part of the County of Zadar belonging to Lika (Fig. 3). Furthermore, the northern part of the island of Pag, though belonging to Dalmatia according to the previously shown map of the region, shall not be researched, for it territorially belongs to the County of Lika-Senj. In the Velebit area, the border between the Counties of Zadar and Lika-Senj goes for the most part over the ridge of Velebit, whereat the southern slope is mostly under the influence of the Mediterranean and the northern slope of mountain climate. The span of the region is determined by Velebit, that is, the line it stretches along, and includes the river of Zrmanja, the area towards Knin, where it turns north-east toward the state border with Bosnia and Herzegovina.

In the context of subregional division, it would not be either possible or correct to reduce Dalmatia only to the coast and the islands, for in the consciousness of the local inhabitants as well as of other Croats it always includes the hinterland as its inseparable component. Their intertwinement can be seen in all segments of life and social interactions. Hence, Dalmatia is observed as a single, undivided area, so that the research shall include all three subregions – the coast, the islands and the hinterland. In order to avoid ambiguities as to the term Zagora or Dalmatinska Zagora and the space they refer to, the term (Dalmatian) hinterland shall be used here for the land part of the region, the one which is beyond the narrow coastal strip. Since the relief is dynamic, it is difficult to define the width of the coastal strip; however this is irrelevant for the purpose of the research.



Figure 3: The scope of the Dalmatia in this thesis: four counties in Southern Croatian Littoral, except the northeastern part of Zadar County. The map was taken from the Internet (maplab, 2010; Political Map..., 2013) and additionally elaborated.

Slika 3: Obseg Dalmacije v tem delu: štiri županije v Južnem hrvaškem primorju, brez severovzhodnega dela Zadrške županije. Zemljevid je dodelan na podlagi zemljevidov, prevzetih s spleta (maplab, 2010; Political Map..., 2013).

3.3 GENERAL NATURAL AND GEOGRAPHICAL CHARACTERISTICS OF DALMATIA

Natural resources are fundamental to landscape character and one of its two basic formative forces.⁷⁰ Naturally, in inhabited areas landscape is largely shaped by the other factor – human activity, but natural and geographical conditions (i.e. geological structure, relief, hydrological characteristics, soil, climate, plant life, etc.) represent the general framework which is further modified by the man. It is assumed here that precisely natural resources of the place, such as sounds, smells and tactile sensations arising from the nature

⁷⁰ The identity of a region is built upon natural landscape characteristics, which can be observed even in zones with highly developed culture (e.g. cities), Hough (1990: 15) believes: “Wherever one goes in Hong Kong, the grandeur of its setting – mountain, sea, and enclosing harbor – and its tropical climate and vegetation are the most clearly understood expressions of the place.” Further, landscape approach to regional planning implies that the landscape character of a region is based on natural resources (cf. Lyle, 1985: 45).

itself represent a significant segment of the sensory landscape identity of Dalmatia. Thus, elementary geographical characteristics of the region shall be described in the following passages.

3.3.1 Geological and soil characteristics

Due to its position on the Adriatic coast, Dalmatia is considered a typically Mediterranean region, not only for its climate, but also for its flora, fauna and the way of life. From the geological point of view, it is a mostly karst area made of limestone and dolomite, with occasional flysch zones such as Ravni Kotari (Zadar hinterland), which is, according to Croatian Encyclopaedia (Brozović, 2001: 7), one of the largest areas of fertile land in the Mediterranean. North-eastern edge of Ravni Kotari is characterised by karst foothill called Bukovica, with very little fertile land (Magaš, 1998). The flysch zone is also significant for certain parts of central Dalmatia's littoral – in the area between Trogir and the mouth of the river Neretva – where loose and fertile soil can be found, which is manifested in the landscape as verdant, cultivated land (Crkvenčić et al., 1974). Limestone slopes, on the other hand, are often rocky and grey, with relatively sparse plant life at different degradation stages. In the Dalmatian hinterland as well as inland of larger islands, karst areas with fertile red soil are commonly found, representing large picturesque agrarian valleys amidst otherwise karst and hilly terrain (e.g. Sinjsko polje, Imotsko polje, Vrgoračko polje, etc.).

Hydrological characteristics of the region can be summed up into one conclusion – there is relatively little surface water, but a „great richness and complexity of the circulation of underground waters . . .” (Crkvenčić et al., 1974: 27). There are four significant rivers in the area of Dalmatia: Zrmanja, Krka, Cetina and Neretva, all belonging to the Adriatic basin. They introduce an interesting dynamics into the predominantly karst terrain, thus making Dalmatia even more diverse in many respects. An insight into the way of life by a river and elsewhere in Dalmatian hinterland, the experience of the mentality, cuisine and atmosphere completely different from those on the coast and islands, which are just a few kilometres away, has been more and more recognized in the tourism industry of the region in recent years.

3.3.2 Relief

The most significant characteristic of Dalmatia's relief is the indented coast, both in terms of the coastline, as well as in abundance of islands and islets. The coast stretches in the direction NW-SE and many islands are parallel with it, which is called 'Dalmatian coast type' in literature (Crkvenčić et al., 1974; Dalmacija, 2001, Dalmacija, 2005; Magaš, 1998). This characteristic is best visible in the Zadar archipelago. High limestone mountains rising over the sea are yet another significant characteristic of the relief. The southern end of Croatia's longest mountain Velebit, with its peak at 1757 m asl, is located in the NW part of the region and makes an impressive scene (PP - Velebit, 2012). Its southern, coastal slopes are mostly rocky and grey, with sparse vegetation, primarily due to the strong north wind (bora) blowing here frequently, particularly during winter months. Along the Dalmatian coast, the littoral of the Zadar County is the only area with no mountains or hills. Together with the hinterland, it forms a single lowland area with barely

dynamic relief (up to 200m asl) (Magaš, 1998). The coast south of Šibenik has transitional characteristics of a medium high mountain, and along the coast from Split to Dubrovnik there are high mountains, such as the especially prominent Biokovo (with the height of 1762 m).⁷¹ The mountain range is discontinued only by the Neretva River delta, one of the most fertile zones in Dalmatia, with numerous citrus orchards and other crops. With their characteristic location, hills and mountains narrow the coastal area and separate it physically from the hinterland. The area behind them is usually called Dalmatian Zagora (*zagora* = behind the hills), which does not exist only in the southern part of the region (the County of Dubrovnik-Neretva) (Magaš, 1998), where the state territory is very narrow. The term Zagora is not used for the hinterland of Zadar as well, for that part of the littoral, as mentioned above, has no mountains and hills.

3.3.3 Climate

The climate of Dalmatia is typically Mediterranean, with hot, dry summers and mild, rainy seasons from autumn to spring. Given the highly dynamic relief (i.e. high mountains in the littoral and a number of relatively large islands), the effect of the open sea and of the inland, considerable climatic differences can be observed depending on the location (Crkvenčić et al., 1974; Kovačić et al., 2008). Still, certain general characteristics can be isolated. Unlike in the summer, when the weather is relatively stable, the weather is much more variable during the winter, with frequent changes in temperature, humidity, cloud cover, wind and air currents (Crkvenčić et al., 1974). Average summer temperatures range between 20 and 26°C, sometimes even reaching up to 40°C in July, and average winter temperatures range between 6 and 9°C (Dalmacija, 2001; Kovačić et al., 2008). Interestingly, temperatures do not considerably change with distancing from the coast, but in the direction NW-SE (Dalmacija, 2001).

Winds are yet another significant factor affecting the climate and weather in Dalmatia, with bora and sirocco as dominant winds in winter months and mistral (maestral) during the summer. Bora is an extremely cold, north or northeast wind, blowing in gusts and generally bringing clear and dry weather. Sirocco, on the other hand, is a warm south wind which brings wet, rainy weather, and often big waves in the open sea. Mistral is a light northwest wind blowing during the summer from the sea to the mainland and bringing the much needed refreshment on hot summer days. South Croatian littoral belongs to the sunniest parts of the Mediterranean, especially the islands in central and southern Dalmatia (e.g. Hvar with 2 715 hours of sunshine a year) (Crkvenčić et al., 1974; Kovačić et al., 2008). This characteristic is one the main factors that make Dalmatia attractive. However, it causes droughts – a problem typical of this area, especially during warm months (i.e. in the period between April and September). Among other factors, droughts are caused by the uneven distribution of precipitation, both with regard to its time span (per months) and space (depending on the relief).

Due to the warm Mediterranean climate, the Adriatic Sea is a relatively warm sea, with temperatures rarely dropping below 11°C (Kovačić et al., 2008). During the summer, the

⁷¹ The mountain range consists of mountains Kozjak, Mosor, Biokovo, Omiška Dinara, Rilić, Opor and Vilaja.

sea is very warm and pleasant for swimming, as the temperature near the coast is often above 25°C. The sea has a strong thermal effect on the islands and the littoral, which is significantly more apparent during the winter than the summer (Crkvenčić et al., 1974: 21; Filipčić, 1993: 156–157). Unlike the land, it heats and cools down slowly, so that the islands and the coast are significantly warmer than inland during the winter. During the summer, however, temperature on the coast and the hinterland are not that different, that is, “the Adriatic sea does not cool the coast that much so as to make it colder than the inland”, Filipčić (1993) notes.⁷² Another characteristic of the Adriatic Sea is its high transparency, which has in turn given it a beautiful turquoise-green-blue colour, especially in shallow parts, and which is one of the reasons it is often referred to as crystal clear. With the salinity of approximately 38‰, the Adriatic Sea belongs to more saline seas.

3.3.4 Vegetation

The vegetation of Dalmatia, with mostly Mediterranean species, is a result of the natural and geographical conditions but also of the man's influence. The flora of the coast, islands and the hinterland is extremely rich, with numerous endemic species, particularly at isolated areas such as offshore islands and high mountains (e.g. Biokovo) (Kovačić et al., 2008).⁷³ Many species of the area are evergreen, which makes Dalmatian landscape look relatively lush and green even during the autumn and winter. Furthermore, many plants - their flowers, leaves or other parts - have a distinctive smell, so that vegetation is a major source of olfactory experience. Much of the plant life in Dalmatia belongs to the strip of the Mediterranean littoral (coast), which is divided into three distinct zones: steno-Mediterranean, eu-Mediterranean and sub-Mediterranean (Alegro, 2000; Trinajstić, 1998).⁷⁴ The vegetation covering the steno-Mediterranean zone, which includes most islands of the central and south Dalmatia and the mainland south of Split, are Aleppo pine forests (*Pinus halepensis*) as well as other typical species (e.g. *Myrtus communis*, *Pistacia lentiscus*, *Ceratonia siliqua*, *Juniperus oxycedrus*, *Smilax aspera* etc.). Holm oak (*Quercus ilex*) with similar species is characteristic of the eu-Mediterranean zone,⁷⁵ which includes

⁷² The weaker climatic influence of the Adriatic sea in the summer than in the winter, Filipčić (1993) explains through the fact that the Adriatic Sea is just a bay of the Mediterranean, surrounded on three sides by land. The cooling maritime influence can be felt only at a greater distance from the coast, offshore islands and long or relatively small islands.

⁷³ The European Mediterranean is well-known for the extreme diversity of its flora. Namely, according to Kovačić et. al. (2008), though it makes only 1.6% of the Earth's surface, approximately 10% of all known plant species can be found here.

⁷⁴ It is suggested in literature that, within Mediterranean region, in Croatia, aside from the strip of Mediterranean littoral there is yet another zone – Mediterranean-montane (i.e. mountain strip), which can be found at high altitude (Alegro, 2000; Trinajstić, 1998). As a continuation of the sub-Mediterranean vegetation of the Mediterranean littoral zone, it includes epi-Mediterranean and hemi-Mediterranean zone, the first of which includes plant communities (forests of hop hornbeam (*Ostrya carpinifolia*) and pubescent oak (*Quercus pubescens*)) in the continental part of the littoral, mainly along the Dinara mountain range, and in the south Croatian littoral (i.e. Dalmatia) at altitude between 600 and 950 m. The vegetation of the latter, hemi-Mediterranean zone, with forests of Dalmatian black pine (*Pinus nigra* ssp. *dalmatica*), holm oak and hop hornbeam, is mostly found on islands of central and south Dalmatia and some parts of southern Dalmatian littoral, above 400m asl.

⁷⁵ Common species of this zone include myrtle (*Myrtus communis*), strawberry tree (*Arbutus unedo*), tree heath (*Erica arborea*), bay laurel (*Laurus nobilis*), virgin's bower (*Clematis flammula*), prickly ivy (*Smilax aspera*), laurustinus (*Viburnum tinus*), minorca honeysuckle (*Lonicera implexa*) and many other (Alegro, 2000; Kovačić et al., 2008).

the very narrow littoral strip and most of the south Adriatic islands. This zone's species are extremely well-adapted to arid conditions and, according to Alegro, make the most stable ecosystem of the Mediterranean. However, due to the long human intervention into it (deforestation for various purposes), holm oak forests can rarely be found and are mostly in different degradation stages of maquis, garrigue and eventually rocks (Alegro, 2000; Crkvenčić et al., 1974). Numerous aromatic species, which contain a lot of essential oils, Alegro notes, are typical of degradation stages, thus certainly giving a strong olfactory character to such a landscape. The third, sub-Mediterranean zone mainly includes the hinterland, where even weather conditions are somewhat different (average temperatures are lower and precipitation higher than in the eu-Mediterranean zone). Its vegetation consists of deciduous forests of oriental hornbeam (*Carpinus orientalis*) and pubescent oak (*Quercus pubescens*), as well as English oak (*Quercus robur*) south of Zrmanja, which are often at various degradation stages (Alegro, 2000).

3.3.5 Interweaving of landscape and culture

The abovementioned natural and geographical conditions, particularly the warm Mediterranean climate, have moulded the way of life and culture of Dalmatia, which can be observed in various forms in its landscape. The karst terrain and abundance of stone have made stone the main construction material in traditional construction, with green or blue window panes, narrow stone-paved streets, squares and waterfronts. The stone is not only significant in natural and urban, but also in rural and 'open' cultural landscape. Namely, agriculture and sheep husbandry belonged to the most widespread activities for many centuries, whereat people dug stones from the ground and used it to fence their land – pastures and fields, but were also useful in preventing erosion caused by rain and wind. Dry stone wall technique has been brought to perfection due to the long tradition in its construction; stones without a bonding material have been piled to make kilometres of dry stone walls, numerous circular-shaped dry stone houses (Croatian: *bunja*) and tumuli.⁷⁶ One of the distinguishing elements of Dalmatia's cultural landscape are vineyards, olive orchards and other orchards.

The way of life on the coast and islands is also strongly moulded by the sea, making maritime affairs, fishing and shipbuilding some of the most important economic activities. Ships, ship sails, fishing nets and other tools, salt, waves, winds and the like have become symbols of life by the sea. The warm climate and mostly fine weather have allowed outdoor life for the most part of year and consequently, constant coexistence of people, and specific forms of socialisation (conversing, playing cards, bocce, walking, singing, etc.). Though life in the hinterland has been similar, it has developed around other activities (primarily agriculture and livestock breeding), due to a somewhat different natural environment, thus creating a distinct culture, customs and forms of socialisation. Both the nature and man have constantly been affecting the creation of the unique landscape of Dalmatia, which is reflected in all its sensory components – sights, sounds, smells, tactile sensations and tastes.

⁷⁶ Bunja is a small house in a field in which agricultural tools were kept. A *gomila* (tumulus) is a tomb from the time of the Illyrian tribes; a pile of stones in the shape of a truncated cone.

4 METHODOLOGY – THE EXPLANATION AND THE PREVIOUS USE OF SELECTED METHODS

In the empirical part of the thesis a multi-method approach has been applied and it comprises three methods: public opinion survey, sensory walk and content analysis. In this chapter the reasons for their selection is given together with the thorough review on their previous use in similar research contexts. The special emphasis is on the sensory walk and content analysis, the survey being relatively common and well known method in social sciences.

4.1 PUBLIC OPINION SURVEY

Public opinion surveying is the first phase of an empirical approach to the sensory identity of the Dalmatian landscape. The survey has been an important tool in geography for several decades, suitable for the study of people's attitudes, opinions, emotions and experiences of the environment (McLafferty, 2010: 77). The questionnaire is a practical means for examining the perception of landscape values and qualities, as well as of landscape identity (Bullen et al., 1999; Butula, 2009; Nitavska, 2011). The intention of this research is to examine the following:

- Do its inhabitants and visitors perceive and recognise Dalmatia by its sounds, smells, tactile sensations and tastes?
- If so, by which ones?
- To what degree do non-visual characteristics form the perception of the region?

Two facts make the use of questionnaires in the examination of non-visual landscape identity difficult. Firstly, the awareness of the landscape as a multisensory surrounding is not significantly developed yet; therefore, general questions regarding landscape qualities and experiences can result in mainly visual associations. Secondly, sounds, tactile sensations and especially smells and tastes are ephemeral and elusive properties in space, which fact can also be reflected in the respondents' answers.

The survey questionnaire represents the initial step in studying the problem at hand. The results should shed light on the fundamental relationships within the concepts of *Dalmatian non-visual landscape identity*. Does Dalmatia have an auditory, olfactory, tactile or gustatory identity? How much is it pronounced? Which are the non-visual characteristics of Dalmatia? To what extent does the perception of regional identity of a region's inhabitant correspond to that of a visitor, if at all? The gathered data could serve as a basis in further stages of the empirical study, especially in contents analysis planning.

4.2 SENSORY WALK AS A TOOL FOR LANDSCAPE IDENTITY RESEARCH

The research into the sensory landscape identity here continues by employing the field method of sensory walk, becoming thus more individual and subjective. It is a means, Adams and Askins (2008) say, "...to investigate and analyse how we understand, experience and utilise space" It is considered mainly a qualitative method, argue Henshaw et al. (2009), for exploring "aspects of the physical and/or cognitive experience of being within a particular . . . environment". A landscape is best understood and sensed in a direct

contact with it. Sensory walk includes investigating such immediate experiences, as opposed to a questionnaire, which investigates impressions once experiences have already taken place (there are no immediate stimuli, it requires recollection).

The method relies entirely upon personal experiences of its participants. The humanist approach to the investigation of the non-visual landscape character is convenient, for the conditions in the dynamic everyday context in which it is carried out are not controllable, cannot be predicted or repeated. Due to the ephemeral nature of non-visual stimuli and the fact that they depend upon a number of transient factors, many of them cannot be 'caught' with measuring instruments. So it is, for instance, possible to measure temperature and wind at a certain point in time at a particular location, but subtle transient temperature changes (e.g. due to lee, clouds passing over) or air streaming caused by a sudden move shall be felt only by an individual who happened to be at a specific point in time and place. Thus, Gibson (1986: 43) is right when he argues that the environment of each observer is always unique, for two observers cannot be in the same place at the same time. In detecting the limitless diversity of impulses from the environment, human senses and observations are far more detailed, richer and informative than available measuring instruments.

Within the sensory walk method, landscape is at the same time the research object and context. This method, which has not been fully developed yet, aims at investigating and analysing sensory dimensions of the human environment and the ways it is perceived and evaluated. More precisely, it is an umbrella term for several variants of one and the same method, arisen through the tailoring thereof to the needs of a particular research issue. It may be conducted for a single or simultaneously for more sensory characteristics, with or without tools and technology for the recording or intensifying of perception (magnifiers, hearing aids and similar), in open or closed spaces, individually or in groups, it may differ in its duration, be conducted in silence or discussing the perceived, noting down one's impressions during or after a walk or not noting down anything, etc. The procedure has not been standardized yet. There has been an open debate among scientists with regard to the efficiency of the method, possible approaches within the methodology, the scope, reliability, ethical aspects, how it should be employed and other related issues (Adams and Askins, 2008). Aside from being a research tool, sensory walk might be convenient as an artistic technique or an everyday activity.

4.2.1 Context for the method development

Along with visual characteristics, non-visual characteristics shape specific *genius loci*, influence the attachment to a place and define its character that is identity. Landscape character is a sample compiled of a specific combination of spatial characteristics, which makes it distinctive and generates a sense of place (Swanwick and Land Use Consultants, 2002; Anzani, 2010). Every landscape is a unique blend of natural and/ or cultural characteristics that cannot be found anywhere else. According to some studies that Swanwick (2009) refers to, people perceive landscape precisely as a structured whole rather than as a series of separate elements at one place.

Since sensory qualities of the environment have been brought into the focus of many scientific disciplines, sensory walk has been recognized as a method potentially applicable

for the investigation into aspects of experiences and the character of a place. Using human body and senses as a scientific instrument results partly from the lack of secondary sources of data⁷⁷ about non-visual characteristics, just like photographs and recordings are used to 'read' visible ones. Tactile and gustatory characteristics are particularly difficult to measure accurately (if at all), record and reproduce with the available technology (Henshaw et al., 2009; Porteous, 2006). These sensations "cannot be broadcast as can sounds and images" (Bunkše, 2007: 228); they cannot be translated via media and then used in a spatial analysis. The nature of the so-called 'intimate senses' calls for a different approach. Human sensory systems are required for the detection and identification of smells, tactile sensations and tastes.

There are certain technological possibilities for recording sounds in the environment; however the recording depends upon a sound's characteristics – primarily its volume, the distance to the source and characteristics of the environment it goes through. The distance from which orthophotographs are taken is too great to detect almost all sounds from the environment, with few possible exceptions, such as the sound of a thunder or a large aeroplane. Most sounds have to be recorded from a relative proximity to their source, which, consequently, again means that one should be in landscape, on the 'ground level'.

Since 1970s, spatial data collection has largely relied upon *remote sensing* – orthophotographs and satellite images (Howes, 2013b). Photographs, maps, visual, audio and video recordings are also used as sources of data on the visible and sometimes acoustic environment. The development of sophisticated technologies, for the collection of visual data in particular, has resulted in the distancing of the researcher from landscape as research object, thus decreasing the influence of subjectivity so undesired in the Western empirical science, and ascribing objectivity to visual data (van Ede, 2009).

However, studying landscapes merely through technology-aided representations allows only "relatively superficial and abstracted knowledge. There is no substitute for personal experience, for being there", Tilley argues (2010: 26). Due to the cooperation of various sensory systems, single sensations and their role cannot be simply isolated from a compound experience and observed as separate units. For this reason even the available multimedia technology fails to convey the entire character of a place and substitute for an actual experience. It should therefore be assumed and accepted as a premise in researches into sensory landscape character that a distinctive human experience cannot be recorded in its entirety (Rubidge and Stones, 2009).

Certain aspects of an experience through which one obtains knowledge of a place resist objectification (Tuan, 1975: 152). The interest in such aspects of an area and landscape, especially sensory and emotional ones, "where the world can be taken as an experience to be described, not an object to be explained" (Pocock, 1993: 11), has resulted in taking a new direction with regard to theories and philosophies. The focus has shifted from the

⁷⁷ The term 'secondary' denotes here the reality which is mediated by (recorded with) technological means, in contrast to that that one learns through a direct contact. Accepting William James' classification, who distinguishes between direct knowledge (knowledge of) and second-hand knowledge (knowledge about), Porteous (1986) believes that orthophotographs and satellite images are distinctly secondary (second-hand) knowledge.

positivist research platform, typical of the science of reason, towards the humanist, phenomenological and qualitative approach (van Ede, 2009; Henshaw et al., 2009; Pocock, 1993; Rodaway, 1994), within which human observations, preferences, sensations and attitudes are considered valuable data on both the physical and social environment. The sensory shift in humanistic and social sciences (Howes, 2013b), which took place in the late 1980s and 1990s, gave rise to the need for the utilisation of intimate sensing as a means of gathering such data. The return to the individual, intimate involvement into the understanding and interpretation of landscape has been advocated by many geographers, such as Pocock (1993: 11), Rodaway (1994: 4), and especially Porteous (1986: 250).

Intimate sensing is a field method (Porteous, 1986). It implies direct perception, based on physical and mental immersion into a landscape, an intimate and direct contact with the environment one lives in. Such site observations, though more expensive, are “the most exhaustive form of [landscape quality] assessment” Ramirez and sur. (2011: 205) concluded. According to Porteous, they are more complete than remote sensing, for they include all senses – sight, hearing, smell, touch, taste, as well as the body, soul and mind. Unlike remote sensing, which is “clean, cold, detached, easy”, intimate sensing is, he says, “rich, warm, involved” (Porteous, 1986: 251). However, he sees these approaches as complementary rather than mutually exclusive and alternative.

Even though there exist sophisticated technological tools and multimedia, immediate human experience, which results from the bodily emplacement and is articulated either verbally or textually, is still (and will probably remain) the main research material in gaining an understanding of experiential landscape dimensions. “To understand landscapes phenomenologically requires the art of walking in and through them, to touch and to be touched by them”, illustrates Tilley (2010: 27).

4.2.2 Emergence, development and utilisation possibilities of sensory walk

The beginnings of sensory walk go back to the early 1970s, when the interest in environmental perception was on the increase, in response to the need for a deeper understanding of various dimensions of the complex everyday human experience of the environment. Initially, it emerged in the form of soundwalks and listening walks, as a procedure used in studying the acoustic environment. Procedures, as well as their names, have been devised within the World Soundscape Project under the guidance of the Canadian composer and environmental expert R. Murray Schafer. However, dr. Andra McCartney (2010) indicates that there were some even earlier cases in which sounds were listened to and recorded during walks.

Nowadays, soundwalking has become a common method for the investigation into qualities of the auditory environment, accepted and utilized by many scientists in various forms (Adams et al., 2008; Davies et al., 2013; Drever, 2011; Hall et al., 2008; Kang and Zhang, 2010; McCartney and Paquette, 2012; Watts and Pheasant, 2013; Yong Jeon et al., 2011). As Polli (2011: 258) puts it, the main purpose of a soundwalk is to “listen to the environment”, either individually or in a group, either recording or not recording the sounds. It should however be noted that there is a distinction between soundwalk and listening walk. Already Schafer distinguished among these. Whereas listening walk

includes active listening of the environment while walking, participants in a soundwalk are both active listeners and researchers and creators of soundscapes (Schafer, 1994: 212–213; cf. Wagstaff, 2002).

Modelled on soundwalking and Lynch's creation of mental maps, back in the 1990s Porteous (2006) proposed that the same procedure be applied for research and mapping of smellscapes, which he called smellwalk. The World Smellscape Project, a variant of the World Soundscape Project for defining a place in terms of its olfactory characteristics, would be faced with the problem of recording smell, he pointed out. In addition to questionnaires and interviews done on the sample of the general population, and analysis of literature, a possible technique for the assessment of environmental smells might be, he believes, engaging groups of highly sensitized nose-trained experts.

An overview of interdisciplinary literature reveals that smellwalk as a scientific method was first used by Victoria Henshaw, a research associate at the University of Manchester. She has conducted a series of tours to identify smells in urban areas, first in England and then in cities around Europe and North America (Grup de Recerca en Epistemologia i Ciències Cognitives, 2013; Henshaw, 2012c, 2013; Henshaw and Bruce, 2012). Her work has revealed interesting facts about olfactory characteristics of urban landscapes, contextual aspects of the perception of smells and their individual and social implications. Rare smellwalks were documented earlier, Henshaw et al. (2009) note, and even if they were, they had a predominantly educational and documentary character.

Thus far there have been no records in scientific literature regarding the utilization of this method for the research of tactile or gustatory spatial characteristics. Scientific studies researching into the overall sensory character of place by means of sensory walk (e.g. through five modalities) have also been rare, although there are a few examples thereof, Henshaw et al. (2009), claim. Degen and Rose (2012) have conducted an interesting research of that kind in two British towns. The method, which they named 'walk-alongs' (instead of sensory walks), has included a series of walks through urban ambiances; 17 participants in 13 walks along Bedford and 16 participants in 12 walks along Milton Keynes. The researchers monitored the participants in carrying out their daily chores across the town with the aim of detecting their sensory impressions, senses of place and attitudes towards spaces they moved about. The participants described "... the colours, texture, sounds, temperature and the smells of the two town centres." (Degen and Rose, 2012: 3276).

Although sensory walks are said to be a tool for the research of one or more sensory characteristics of the environment (Adams and Askins, 2008; Grup de Recerca en Epistemologia i Ciències Cognitives, 2013; Henshaw and Bruce, 2012; Henshaw et al., 2009), in the later sense they mostly included a combination of visual and auditory (Watts and Pheasant, 2013) and sometimes olfactory characteristics hitherto (Yong Jeon et al., 2011). Henshaw and Bruce utilized sensory walks in several English towns to investigate expectations regarding sounds and smells, but, although they cooperated during the research procedure, in terms of methodology and analysis, the studies were conducted independently, each of them including one sensory aspect of an urban environment. Thus, it can be concluded that, as a scientific method, sensory walk had primarily been directed

to individual perceptual modalities, usually auditory (soundwalk) or olfactory ones (smellwalk).

4.2.3 Types of spaces thus far researched through sensory walk

In terms of space type and size (scale), sensory walks (soundwalks, smellwalks, compound walks) have primarily been used in researches into urban environments (Adams and Askins, 2008). The method's implementation into other spatial contexts, larger or smaller than cities and towns, is extremely rare. The growing body of literature on the character of individual places offers generally more information and knowledge on towns and cities than on other spatial levels such as neighbourhoods, regions or whole countries (Tuan, 1975). The strong interest in urban areas certainly partly results from the fact that a city or a town is, as Tuan says, an environment created solely for human use and tailored to his needs. For the increasing number of people urban environments are their everyday surrounding. Towns and cities are places in which a large number of people, and accordingly of edifices, sites, activities and events are concentrated. A coherent urban body encompasses various functions and ambiances at a relatively small, compact space, which pulse with an ever-changing spatial and time dynamics and rhythm. This makes them convenient and interesting objects of field bodily research.

Regardless of sensory qualities in focus, examples of sensory walks' utilisation for investigations of landscape character on the level of countryside, a region or a country are rare. One of these is a study by Watts and Pheasant (2013), who have utilized sound walks to investigate into the tranquillity level of the countryside in the province of West Yorkshire, England. Soundwalks were also utilized for researches into soundscapes of five European villages within the World Soundscape Project in 1975 (Drever, 2009).

As Tuan (1975) explains, it is difficult to experience rural, regional, national and other relatively large areas directly, through physical presence, due to their large scale. Therefore, the knowledge thereof depends far more upon abstract cognition. A region is usually not clearly defined in terms of its borders and includes a number of smaller, for people more tangible places. In contrast to cities, which represent clear, visible landscape objects, centres of meaning with distinctive silhouettes and names assigned, regions lack such perceptual and conceptual legibility, Tuan argues. A region is, he explains, "far too big to be directly experienced by most of its people. [It] is therefore primarily a construct of thought. . . . It has to be constructed by symbolic means." (1975: 158, 159).

Discussing the phenomenological approach, Tilley (2010) as well notes that studying a landscape through direct experience necessarily implies a small scale. Researches involving a personal contact with and being in a landscape are easier to conduct for a narrow area, whereas it is not possible to conduct them for large ones, such as large regions, countries (here he gives France as an example) or the world. Alternatively, he believes, "... a comparative global phenomenological study through comparing and contrasting the accounts of different social scientists" could be undertaken (Tilley, 2010: 28). The same principle can be replicated on the humanistic approach as well.

Although sensory walks have almost been synonymous with experiencing and moving in an open space, they can be conducted in closed, built spaces as well. However, such utilization thereof is rare, and actually there have not been any scientific studies of that kind yet. Henshaw has demonstrated it as a rather informal and educational technique in the form of smell walks done with families visiting Manchester Museum within the Manchester Science Festival (Henshaw, 2012b). A further example includes multisensory walks, of educational character as well, within the course *The Power of Maps and GIS* by Professor J. Krygier (Krygier, 2013).

4.2.4 Sensory walks in non-scientific contexts

In the last 10 years, investigating the environment and connecting with it by walking, a basic and most natural way of getting to know both a place and oneself, has gone beyond the scope of science and entered other spheres of social practice. Sensory walks have been more and more used as a creative art technique (Brotherton, 2008; Matos Wunderlich, 2008; cf. Rubidge and Stones, 2009), an educational activity or, in everyday life, as a form of physical activity, recreation and relaxation or a play. It has been integrated into educational programmes at multiple levels – at a preschool, school, and academic level, as well as that for adults. Some educational aims of perceptually aware walking include multisensory familiarisation with the environment, developing attachment to a place, developing sensory sensitivity and awareness, developing communication, language and observation skills, stimulating creativity, team work (National Wildlife Federation, 2005; RedCardinal, 2011; Scottish earth science education forum, 2012; WeeCatCreations, 2011; Young, 2013). Side benefits include playing, socializing, being out in the open, physical exercise, physical and mental well-being, relaxing.

Interesting sensory walks have been conducted within the course *Geography 222: The Power of Maps and GIS* under the guidance of Professor John Krygier, Department of geology and geography at Ohio Wesleyan University. Through exercises titled *Mapping PsychoGeographies*, students executed a number of sensory walks, both individually and in groups, during which they observed and recorded (on maps) their sensory experiences of space (Krygier, 2009b, 2013). As a result, cartographic images containing various sensory data have been created. The emphasis lay on the multisensory non-visual perception, so that the images show, either cumulatively or individually, soundscapes, smellscape, touchscapes and tastescapes of visited areas. In addition, the task included recording the atmosphere and psychological characteristics of the environment, that is, feelings, emotions, memories, expectations and similar, generated in an individual participant or a group of participants during the walks. These spatial aspects were called psychoscape and were recorded on psychogeographical maps.

The potential of sensory walks for recreation, socializing and entertainment has been more and more recognized in everyday life as well. According to MSc Cindy Haskin-Popp (2011), Clinical Exercise Specialist, health benefits of sensory walks include “improved mood, reduced stress, decreased anxiety, enhanced personal identity/self-esteem, increased energy/reduced fatigue, improved mental focus/attention, increased mental clarity and enhanced creativity”. They can be exercised individually or in the company of others. Blithewold, a 13 ha farm situated on Rhode Island, USA, organizes seasonal family sense

walks. Tours of the estate's gardens, led by horticultural experts, represent an experiential exploration of colours, sounds, smells, textures and movements, at the end of which visitors can taste the gardens' fresh fruits (Blithewold, 2009).

Given the above, it might be said that, in utilizing sensory walks as an artistic, educational, therapeutic and everyday activity, a simultaneous use of as much senses as possible is encouraged, while those scientifically-oriented are mostly conducted as a mono-sensory activity. Moreover, the two differ in the selection of locations. Unlike science-oriented sensory walks, which are usually conducted in urban settings, at the root of a non-scientific sensory walk often lies the need to break away from the city and return to nature, get into or renew the contact with the natural landscape features. Therefore, places such as city and town parks and green areas, peri-urban, rural and natural areas outside of the city are preferred.

4.2.5 Mapping of sensory landscape experiences

Sensory maps allow the recording of, representation, sharing, keeping and re-using of sensory landscape data. The very creation of such maps, on which, in a visually understandable and legible manner, locations of prominent vistas, sounds, smells, tactile sensations, tastes and even their atmospheres and emotions they triggered are shown, is an expected result of the multisensory approach to landscape understanding.

Already at the beginning of 1990s Porteous (2006: 92) introduced the idea of mapping sensory landscape qualities, suggesting the possibility of mapping smellscape through smellwalks. However, sensory mapping is still in early phases of development. Symbols used for the depiction of various auditory, olfactory, tactile, gustatory and other experiences have not been defined, unified and systematized. The depiction of such data still depends largely on the personal selection and idea of each individual participant or possibly on an agreement within a workgroup. The absence of a system of symbols results largely from the lack of a generally accepted classification of sensations these should depict. So Henshaw et al. (2009), for instance, note that there is no universally accepted classification of smells. The same is true of other non-visual landscape characteristics as well.

In two separate sensory walks – the smellwalk under the guidance of V. Henshaw in a Manchester museum and the multi-sensory walk (sounds, smells, tactile sensations) exercised by J. Kryger and his students around the campus of Ohio Wesleyan University – arose the idea of using a stylized human face (smiley faces or Chernoff faces) as a tool for the rating of the comfort level of an experience in creating sensory maps (Henshaw, 2012b; Krygier, 2009a). Such symbols might be useful in presenting the aesthetic and emotional character of an experience.

The scope or the size of the researched area might also pose an obstacle in mapping sensory landscape characteristics as well as in conducting sensory walks. Namely, drawing a sensory map for smaller spaces such as an edifice, a neighbourhood or even a town or a city is certainly less complex to do than for bigger cities, regions and larger areas, where a direct physical contact with that space as a whole is not possible, as Tuan (1975) noted. A

potential solution would include selecting a sample consisting of specific locations that would represent a larger area.

4.2.6 Potential practical application of sensory walk in landscape planning and management

Although inseparable and sometimes essential aspects of landscape experience, non-visual characteristics such as sounds, smells, tactile sensations and tastes have only recently been integrated into processes of landscape planning, design, protection, assessment and management.

Probably due to the growing awareness as to the significance of sensory landscape characteristics and an increasing number of studies in this field, recently there have been attempts to include non-visual characteristics into spatial documents and decision-making processes. Developing techniques and procedures for the detection, recording and graphic presentation of landscape sensory data is important for their integration into landscape policies. Methodologies for the assessment of landscape character known as Landscape Character Assessment (LCA) in England and Scotland and LANDMAP in Wales represent a significant step in this direction. The LCA method has been accepted as the basis for landscape character assessment in some other European countries as well (Ode et al., 2008). Landscape Character Assessment: Guidance for England and Scotland defines landscape character as “a distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.” (Swanwick and Land Use Consultants, 2002: 8). Landscape assessment, according to the document, was developed in the mid-1980s for the purpose of distinguishing the process of determining a landscape’s character (that what makes one landscape different from other landscapes) and the respective classification thereof, from the process of landscape evaluation (that what makes one landscape better and more valuable than other ones) (cf. Swanwick, 2009: 68).

Although the aforementioned methodologies differ to a certain extent (Ode et al., 2008), in both of them experiential (sensory) aspects have been included in the process of determining the distinctive landscape character (Countryside Council for Wales, 2008; Swanwick and Land Use Consultants, 2002). Though most of them still refer to visible qualities such as the scale, enclosure, diversity, texture, form, colour, movements, sample etc., other sensory (auditory, olfactory, tactile etc.) and emotional qualities (e.g. tranquility, security) have been considered as well. These processes include the identification, description, classification and mapping of sensory landscape characteristics and have been utilized in the decision-making and planning for the sustainable development.

An assessment of sensory landscape characteristics relies in both methods upon surveys, conducted by experts in relevant fields (e.g. landscape professionals in cooperation with landscape historians, archaeologists, ecologists and other experts). For instance, LCA is divided into six steps, the third of which is field survey, during which data on aesthetic and perceptual landscape characteristics “which are unlikely to be evident from desk information” (Swanwick and Land Use Consultants, 2002: 14) are gathered. These are recorded on previously prepared checklists (templates) and additionally in the form of

textual descriptions. The LANDMAP method, in chapter 5, entitled Visual & Sensory, also utilizes previously prepared site assessment forms, in which experts, along with visual, record auditory, olfactory and other sensory information as well, which are then reconciled with the data gathered from office analyses (Countryside Council for Wales, 2008: 11). Such field approaches represent a certain form of sensory walk.

Guidelines given in both methods imply the necessity of combining an objective and subjective approach. A certain level of subjectivity in site assessments, especially of non-visual sensory and emotional qualities, has been acknowledged. An attempt to reduce the subjective influence and incorporate perceptual characteristics in a rigorous, systematic and transparent manner is reflected in the consistent use of definitions, procedures and terminology.

4.3 CONTENT ANALYSIS

Survey and sensory walk are methods that include a sort of direct communication with the respondent, with the aim to obtain an active answer to questions on the researched topic. While such approaches provide a relatively quick and effective insight into the collective attitude on a certain phenomenon, a lot can be learned from various fields of social creation and communication.

Attachment to the environment, values and general attitudes on the landscape a society lives in are interwoven into various segments of the complex system of human expressing and communication. Some of them can be read directly from the landscape – best from the cultural, but also from the natural one. For instance, protected natural areas and landscapes reveal what people consider valuable in their territory, whereas derelict areas can indicate a lack of attractiveness or that certain types of landscapes are not particularly valued. However, except landscape itself, some cultural media as well reflect people's attitudes towards and uses of a landscape (colourful experiences, unique and typical occurrences related to a particular part or characteristics of a landscape, in short – life with and in a landscape). Therefore, such media are a valuable source of knowledge about the landscape identity of a particular area.

The aim of here presented content analysis was to identify sensory modalities through which the Dalmatian region is represented in selected communication media as well as in which proportion these modalities appear. The research starting point was the assumption that the review of the selected contents, which represent Dalmatia as a whole, Dalmatian counties, rivieras, towns, villages and localities, as well as various products and services, can deepen the knowledge on the region's recognizable properties and features of its landscape identity.

Sources providing an insight into what the society considers valuable in the landscape of Dalmatia and how it perceives it – potential content analysis sources – are numerous: from visual (pictures, photographs, drawings, postcards, posters, etc.), print (newspapers, magazines, advertisements, Internet articles, literary works, etc.), audio recordings (music, radio shows, radio commercials, speeches, etc.), audio-visual media (TV commercials, documentaries, movies, concerts, YouTube and similar recordings, etc.) or a combination

of these media. Qualitative materials are rather vast in terms of quantity, and the choice of those to be analysed depends primarily on the analysis' subject matter, but also on what is available to a researcher, Žugaj (1997, cit. by Tkalac Verčič et al., 2011: 92) points out.

4.3.1 Written word – an instrument in the understanding of landscape experience

Language is a fundamental means of human communication, a means of conveying attitudes, ideas and feelings. At the same time, it is a sophisticated semiological system in which many words and syntagmas have, in addition to the literal, a metaphorical meaning as well. Enriched with an additional meaning and put into a proper context, verbal expressions become symbols – besides that to what they directly refer, they also transmit a message about something else, in a way understandable to a society. Language is a means through which the immense diversity of human experiences and opinions can be expressed, whereat the written word carries a particular importance, for it remains recorded for a long time,⁷⁸ preserving and witnessing cultural standpoints of an individual and a society at a certain point in history. Among other things, print materials represent a rich treasure trove of information on the character and social conceptions of the landscape at a certain time – the needs, concerns, values, aesthetic preferences, etc. As Vukosav (2011: 262) noted, “language is the main media of structuring people’s experience of place and the bearer of connotations held in individual and collective memories.”

In contrast to non-verbal forms of communication, such as image and sound representations, language is a system that allows the expression of both visual and non-visual experiences. It is not modally flat, but multi-dimensional, in the sense that words can be used to convey and depict a scene as well a sound, smell, touch and taste. Image, audio and video recordings can relatively accurately convey the visible and audible reality, but can only point to smells, tactile sensations and tastes as an association that, depending on the observer, may or may not be triggered (e.g. a depiction of food may trigger olfactory or gustatory associations). On a photograph, non-visual sensations can be only implicitly present (Cañas et al., 2009: 1173; Warren, 2012: 112).

As a means of conveying experiences and a source for interpretation, an image is, in sensory terms, a reduced media. In it, landscape is devoid of the vivacity brought by the real life ephemera and current experiences that can be discerned by non-visual senses. This limitation of picture has been discussed in many works on environmental perception and evaluation of landscape qualities (Cañas et al., 2009; Palmer and Hoffman, 2001; Ramírez et al., 2011; Warren, 2012). Tilley (2010: 27) and Tuan (1990) use similar examples to describe the static and flat nature of ‘the picture’:

We can see through the window of an air-conditioned bus that the slum is ugly and undesirable, but how undesirable reaches us with pungent force only when we open the window and catch a whiff from the malodorous sewers. The person who ‘sees’ is an onlooker, a sightseer, someone not otherwise involved with the scene. The

⁷⁸ Nowadays, a speech can be documented not only in print but also in audio-visual media (audio and video recordings). However, it was up until recently that the only possibility was to document the word by writing it down, so that most of the knowledge, ideas and attitudes of the mankind have been preserved in print materials.

world perceived through the eyes is more abstract than that known to us through the other senses (Tuan, 1990: 10).

Experiences sensed with other senses can be described very vividly and suggestively with words, giving the description an emotional tone in a manner unique to language expressions. Smells, tastes, textures, temperatures and somatic sensations from the past are preserved primarily in textual descriptions, Dugan and Farina (2012: 374) point out. Thus, writing is, as an interpretative depiction of the real world, more complete than other forms of communication, for it allows the articulation and representation of a landscape experience as a synergy of sensory (visual and non-visual) and emotional dimensions. Precisely this makes written materials the best source for the analysis that a research of perceptual aspects of landscape calls upon.

Within the issue of landscape perception and landscape quality assessment, an analytical review of literature, as well as of other creative accomplishments of a society, is typically found in the so-called humanistic paradigm,⁷⁹ in which such materials are a valuable source of knowledge about the everyday interaction with landscape and subjective impressions arising from it. According to Zube, Sell and Taylor (1982, cit. by Ndubisi, 2002: 216), experiences of landscape are best understood through the creative work they inspire.

Literature (poetry and prose) and other written artefacts are an important segment of culture and inextricably connected to the space and time they were created in. As such, they are not merely a reflection of the author's attitudes, but also depict the actual social perception of a shared landscape. A continuous feedback is a significant characteristic of the relation between print materials as a part of cultural production, and social conception: while conception, conditioned by the landscape itself on one hand and the cultural milieu on the other, is reflected in written creations, it in turn shapes attitudes, beliefs and the relation towards landscape. Within this process, the collective notion of the identity is shaped by selecting and emphasizing landscape's most distinctive qualities. It is only logical to assume that literary descriptions of a region's landscape mostly refer to its unique or dominant elements. Just like graphic media present and shape symbols of visual landscape identity (Kučan, 1996), so do textual media present and shape symbols of the non-visual (and visual) landscape identity. Together they represent a channel through which particular landscapes, landscape elements and characteristics evolve into symbols – widely distinctive and integrated into the public consciousness (Meinig, 1979a).

4.3.2 Limitations of vocabulary in the realm of non-visual experiences

Within the worldview primarily oriented to the sense of sight, languages have developed, which, in turn, has made them significantly richer in the field of visual expression. The range of possible words for the description of non-visual experiences is rather scarce in many languages, especially Western ones. The choice of words within a particular

⁷⁹ The humanistic paradigm has been mentioned here as one of the three paradigms of landscape perception and landscape values, which Ndubisi adopts from Zube, who has classified these according to disciplinary orientation in his article *Themes in Landscape Assessment Theory* (Ndubisi, 2002: 204). In addition to the humanistic paradigm, he distinguished among professional and behavioral paradigm as well.

modality varies from language to language, but in most Western languages there are a lot more of those for describing visual than other experiences. For instance, there are only four gustatory expressions for taste – sweet, salty, sour and bitter (and possibly a combination of the four) – though countless more nuances can be discerned in reality. Therefore, in describing tastes we often use comparisons (e.g. it tastes like cherry). With other non-visual experiences the case is mostly the same.

Diane Ackerman (1995) gives an interesting example in the field of olfactory perception. That what we see, she claims, can be described into the tiniest detail, using visual adjectives such as red, blue, bright, small, wide etc. For smells, on the other hand, “we use words such as smoky, sulfurous, floral, fruity, sweet, we are describing smells in terms of other things (smoke, sulfur, flowers, fruit, sugar). . . . [or] we tend to describe how they make us feel. Something smells ‘disgusting’, ‘intoxicating’, ‘sickening’, ‘pleasurable’, ‘delightful’, ‘pulse-revving’, ‘hypnotic’ or ‘revolting’.” (Ackerman, 1995). Polič (2007) also points out that the accuracy in identifying smells depends on the possibility to name these appropriately. However, McHough (2008: 5) believes that such borrowing, or as he calls it, “ostensive descriptive language”, is typical not only of the vocabulary of olfactory, but other sensory experiences, including visual ones as well. Nonetheless, there are several authors who, just like Ackerman, believe that language⁸⁰ is richer in the field of visual experiences than of non-visual ones. “A major problem in studying the non-visual sensory landscape is the general lack of an appropriate vocabulary.”, Porteous claims (2006: 91). Other examples include Bunkše (2007: 228, 2012: 12), Brant (2008), Blesser and Salter (2007: 6), as well as Davies et al. (2013: 229), who have come across this problem in practice during their researches into the perception of sounds and soundscapes.

This limitedness of language does not only make it more difficult to verbalise perceived sounds, smells, tactile sensations and tastes in everyday life, but poses a problem in studying personal, subjective experiences of non-visual environmental properties. For the same reason, terminology used for visual aspects is often used metaphorically for some abstract concepts. For instance, to ‘see’ means at the same time to understand, the notion of a place implies a mental or social ‘image’ thereof, evoking a past or future situation is regarded as ‘visualisation’, etc. Possibilities of language largely determine expression.

Descriptions of visible landscape characteristics are usually far more detailed than those of other. As was mentioned, it is partially owing to a wider range of possible words, but also due to the difference between visual and other forms of perception. Namely, from the standpoint of everyday experiencing of living space, the man seems to be able to discern far more details within the visible than within auditory, olfactory or tactile environment. The visible environment is considerably more informative; it comprises more elements and characteristics the man can identify and name. Thus, it is natural that these two factors (the richness of vocabulary and perceived complexity of a particular sensory component of the environment) should be reflected in textual descriptions.

⁸⁰ This applies to English, but can be said to be true of other Western languages as well. In some other languages, such as African Anlo-Ewe, the vocabulary related to sensory experiences, emotions and feelings is completely different and reflects a cultural heritage that differs from the one in western countries. Geurts (2002) has conducted an extensive ethnographic research into the language of Anlo-Ewe people on that topic.

It is important to note that the complexity of a scene (i.e. the number of described elements seen in the environment) does not always indicate that visual characteristics have the strongest perceptual influence in an author's overall impression of a place. A poem might, for instance, describe a walk through a place, with an intoxicating smells hovering around all along the way. Here, smell is the central sensory experience and visual details of a place only serve to illustrate its omnipresence. Thus, it can be distinguished between quantitative and qualitative characteristics of a description. When analysing a written content, it is extremely important to consider this fact, so as to understand that the complexity (the quantity of characteristics within one sensory group) does not necessarily correspond with the intensity of an experience. To put differently, visible landscape can be described in detail, but sometimes a single smell, sound or some other sensation might have the strongest influence on the overall experience.

4.3.3 Literature as a source of landscape sensory information

The role of textual media in shaping and understanding the social conception of the environment is widely recognized (Hough, 1990; Lewis, 1979; McHarg, 1992; Meinig, 1979a; Mišetić, 2004; Nogué and Vicente, 2004; Pink, 2009; Skoko, 2004; Sopher, 1979; Tuan, 1990, 1979). Many of the examples given there, mainly from literary works, are actually interesting multisensory descriptions of experiences of a known or a new landscape one has just become acquainted with, in which typical sounds, smells, tactile sensations and tastes are used to portray the unique *genius loci* of that place in its fullness. An analysis of literature, Gaspar (2001) and Porteous (2006) believe, may reveal a lot about smells of a landscape. All art, and especially literature, is a generally admitted medium for landscape interpretation, though all genres are not evenly used (Porteous, 1985a).

Literary works are rich in articulate descriptions of places (Tuan, 1975). Through them, we build impressions and familiarise with places and cultures, even those we have not been to (Dhussa, 1986; Skoko, 2004). A reader experiences and shares described experiences, acquiring through it the sense of place, Dhussa believes. Recent studies in neuroscience support this. They have shown that various representational media – visual, audio, video, textual, etc., as well as memories of past situations not only evoke imagined, presupposed sensations, but revive them to a certain extent – create and recreate them (Agapito et al., 2013; Rubidge and Stones, 2009). According to these studies, differences among “actually smelling a lily, seeing someone else do so, or even reading about someone doing so” are more subtle than originally believed (Dugan and Farina, 2012: 375).

Subjectivity inherent in literary works Skoko (2004) considers to be positive and useful in the promotion and shaping social attitudes towards a particular area, for it often leaves a reader with an impression stronger than that induced by some more ‘objective’ media used for a destination’s promotion. However, in contrast to Sopher, who believes that poetry and folk sayings do not provide a deep enough insight into home and place and should thus be supported with more precise instruments of knowledge such as questionnaires and field observations, Tuan (1990: 49) believes that precisely literature is a source providing more details and fine nuances of human perception than social studies (cf. McHarg, 1992: 29). “Literature is made up of words that have evocative as well as analytical power; they

combine subtlety with precision.” stated Tuan (1979: 98) in one of his earlier essays. This can also be said for other textual contents (e.g. publicist and commercial).

4.3.4 Other textual content as a source of landscape sensory information

Written media represent a very wide segment of production, which, besides literature, include various, as Meinig (1979a) calls them, ‘popular’ materials, such as non-fiction books, magazines, newspapers, advertisements, calendars, tourist brochures and guides, etc. Lately, materials found on the Internet have been an extremely important category in this context (Pink, 2009: 47; Skoko, 2004). Given the vast amount of such materials, every analysis is necessarily selective, Meinig warns.

Unlike with well-known and distinguishing spatial symbols (e.g. well-known buildings or urban spaces), there are almost no books, documentaries, articles and related evidence on the existence of vernacular cultural landscape in which people dwell, live and work, Lewis (1979) notes. Therefore, he believes that these popular sources are indispensable in the familiarisation with and research into vernacular landscape.

4.3.5 The semantic link between text and the concept of landscape identity

The relationship between textual contents and the concept of landscape identity relies precisely on the recurrence of sensory motifs. Many sensory impressions are frequently repeated, through which they slowly develop into symbols, in minds of people inseparably linked to the region of Dalmatia. The choice of motifs and the frequency of their recurrence lead to the creation of the social conception of landscape, through which consequently the place identity is shaped, Kučan remarked (1996: 77). Although she primarily referred here to photography and visual motifs, the same principle can be applied to textual motifs as well.

Seen from the perspective of Barelson’s tripartite approach to content analysis, Halmi (1996) notes, an analysis of qualitative, symbolic materials may be directed to: 1) characteristics of the content of a message; 2) the creator – a researcher is interested in what the content of a message says about a person who created it; 3) the audience – a researcher is interested in what the content of a message says about those it is directed to. For the purposes of this research, first of the above three approaches has been taken, with characteristics of the content of textual messages in focus.

This method has been used as an addendum to the questionnaire, so as to further investigate within the textual semiotic system, as a spontaneous or devised symbolic communication, which sensory experiences, as distinctive characteristics, shape the landscape identity of Dalmatia. The search for typical characteristics of Dalmatian landscape is based on the identification and recording of the region’s sensory characteristics and attributes and epithets supplementing them.

The starting assumption of the analysis is that landscape characteristics found in the selected textual materials (i.e. promotional, mostly tourist, materials and lyric poetry) represent socially recognised characteristics of the region, which are thus a part of its

identity. Just like paintings, postcards and other forms of visual communication relating to Dalmatia use mainly motifs of the visual landscape identity (the sea, ships, olive trees, dry stone walls), so can also motifs of the non-visual identity (auditory, olfactory, tactile, etc.) be frequently found in textual forms of communication.

Texts, like other forms of communication, convey only a part of complex human experiences and that part has been analysed here. It can be assumed that experiences which were shaped into a symbolic message (in this case a written one) are those that made a strong impression on the author – those that are specific, interesting, conspicuous, intensive and therefore singled out from the mosaic of his impressions. In their study based on sensory walk, Rubidge and Stones (2009) concluded that retrospective notes, written immediately after a walk or from a certain time distance, present a selection of particularly distinctive and memorable moments from the flow of transient *in situ* observations.

The analysis of selected textual materials should reveal the most impressive and distinguishing sensory properties typical of Dalmatia. And it is precisely the quality of being recognizable that qualifies them for a potential element of the landscape identity.

4.3.6 Proportion of visual to non-visual experiences

It is assumed that the analysis of selected content shall show more descriptions of visual landscape than those from other areas of perception. It is well known that an average person gathers most information about the environment through the sense of sight (Polič, 2007). According to Porteous (1985b), even up to 90% of received environmental information is visual. A single look often encompasses a lot of details (e.g. the sea, ships and boats, houses by the sea, hills in the background, people passing by etc.). Not only does a man distinguish among various details and nuances of the visual environment, but can also name these, for language is more elaborate and richer in the visual domain. Due to the ephemerality of non-visual characteristics, auditory, olfactory, tactile and gustatory environment is structured differently and the very nature of experiencing is different.

Visual characteristics are expected to prevail also because the tourist promotional materials almost inevitably include visual descriptions. For this reason, Pan and Ryan (2009) have excluded them from their content analysis, focusing on the relationships among the other four modalities. Textual descriptions accompany the illustration of visual specificities of Dalmatia – mainly the segments of cultural and historical heritage, the architecture of its cities and towns and other sights – whose value is contained, from the sensory aspect, primarily in the visual dimension. Most webpages of Dalmatian coastal towns and cities include “rich textual and pictorial sections on local history, with particular emphasis on architectural heritage.” (Senjković, 2006: 205).

5 THE RESULTS OF A THREE-PART RESEARCH

In this chapter the research design, the implementation and the results of all three conducted methods are presented in three subchapters respectively. Each ends with a method-related discussion.

5.1 PUBLIC OPINION SURVEY ON PERCEPTION OF DALMATIA AND ITS LANDSCAPE

The method was divided into three consecutive stages:

- 1 Research planning and implementation,
- 2 Data coding and processing, and
- 3 Interpretation of the survey results.

5.1.1 Research planning and implementation

Survey planning was a three-step process which included questionnaire design, defining of the sample and deciding on the way of administering the survey.

5.1.1.1 Questionnaire design

It is important to coordinate the two survey goals – obtaining high-quality, relevant answers regarding the problem at hand and inducing and keeping the interest of the respondent throughout the questionnaire. The questionnaire design, like wording, the number and type of questions, can have a significant impact on the quality of gathered data (McLafferty, 2010: 78; Tkalac Verčič et al., 2011: 119). The questions should be as simple and as interesting for the respondents as possible (Tkalac Verčič et al., 2011: 104), since these factors have an influence on their readiness to cooperate.

In this research a questionnaire consisting of 18 questions was designed; 12 thereof related to the research topic and six demographic questions. There were three open-ended questions (P1, P2 and P11) and two closed-ended questions with an open variable (P4 and P5). Out of the remaining closed-ended questions, three were based on the five-point Likert scale (P3, P6 and P7), and four included single- and multiple-choice question variants (P8, P9, P10 and P12). The aim of using a relatively small number of questions, mostly closed-ended, was to reduce the time required to answer the questionnaire, which can increase the respondents' willingness to participate and complete the questionnaire. Additionally, close-ended questions, offering answer choice, were appropriate in this case due to the abovementioned usual understanding of landscape as the visible, rather than multisensory surrounding. Open-ended questions did not offer a high probability of obtaining the sought answers regarding the share of an individual modality in experiencing the region without being somewhat suggestive. Moreover, the analysis of answers to open-ended questions is more demanding, especially in the case of a large number of completed questionnaires, for it requires a thorough examination of all answers in order to obtain high-quality data classification (coding) (Tkalac Verčič et al., 2011: 121).

The questions were formulated so as to be short and concise, non-ambiguous, not to be suggestive, and to offer the option to give various answers to multiple-choice questions. Everyday language was used, avoiding jargon and specialised terms, which was considered to be comprehensible to an average person notwithstanding their level of education.

The questionnaire was originally formulated in Croatian and was translated into four languages – Slovene, English, German and Italian – to conduct the survey among Dalmatian visitors and tourists. When addressing this target group, some of the questions had to be slightly adapted to obtain a precise meaning, as is visible from the example of question P4 in Croatian and English:

P4: Smatrate li da postoje mirisi koji su karakteristični za Dalmaciju? Ako da, navedite neke primjere. (*Do you believe that there are smells (scents) which are typical for Dalmatia? If so, please provide some examples.*)

P4: During your visit(s) to Dalmatia, have you noticed any smells (scents) that you would describe as typical for Dalmatia? If yes, please provide some examples.

One cannot *a priori* expect people who have only visited (or have been visiting) Dalmatia, instead of living there, to have formed an attitude on what is characteristic for the region, and what is not. Rather, they were asked if they had noticed any smells (scents) or sounds that they would describe as typical for the place they visited. The meaning of the question (as well as that of the answer) was therefore kept, in spite of a somewhat modified wording.

Questionnaire form

The questionnaire was made in two versions – printed and online, with minor structural differences required by the specific media.⁸¹ To facilitate its distribution and make it more visually appealing, the printed questionnaire was distributed in A5 format and in the form of a booklet. The cover page contained the basic data: institution where the research is taking place, title of the survey questionnaire depicting the research topic, and date of printing (month, year). The following page contains the introductory text briefly presenting the role of the researcher and research topic and goals, as well as noting that the research is anonymous and expressing gratitude for participation. The pages that follow contain questions and are numbered (e.g. 1/5) so that the respondent might follow their advancement through the questionnaire.

The order of the questions is also significant since “it influences the quality of the information, as well as the interest and readiness of respondents to participate in the research” (Tkalac Verčič et al., 2011: 123). For this very reason, the questionnaire commences with general questions about Dalmatia and continues to more specific questions on the experience of the landscape, while demographic questions (regarding sex, age, education and place of residence) come at the end.

⁸¹ The printed and the online version of the survey questionnaire are given in Annexes A and B respectively.

The online survey questionnaire was designed in line with the printed version, with certain adaptations necessary for online preview and distribution.

5.1.1.2 Sampling

Considering the research topic, the group of potential respondents was made out of people who had visited Dalmatia at least on one occasion, as well as those who visit Dalmatia on a regular basis or those who live there. Statistical data on Croatian citizens who visited Dalmatia cannot be found in the database of the Croatian Bureau of Statistics or elsewhere, and similar data regarding foreign citizens are also non-existent. Therefore, since the total population was not known, it was not possible to obtain a representative sample. When the number of units in the population is unknown or when such units cannot be determined individually, intentional samples are used, as they can be largely useful in researching a little-known phenomenon or a little-known group (Tkalac Verčič et al., 2011: 77).

The sampling strategy in both versions of the questionnaire was based on the non-probability snowball sampling principle, which was appropriate in this case to gather a relatively large number of diverse units. Participation in the research was anonymous and voluntary. Apart from participating in the research, initial contact persons were asked to find additional 10 to 30 participants (depending on their possibilities) who were known to them to satisfy the fundamental criteria (i.e. living in Dalmatia or having visited Dalmatia on at least one occasion, and being at least 18 years old). Initial respondents were located in Dalmatia and other regions of Croatia, even though they were not distributed equally. A certain number of questionnaires in foreign languages was distributed in hotels in Zadar area and collected subsequently at their reception desks. Online participation was enabled by the link to the questionnaire at various websites, as well as via initial e-mail contacts.

5.1.1.3 The implementation of the survey

The survey questionnaire was administered in two phases. The first phase consisted of the printing and distribution of the printed version of the survey questionnaire, while the second phase included the programming and distribution of the online questionnaire.

The printed questionnaire was delivered to the initial respondents either in person or, if possible, by mail, and they distributed the questionnaires to further respondents personally. Completed questionnaires were returned to the researcher in the same manner. The distribution and collection of printed questionnaires took place in the period between the beginning of December 2009 and the end of August 2010. In this way, a total of 1014 respondents were included (Fig. 4).

The online questionnaire was programmed using online survey software by the provider SurveyGizmo (Widgix, LLC dba SurveyGizmo, 2013). The options offered by the software enabled filtering the respondents on the first page by date of birth and the response they offered to the question if they had visited Dalmatia before. Respondents under 18 and those who had not visited Dalmatia before were exempt from the research and sent an explanatory message.

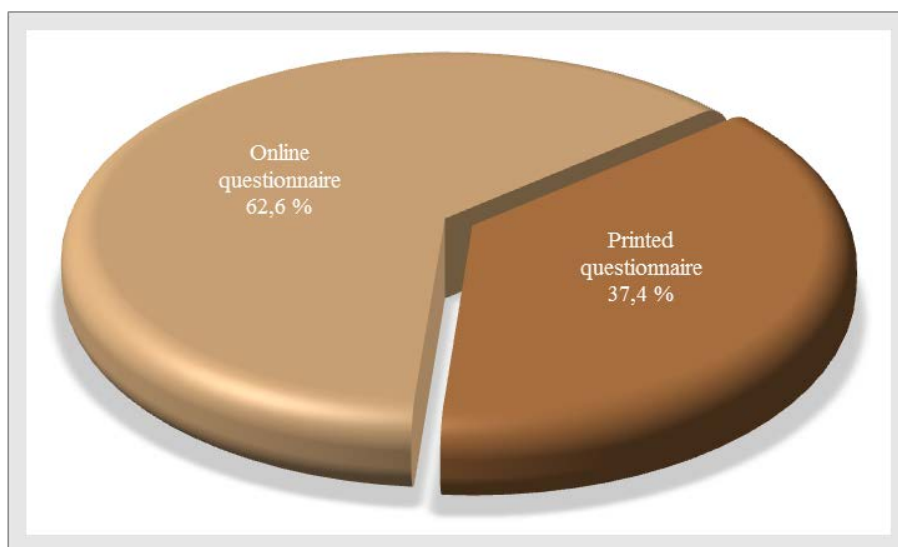


Figure 4: Respondents' share in printed and online questionnaire in the total sample
Slika 4: Delež izprašenih s tiskanim in spletnim vprašalnikom v skupnem vzorcu

Other questions and their order are identical to the ones in the printed version of the questionnaire. The online questionnaire was also made in Croatian and the four languages mentioned above. Its distribution started on 14 September 2010, and the answers were collected until 13 November 2010. In this period, the online questionnaire was distributed via various channels in and outside Croatia, depending on people's readiness to help with the research:

- e-mail (personal e-mail)
- e-mail lists of various organisations in Croatia and abroad
- Facebook
- Tourist Boards' websites
- Library websites in several Croatian cities
- Websites of certain organisations in Croatia and abroad

Respondents who were contacted via e-mail were asked to forward the questionnaire to their contacts.

The respondents' answers were collected and archived via the SurveyGizmo software, and then exported and taken over in a corresponding format (Excel file). The locations of the completed online questionnaires could be displayed on a world map (Fig. 5). Online questionnaire was completed by 1694 respondents, making a sample of a total of 2708 respondents when combined with the printed sample.



Figure 5: Schematic map preview of the locations where questionnaires were completed (Widgix, LLC dba SurveyGizmo, 2013)

Slika 5: Shematski kartografski prikaz lokacij, kjer so izpolnjeni vprašalniki

5.1.2 Coding of the open-ended answers and data processing

Five open-ended questions and variables were coded (P1, P2, P4, P5 and P11). The procedure included the review of all the answers offered to a certain question in the sample and the formation of corresponding categories according to which they were classified.⁸² These categories were presented through the results of the survey.

Open-ended questions and variables offered the possibility of multiple answers (P1 offered five, P2 three, and others an arbitrary number of possible answers). The choice, rather than the sequence, of offered answers was important for their analysis. Answers to open-ended and multiple-choice questions, as qualitative variables, have a nominal value here.

The data was processed and analysed by using SPSS software, and the charts were created in MS Excel. Since this is the first research of the sensory landscape identity phenomenon, data processing was primarily based on descriptive procedures. Statistical significance tests were added where necessary. Differences between certain groups within the sample were obtained by cross tabulation, based on which the need of determining statistical significance was evaluated.⁸³

5.1.3 Interpretation of the survey results

The overview of the survey results is divided here into two segments, the first of which regards the overview of the demographic characteristics of the observed sample, while the second concerns the overview of answers regarding the experiencing and perception of Dalmatia.

5.1.3.1 Demographic characteristics of the sample

The obtained sample was determined by five questions, the features of which are graphically shown below. The charts represent the structure of respondents within a certain

⁸² A list of codes for the classification of answers is given in the Annex D.

⁸³ Contingency tables (cross tabulation) are given in the Annex C.

question for the printed and online version of the survey questionnaire individually, and for the entire sample as well.

The first demographic question (*Were you born in Dalmatia?*) showed that the total sample included fewer persons who were born in Dalmatia and more of those from other parts of Croatia and from abroad (Fig. 6). However, the printed version of the questionnaire was completed by somewhat more people born in Dalmatia (54,30%), while the online questionnaire was completed by more people who were born outside of Dalmatia (62,80%).

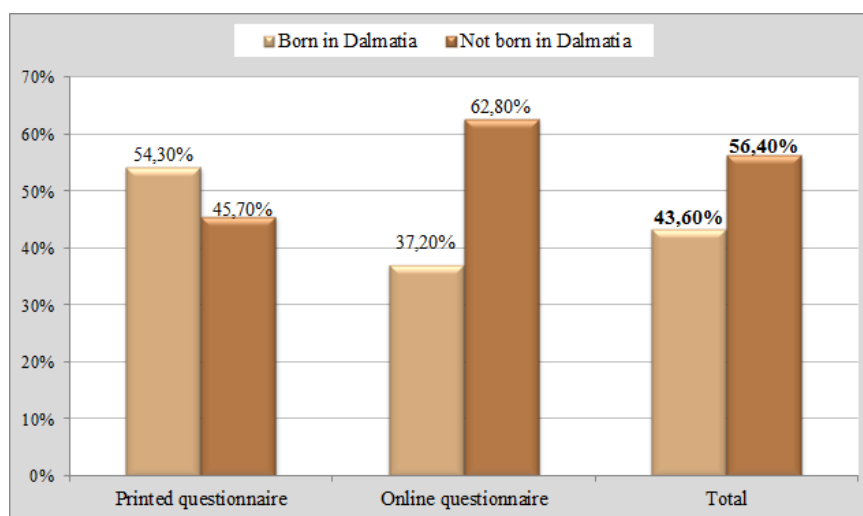


Figure 6: Ratio of respondents born in Dalmatia and those born elsewhere
Slika 6: Razmerje udeležencev, rojenih v Dalmaciji in drugje

According to the place of residence, the total sample contained most respondents living in Dalmatia (43,7%); however, those who live in another Croatian region or in another country together make up for 56,3% of the sample (Fig. 7). Foreign citizens make up for almost a fifth of the total number of respondents (19,6%). The printed questionnaire was completed by more persons living in Dalmatia, and the online questionnaire, which was easier to distribute, by more respondents living in other regions and countries (67,2%). The comparison of the two data sets shows that the printed questionnaire included 10,39% of persons living in Dalmatia, but who were not born there, while the online questionnaire included 10,11% persons born in Dalmatia, but who did not live there at the time of the survey.

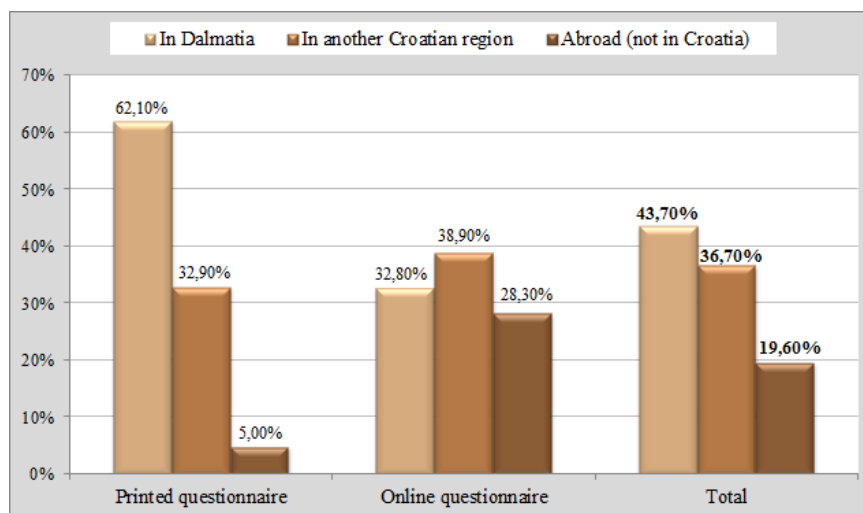


Figure 7: Respondent structure according to the place of residence
 Slika 7: Struktura udeležencev po kraju bivanja

Out of the respondents who visit Dalmatia, around a half are those who visit several times a year, while another 27% visit once a year (Fig. 8). Around one fifth of the respondents visited Dalmatia several times so far or visit occasionally. Only 2,3% completed the questionnaire during their first visit to Dalmatia.

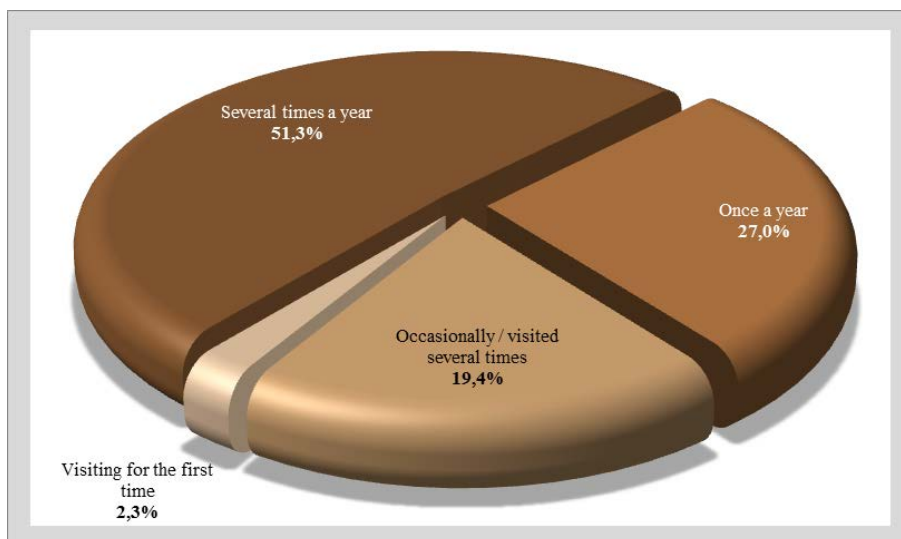


Figure 8: Visitors according to frequency of visit
 Slika 8: Obiskovalci glede na pogostost obiska

Out of the total number of respondents, there were more women (n=1737) than men (n=971), and their ratio is equal in both questionnaires (Fig. 9). According to their age, the respondents were divided into six categories (Fig. 10). Out of the total sample, the most numerous were those who were between 26 and 35 years of age (36,7%) at the time of the survey, followed by those between 36 and 45 years of age (22,5%). Under the age of 25 there were 15,7% of respondents, and somewhat more than a quarter of total respondents were older than 45. The distribution of age groups in the two questionnaires is somewhat different. The printed questionnaire was completed by 25,2% of persons aged between 18

and 25 and 26% between the age of 26 and 35 (other two categories), which makes about one half of persons surveyed in this manner. The online questionnaire included as much as 68,6% of respondents aged between 26 and 45, which is understandable since computer literacy today is still lower in older age groups.⁸⁴

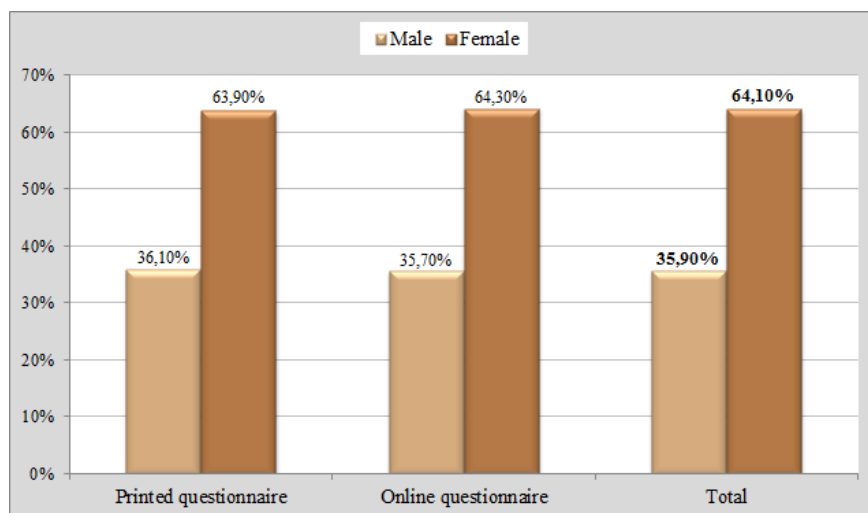


Figure 9: Respondents' structure according to the sex
 Slika 9: Struktura izprašancev po spolu

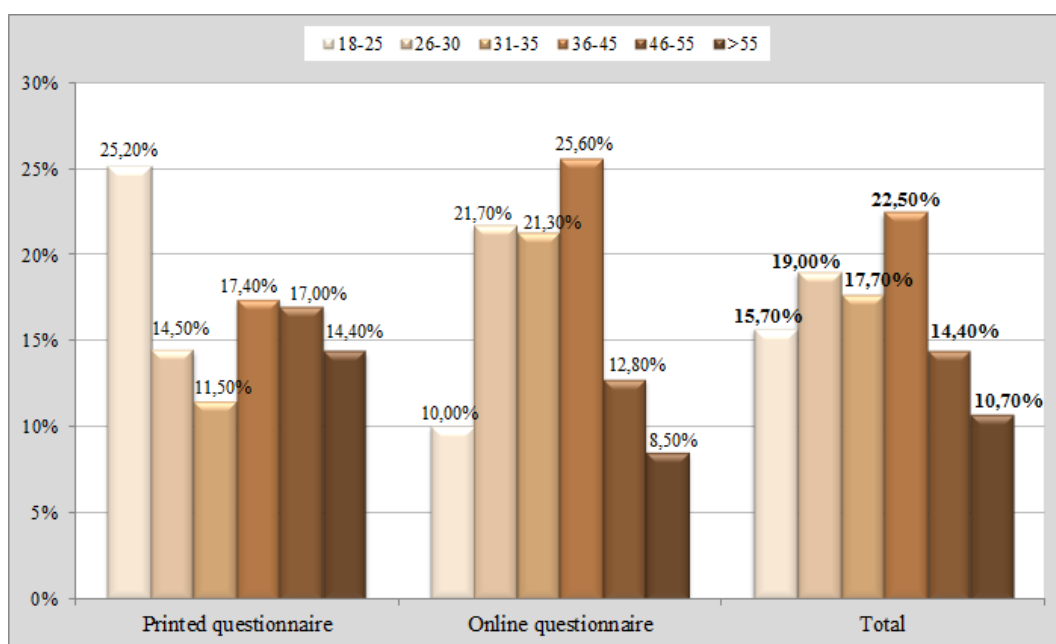


Figure 10: Respondents' structure according to age
 Slika 10: Starostna struktura izprašancev

⁸⁴ For example, survey results of GFK agency conducted in 2011 on a representative sample of Croatian citizens older than 15 (n=1000) (GFK Croatia, 2012).

Most respondents in the sample (60,7%) have higher education qualifications (i.e. university or college). A little more than a quarter of respondents finished high school, while 11,9% of them had doctoral or master's degrees (Fig. 11). The educational structure in the two versions of the questionnaire was different. The printed questionnaire showed an equal share of respondents with high school and higher education degrees, and among those who participated online, some two thirds have higher education degrees. The share of respondents who did not complete primary school or who only completed primary school is negligible.

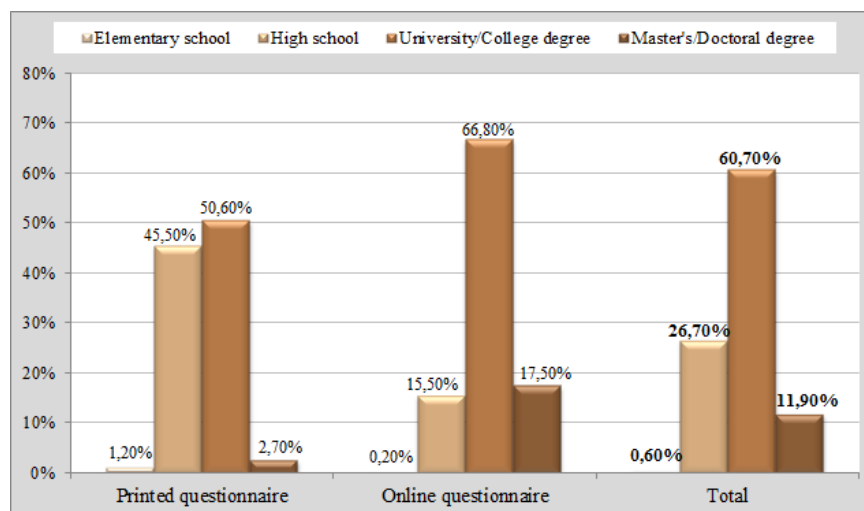


Figure 11: Respondents' structure according to education level
Slika 11: Struktura izprašancev glede na stopnjo izobrazbe

For informative reasons, demographic features of the sample are presented separately for both versions of the questionnaire, as well as jointly. The results of thematic questions are given below, where such differences are not shown since the contents and structure of the questionnaires are identical and such information is of no particular significance for the research at hand.

Moreover, to verify one of the hypotheses – that regarding potential differences in the perception of Dalmatia between local people and visitors – it is important to primarily compare the groups depending on the place of birth (P13), place of residence (i.e. in Dalmatia or outside of Dalmatia) (P14) and the frequency of visits (P15). However, the information on whether the respondent lived in Dalmatia is more informative than the information on whether they were born there, since the place of birth does not necessarily have to correspond with the place of dwelling or a longer period of residence. Data proceeding from other demographic questions are not the focus of interest of this research and serve to show the sample structure.

5.1.3.2 Experience and perception of Dalmatia and the Dalmatian landscape

The results of thematic questions are presented in the order in which they were asked in the questionnaire.

The first five associations of Dalmatia

The aim of the first question was to discover the spatial and other characteristics on which the perception of Dalmatia is based and to what extent the non-visual characteristics of the region are represented in the first five things people think of.

The answers of the respondents were quite diverse and were classified into 25 categories formed in the coding procedure.⁸⁵ The feature mentioned by the most respondents by far, 91,8%, was the sea (Fig. 12), followed by the sun and warmth with 48,4%. A frequent associations to Dalmatia were Dalmatian food and cuisine (38%) and landscape features – the karst (terra rossa, stone, rocks, cracks, karts, rocky terrain, drywalls, maquis or undergrowth, etc.) and the coast (islands, indented coast, coves, beaches, the sea and islands, rocks, Korčula, Zlarin, Veli Iž, Kornati, etc.). Between 20 and 30 percent of the respondents also mentioned olives and olive groves (23,4%), some other landscape features (28,4%) and the lifestyle, the atmosphere in the towns and villages, and emotional attachment to the region (22,3%). It can be seen from the last four categories, jointly represented with 45,6%, that many respondents associate Dalmatia with the summer, activities by the sea, rest and relaxation, and various summer experiences.

Even though the categories were not formed in accordance with sensory modalities, some of them primarily contain experiences of one type of perception, while others include modally different experiences or even multisensory experiences (Tab. 1). This second group includes, for example, the most frequently represented feature – the sea. The sea generates visual, as well as auditory, olfactory, tactile and gustatory experiences; therefore, the general answer *the sea* could mean one or more sensory associations. However, the respondents' answers were sometimes modally defined (e.g. *blue sea* or *salty sea*).

⁸⁵ The list of codes of answers to the open-ended questions is given in Annex D

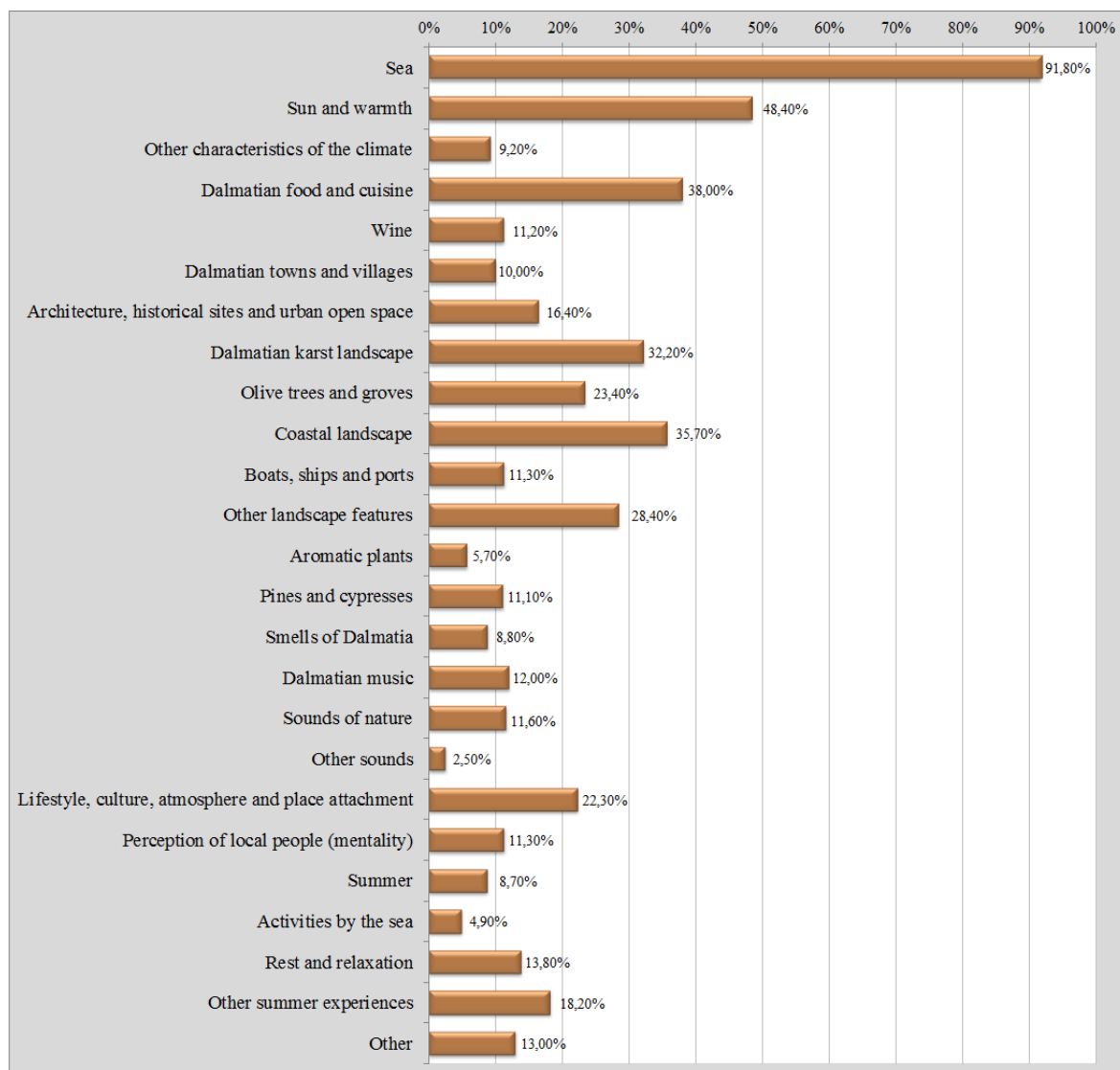


Figure 12: Share of individual categories as the first five reminders of Dalmatia

Slika 12: Delež posameznih kategorij kot prvih pet asociacij na Dalmaciji

The category *Other landscape features* comprises visual and non-visual landscape features which could not simply be put into other categories, such as:

- Abstract associations connected with the region: *beauty, bright colours, spaciousness, clarity, blue, green, whiteness, blueness, picturesqueness, diversity, unpolluted environment,*
- Geographical terms: *the Adriatic, south Adriatic, Mediterranean, hinterland*
- General landscape features: *the combination of the sea and the mountains, mountains, rivers, mountainousness, clear skies, sunset, moon, stars, donkeys, evergreen plants, vineyards, citrus fruits, agave, carob, jujube, fig, water, lack of water, fertile soil in the hinterland, and*
- Ambience landscape features: *Mediterranean ambience, warm white stone, sea, sun and the sound of the waves (as a combination of experiences), dead calm, a sudden storm.*

Table 1: Categories according to sensory modalities
Preglednica 1: Kategorije po modalitetah

MODALITY	CATEGORY
VISUAL	Dalmatian towns and villages Architecture, historical sites and urban open space Dalmatian karst landscape Olive trees and groves Coastal landscape Boats, ships and ports
AUDITORY	Dalmatian music Sounds of nature Other sounds
OLFACTORY	Smells of Dalmatia
TACTILE	Sun and warmth Other characteristics of the climate
GUSTATORY (AND OLFACTORY)	Dalmatian food and cuisine Wine
COMPOUND AND MULTISENSORY	Sea Other landscape features Aromatic plants Pines and cypresses Lifestyle, culture, atmosphere and place attachment Summer Activities by the sea Rest and relaxation Other summer experiences

The categories *Aromatic plants* and *Pines and cypresses* contain answers such as *lavender*, *immortelle*, *rosemary*, *heather*, *myrtle*, *basil*, *aromatic plants*, etc., and *pine trees* and *cypresses*. Such aromatic vegetation has visual, but sometimes even more expressed olfactory features, making this category a visually-olfactory one.

The summer and summer atmosphere in Dalmatia also potentially include compound and multisensory experiences. Examples of this are *summer*, *taste of the summer*, *bathing*, *sunbathing*, *diving*, *picigin* (traditional beach ball game), *night swimming*, *going out*, *walks*, *taverns and fiestas*, *ice cream*, *lazy mood*, *night life*, *commotion*, *crowds*, *tourists*, *stands*, *excursions and exploring Dalmatia*, *fishermen's nights*, etc.

Those answers that implied the way of life in Dalmatia, certain ambiances in which it exists, tradition, usual activities of the locals, feeling towards the region and family and friends who live there, memories and similar features are united in the category *Lifestyle, culture, atmosphere and place attachment* (e.g. healthy lifestyle, relaxedness, peaceful life, life in the country, field labour, Mediterranean philosophy, lack of rush, spontaneity, easy-going; farmers' markets full of fruit, fish market, café terraces, desertedness in the winter; culture, tradition, art, fishing, briscola and tressette (card games), sipping coffee; nostalgia, childhood, youth, family, relations, native place, home, grandfather, grandmother, friends, etc.). Even though some of those terms are abstract, such as tradition or homeland, these answers reflect the image of the character and atmosphere (i.e. sense of place) with a characteristic way of life, as well as the connection with its individual features and people (i.e. place attachment), while both are based on a direct experience with all senses.

The perception of the local inhabitants through various characteristics is also tightly related with the previous category: *temperament, mentality, spite, laziness, diligence, hospitality, warm people, beautiful people, backwardness, arrogance, women-chasing*, etc.

The number of answers of local people and visitors from other Croatian regions and from abroad does not differ drastically in most categories; however, there are differences in some features (Fig. 13). The sea, as the most frequent association, was equally mentioned by all three groups of respondents. Those living in Dalmatia mentioned the sun and warmth (52,4%), karst landscape (38%), olives and olive groves (28,9%), and sounds of nature (11,5%) more frequently than the visitors. Respondents from other Croatian regions also associated Dalmatia with the sun and warmth (49,3%) and sounds of nature (15,1%), and, in contrast to the other two groups, the smells of Dalmatia (13,4%) and rest and relaxation (20,6%) can be added. In visitors from other countries, the thought of Dalmatia invoked associations to Dalmatian food and cuisine (44,6%) (which is also well-represented in the previous groups), Dalmatian cities and towns (16,6%), coastal scenery (*indented coast, islands, coves, beaches* etc.), Dalmatian music, rest and relaxation (16%) and other experiences. In general, rest and relaxation are more significant to visitors than to locals for whom Dalmatia is the usual daily environment.

The said differences correspond to the differences between respondents who were born in Dalmatia and those who were born outside Dalmatia. Analysis by the frequency of visits to Dalmatia shows that this factor does not have a significant influence on the way the region is experienced, since differences are found only in several categories (Fig. 14). Moreover, it should be pointed out that the number of respondents who visited Dalmatia for the first time is relatively low (n=38) in relation to the other groups (more than once a year: n=850; once a year: n=447; occasionally: n=321); therefore, this information should be taken approximatively when comparing such data.

Respondents who visit Dalmatia several times a year or once a year listed the sun and warmth, olives and olive groves, and the smells (scents) of Dalmatia more frequently than those who visited Dalmatia occasionally. Occasional visitors, on the other hand, tended to mention architecture, historical sites and urban ambiances, the beauties of coastal landscape and the character of the local people more frequently.

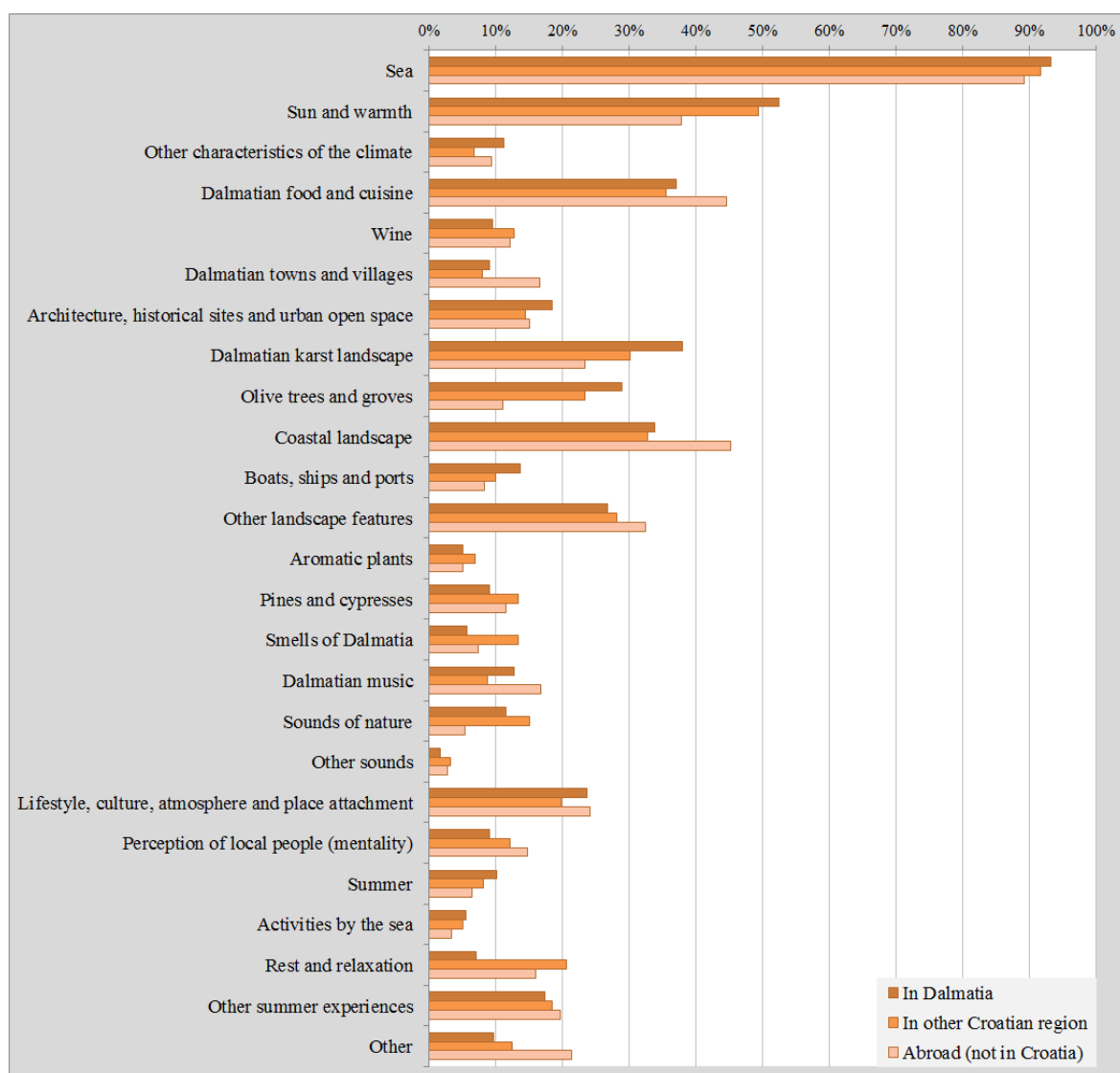


Figure 13: Share of categories considering the respondents' place of residence
 Slika 13: Delež kategorij glede na kraj bivanja izprašancev

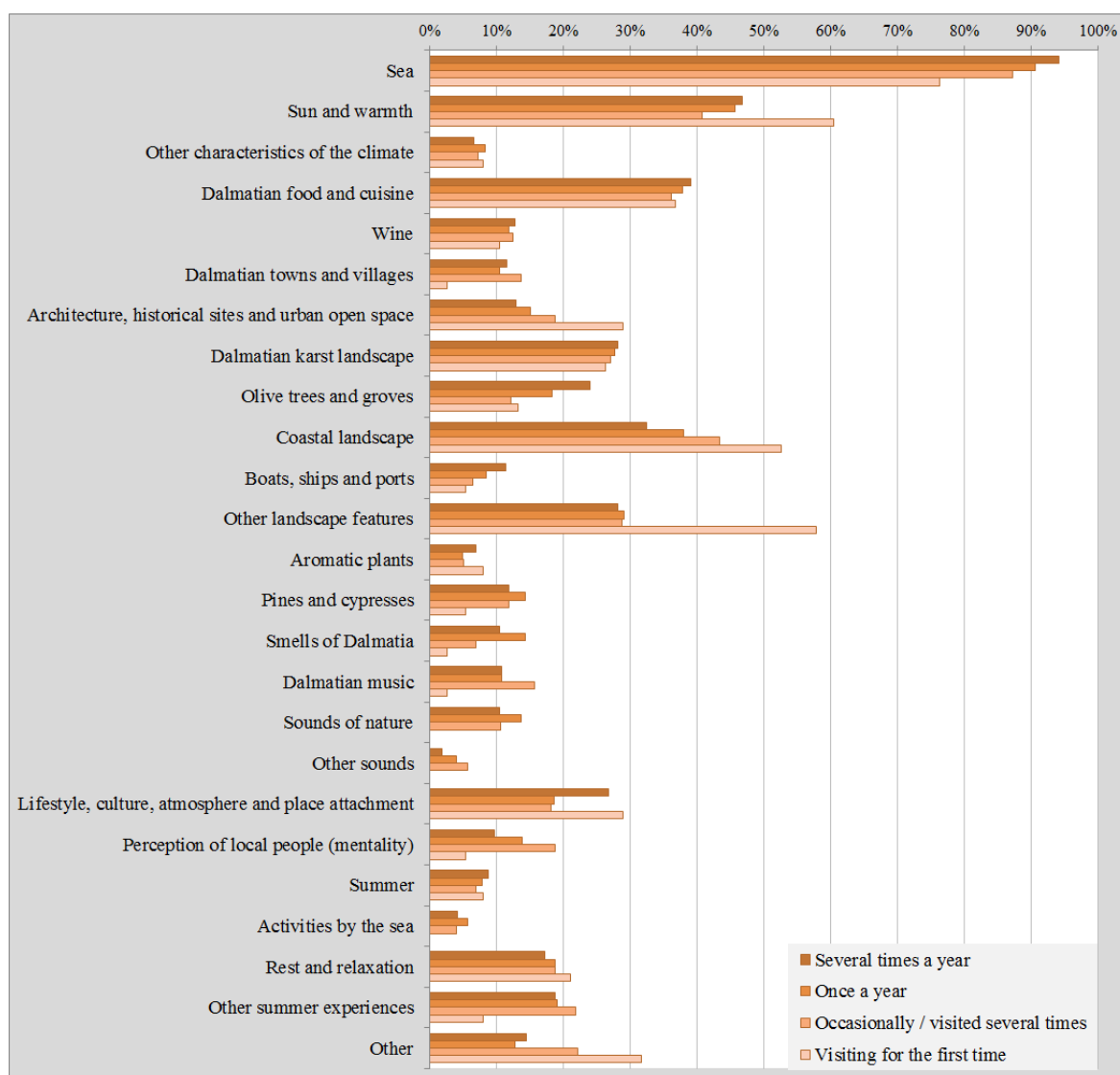


Figure 14: Share of categories considering the frequency of respondents' visits to Dalmatia
 Slika 14: Delež kategorij glede na pogostost obiska Dalmacije

Elements inevitable of the typical Dalmatian atmosphere

Respondents' answers regarding the inevitable elements typical of the Dalmatian atmosphere fit into categories largely similar to those in the previous question, albeit a smaller number of them (i.e. 20 categories). Again, the majority of respondents mentioned the sea (50%), as well as Dalmatian karst features (38%) (e.g. rocky terrain, karst, rocks, stone) (Fig. 15). Similar percentages were found regarding Dalmatian food and cuisine (together with wine even 26,8%), tradition and Dalmatian lifestyle, Mediterranean climate (e.g. sun, warmth, major winds, humidity, warm climates, etc.), as well as olives and olive groves. Stone houses together with other architectural elements (e.g. wooden window shutters, stone stairs, church roofs, terraces) and urban open spaces (stone-slab paved streets, squares, walls, etc.) were considered an essential part of the ambience by 15,9% of the respondents. Therefore, built landscape elements make up 36,4%. Other landscape features were mentioned by 14,7% of the respondents.

Other categories were mostly represented with less than 12% of responses. Taverns, as a specific (mostly) closed ambience, are mentioned in 9,2% responses and are closely related to the category of Dalmatian food and cuisine. Aromatic plants, such as lavender, immortelle, and rosemary, are considered to be an essential feature of the ambience by 6,1% of the respondents, while other smells (scents) of Dalmatia were characterised as such by 5,4%. Pine trees and cypresses, with their visual and olfactory features, were mentioned by 10,1% of the respondents. Dalmatian music is recognised as a part of the Dalmatian ambience by 11,3% of respondents (i.e. *klapa* songs, the sound of the guitar and the mandolin, etc.), while 7,4% mentioned other sounds as well (seagulls, church bells, birds, the sea, etc.).

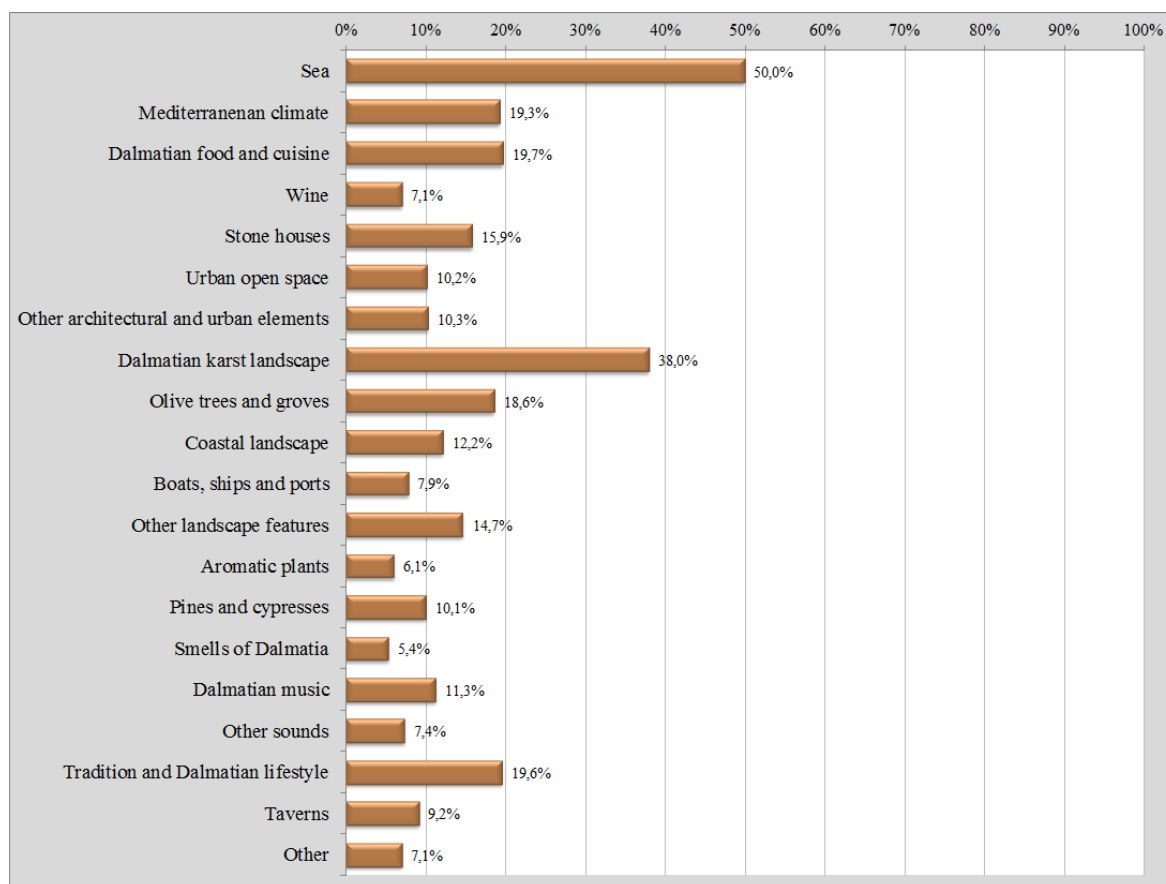


Figure 15: Landscape features inevitable of the typical Dalmatian atmosphere
 Slika 15: Neizogibne značilnosti dalmatinskega vzdušja

The differences in answers offered by local people and visitors are again not large, and they are more pronounced in categories similar to those in the previous question (Fig. 16). Cultural heritage features, such as stone houses, open urban spaces, olives and olive groves, taverns and ships and ports, are considered to be an essential element by more respondents from Dalmatia and other Croatian regions. Karst landscape is a significant feature of the region for approximately 10% more respondents from those two groups. On the other hand, visitors from abroad to somewhat larger extent mentioned Dalmatian food and cuisine, the coastal landscape, tradition and relaxed rhythm of life, pine trees and cypresses, and aromatic plants.

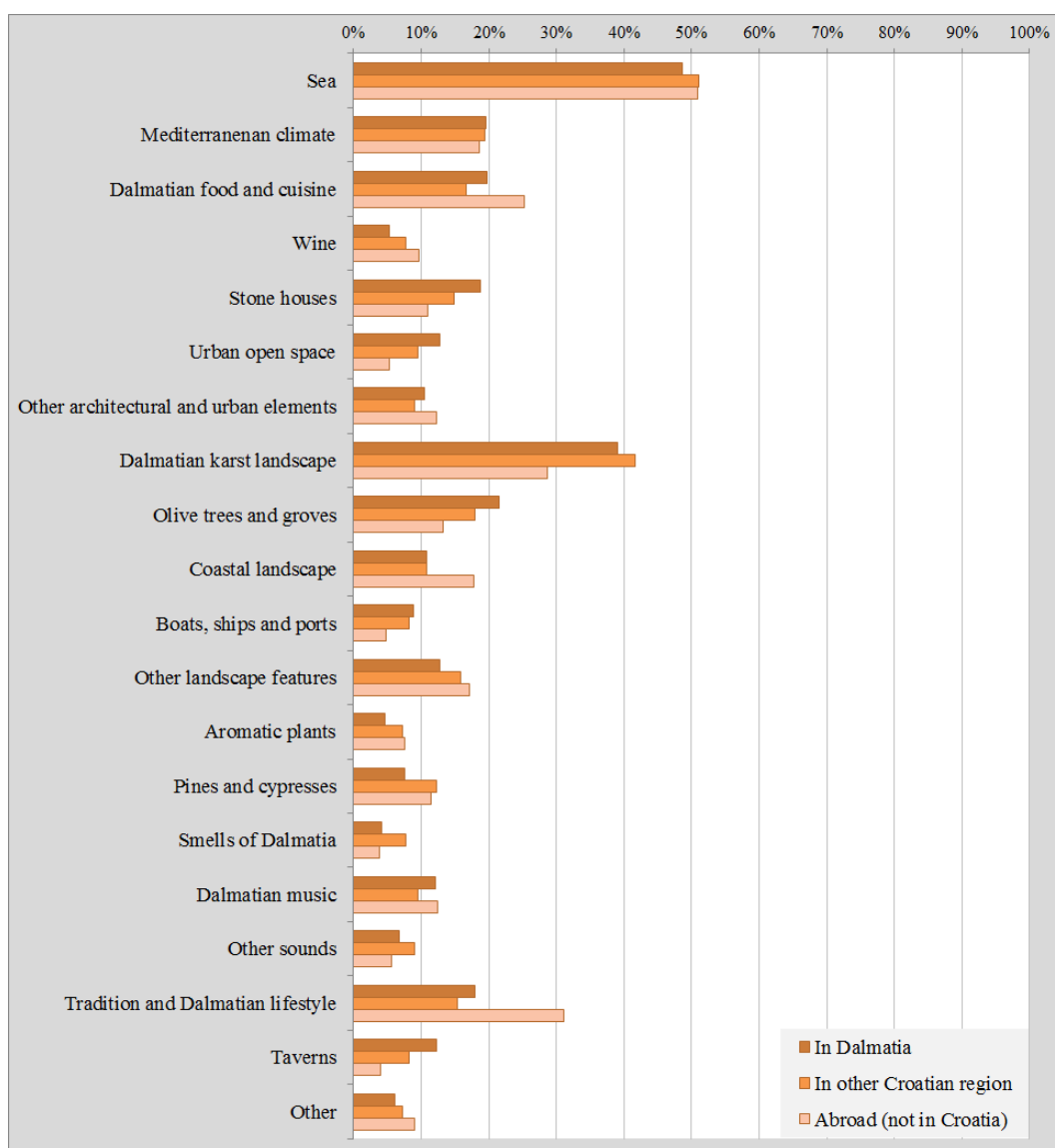


Figure 16: Share of categories depending on the respondents' place of residence
 Slika 16: Delež kategorij glede na kraj bivanja izprašancev

Visitors' frequency of stay in Dalmatia did not have a large influence on the answers. The differences in most categories vary up to several percentage points (Fig. 17), pointing to the fact that inevitable elements of the Dalmatian ambience are equal and very easily recognisable for all visitors, notwithstanding the frequency of their visits.

It should also be pointed out that the categories, just like in the previous two analyses for the previous question, are very uniform in terms of percentages (more pronounced are only categories *sea* and *karst landscape*, and to some extent *Mediterranean climate*, *Dalmatian food and cuisine*, and *tradition and lifestyle*). The conclusion can be drawn from this that the recognisability and identity of Dalmatia are based on many different landscape characteristics, with a special emphasis on several of them.

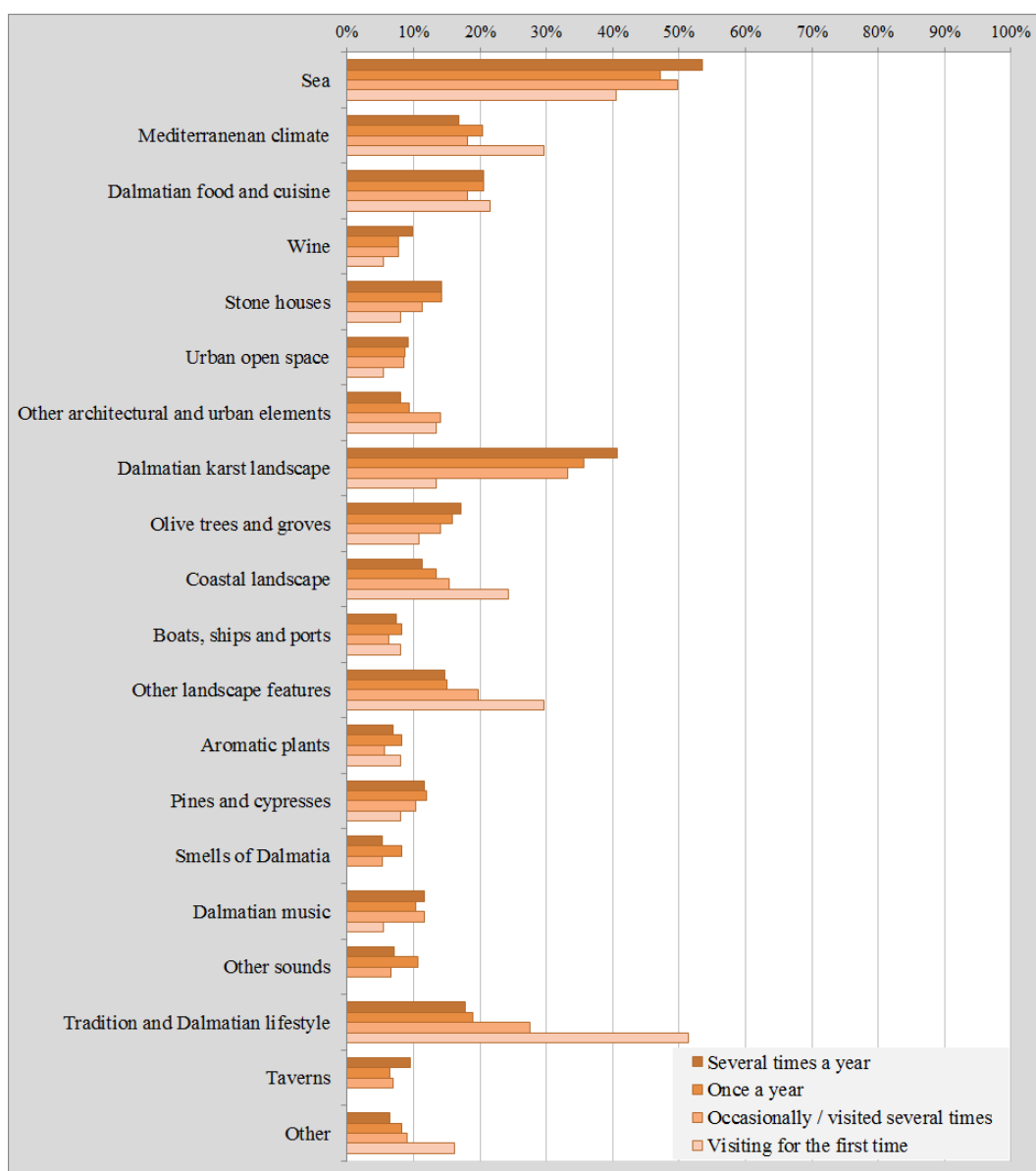


Figure 17: Share of categories depending on the frequency of visits to Dalmatia
 Slika 17: Delež kategorij glede na pogostost obiska Dalmacije

Perception of difference between Dalmatia and other regions and countries

The goal of the third question was to examine how different do the respondents believe Dalmatia to be compared to some other regions and countries. The question in Croatian was slightly different from the question in foreign languages. The question in the Croatian version of the survey questionnaire was the following: *What do you think how much does Dalmatia differ from other Croatian regions according to the following characteristics?* The question was intended for persons who live in Dalmatia (who see their region as different from others) or those who live in other regions of Croatia. The question in foreign languages was primarily intended for respondents who do not live in Croatia and are not familiar with other Croatian regions. Therefore, they were required to compare Dalmatia

with their home: *What do you think, how much does Dalmatia differ from your country (place where you live) according to the following characteristics?*

The question was based on the five-point Likert scale, where 1 meant not different at all, and 5 meant very much different. Eight types of characteristics were offered for validation, with the possibility of offering an additional answer (*Other*), which was used by a smaller number of respondents. The average values generally show that most respondents considered Dalmatia to be very different from other regions and countries by all offered aspects, and thus, very specific (Fig. 18).

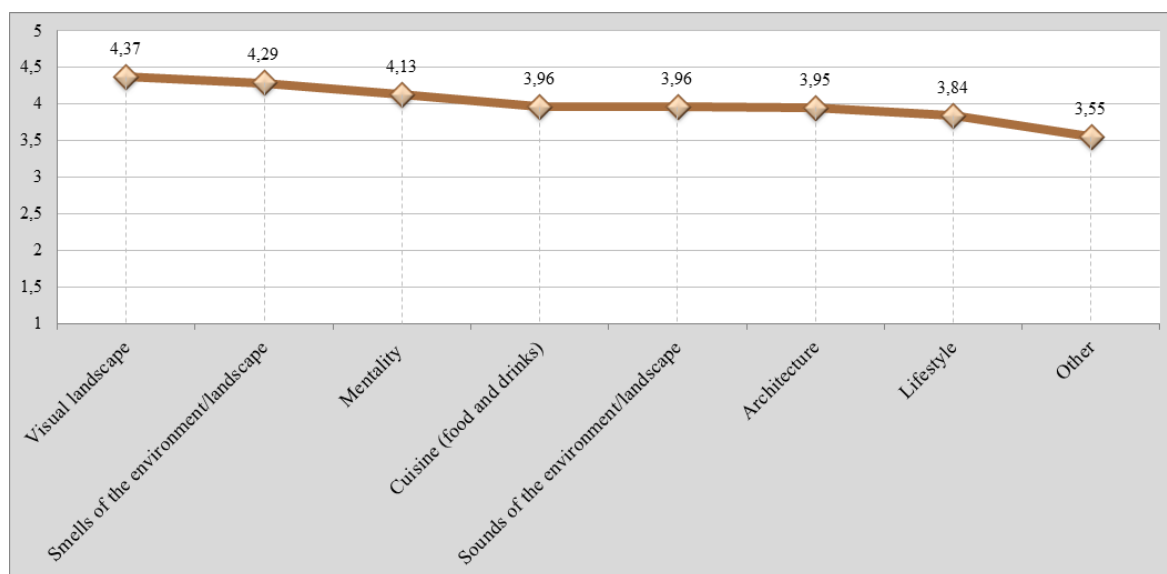


Figure 18: Average values of how much Dalmatia differs from other regions and countries in offered categories (according to the height of the average value)

Slika 18: Povprečne ocene o tem, kako se Dalmacija razlikuje od drugih regij in držav po ponujenih kategorijah (prikazano po višini povprečne ocene)

According to the respondents, the greatest differences in relation with other regions and countries were the appearance of the landscape and its smells, followed by the mentality of the local people. Dalmatian cuisine, sounds of the environment/landscape and architecture are equally (and also greatly) expressed distinctive features. Second to last came the Dalmatian lifestyle, still with a relatively high average value (3,84).

According to other features, Dalmatia's distinction is graded with 3,55, pointing to the fact that some of the respondents added features which they consider to be very different (high grades), but some of them also added characteristics they considered to be relatively similar to other regions and countries (lower grades). In several cases, respondents entered an answer without evaluating it on the scale, and a few respondents marked a value without entering an 'other' feature (which probably means that they valued the distinction of other Dalmatian features *in general*).

One of the most frequent answers in the category *Other* was the climate, in most cases evaluated as a lot (4) and very much different (5) from other areas.

Climatic conditions (cold winters with *bora* winds, hot summers)

Mild winter

Climate, air temperature, number of sunny days

Climate – quantity of sun and warmth

Number of sunny days per year

Weather is significantly different

Summer was very hot but enjoyable

Other answers included temperament, behaviour and lifestyle (hospitality, warmth, cheerfulness, carefreeness, laziness, diligence, relaxedness, closeness), people's appearance (beautiful people, beautiful women) and the manner of speaking (Dalmatian speech and dialect, loud speech).

I come from Slavonia and I believe that Dalmatians are more closed than people from the continent.

Living one day at a time

Closeness among people! (Perhaps least present detachment)

Through communication, they make it clear that you are the "foreign element" in the landscape

Relaxedness, friendliness, courage, casualness, beauty, passion

Sense of humour at their own expense

Constant isolation (especially of Dalmatian hinterland and the islands) manifested in the character of its inhabitants

Their lives are calmer and healthier than those of the people from the continent

The way they are forced to live due to the climate and the mentality which is significantly different than on the continent – they are much more selfish

By their openness to people and approachability they are very different from other parts of Croatia

Croatians and especially Dalmatians have a special 'joie de vivre'.

The people are joyful and loud

Different dialects on a small area

In addition, terms such as culture, tradition, heritage, history, art, and cultural and architecture monuments were found, as well as Dalmatian music and singing, but also different features of the landscape, although somewhat less frequently.

Dalmatia is very quiet and we hear much for nature sounds

Lavender

Not contaminated

The sea

It has the sea...

Too little greenery

By its colours

By *maestral* wind which almost always blows at the same time

By vineyards and olive groves

If this is compared with the results of the first two questions, it can be seen that the most numerous answers in the *Other* category coincide with the more pronounced categories – Mediterranean climate, people's character and behaviour, lifestyle and culture (material and non-material).

Analysis of variance (ANOVA) has shown that the differences in attitudes between surveyed locals and visitors (from other regions and countries) are statistically significant for all offered features (Fig. 19). It is interesting to note that such differences are smaller when it comes to the evaluation of landscape smells and sounds, which means that the attitudes of groups in evaluating of how much Dalmatia differs from other regions and countries under such criteria were more uniform. However, average value lines for each group show that differences in average values for these landscape characteristics vary only up to 0,5 points.

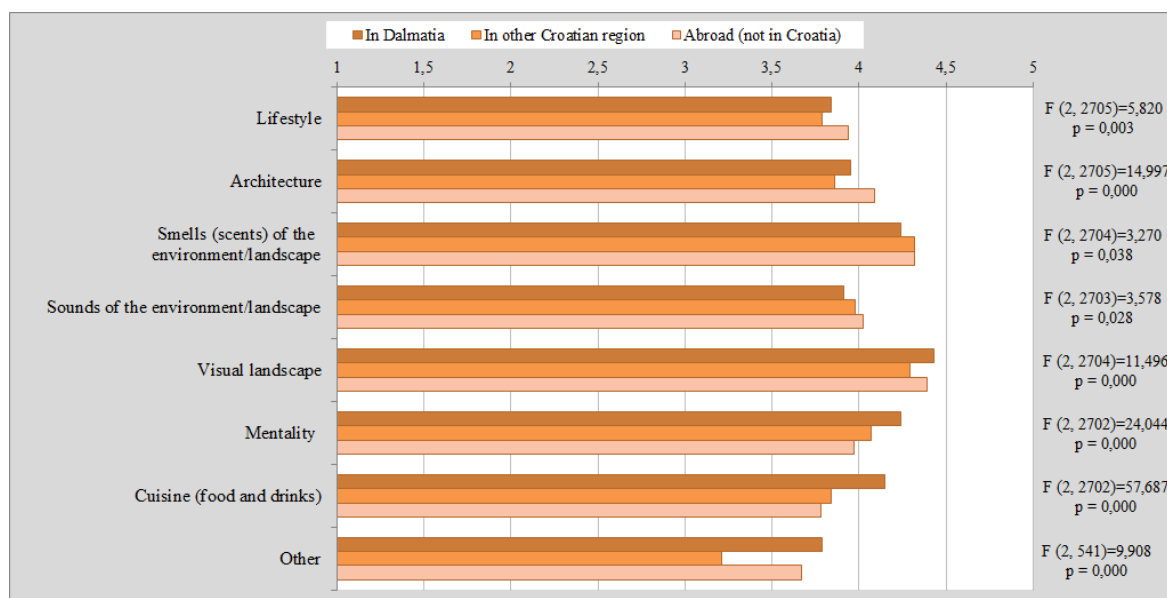


Figure 19: Differences between locals and visitors when asked to what extent Dalmatia is different in given categories (the categories are shown in the same order as in the questionnaire)

Slika 19: Razlike med anketiranimi lokalnimi prebivalci in obiskovalci v vrednotenju, v kolikšni meri se Dalmacija razlikuje po danih kategorijah (kategorije so prikazane po vrstnem redu v vprašalniku)

As Fig. 19 shows, respondents who lived in Dalmatia considered Dalmatia to be somewhat more different when it came to landscape (4,43), mentality (4,24) and local cuisine (4,15) than the visitors did (4,29 and 4,39, 4,07 and 3,97, 3,84 and 3,78). In comparison with the Dalmatians, the visitors evaluated Dalmatia as more different than their home in terms of landscape smells and sounds. The locals and those who were from abroad considered other characteristics (*Other*) to be more different (i.e. specific for the region) than respondents from other Croatian regions (in the order of the graph 3,79, 3,21, and 3,67).

In visitors, the frequency of visits did not considerably influence the perception of the difference of Dalmatia compared to their place of residence (Fig. 20). This can be interpreted as the prominent and recognisable landscape features being noticeable at first visit and are only confirmed at every next visit. By the analysis of variance, statistically significant differences were found in evaluating scents, mentality of the local people and Dalmatian cuisine.

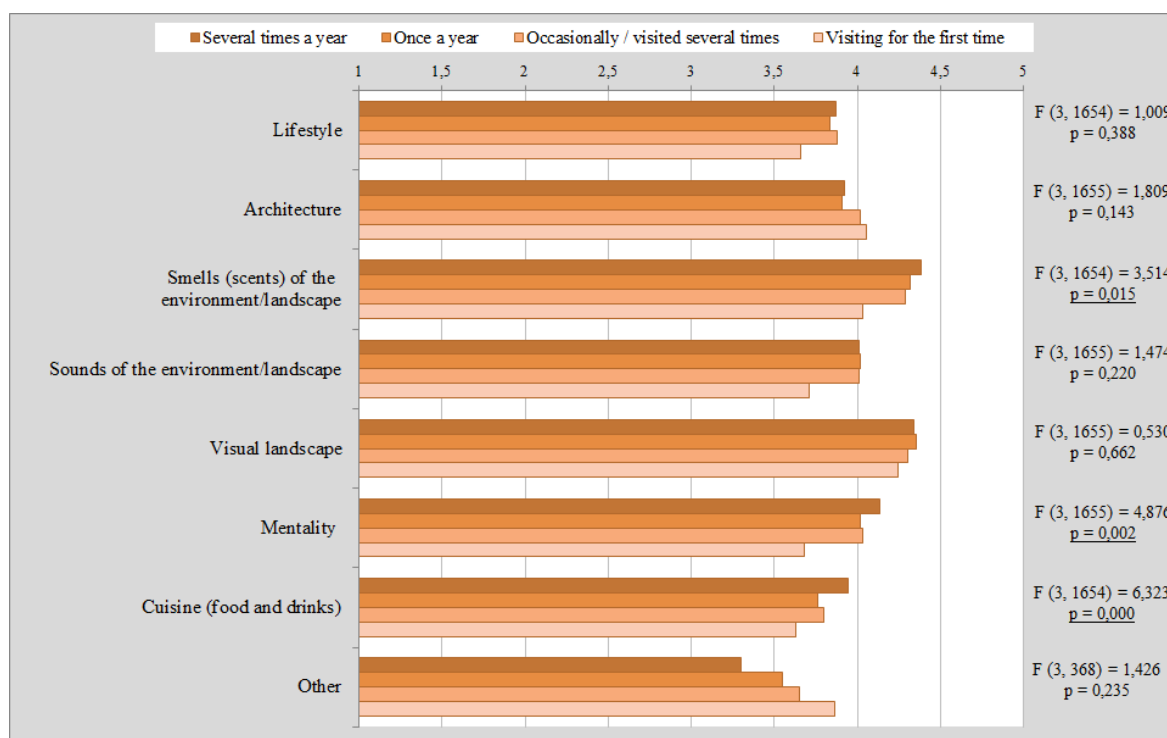


Figure 20: Attitudes of visitors on the difference between Dalmatia and other regions and countries, depending on the frequency of visits

Slika 20: Stališča anketiranih obiskovalcev o razlikovanju Dalmacije od drugih regij in držav glede na pogostost obiska

Typical smells of Dalmatia

The fourth question was used to directly enquire into the attitudes regarding the existence (yes, no, I don't know) and types (examples, if the answer to the previous question was yes) of smells (scents) typical of Dalmatia through these two variables. In the overall sample, 90,6% of the respondents believed that there are smells typical of Dalmatia, and they gave some examples. Only 2,3% of the respondents offered a negative answer (Fig. 21).

The variable requesting to provide an example was given in the form of an open-ended question without a set number of examples. The variable has a nominal value – the sequence of answers (examples) was not relevant, but rather the content thereof. The coding procedure provided eight categories, five of which regarded the smells of vegetation.

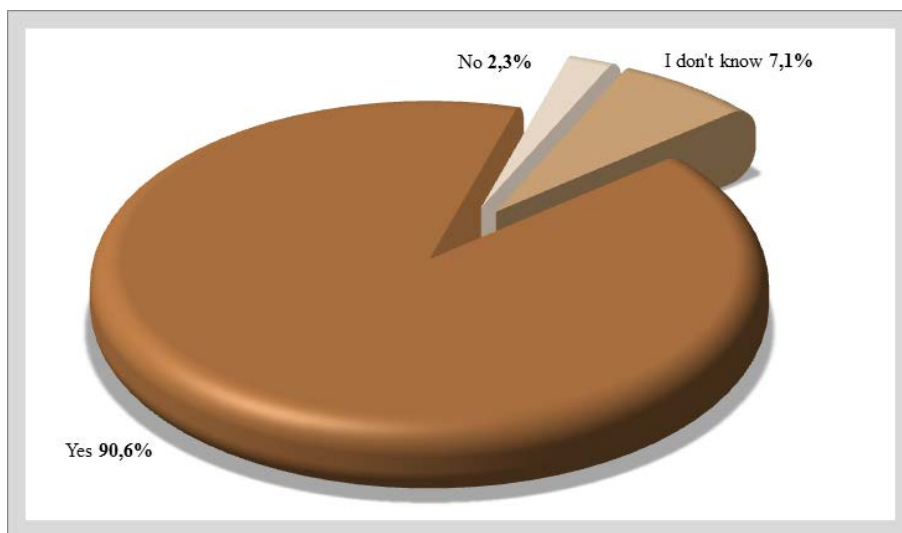


Figure 21: Respondents' opinions on whether there are smells typical of Dalmatia
Slika 21: Stališča anketirancev o tem, ali obstajajo vonji, značilni za Dalmacijo

The largest number of respondents stated that the smell of the sea was an olfactory characteristic of the region (Fig. 22). There was 40,4% respondents who believed that the scents of pine trees and cypresses were recognisable. Regarding aromatic plants (mostly shrubs), lavender was perhaps the most frequently recognised, compared to which the scents of rosemary and immortelle were mentioned much less frequently. However, 28,9% of the respondents mentioned the scents of other aromatic plants (e.g. laurel, sage, oregano, heather, olive tree, Spanish broom, ripe figs, basil, juniper, maquis or undergrowth, tamarisk, wormwood, herbs, holly oak, ripe figs, Japanese pittosporum, the smell of dry summer plants, citrus). These findings suggest that the Dalmatian landscape shows a great deal of olfactory diversity and indicates the existence of still unused dimensions of olfactory identity.

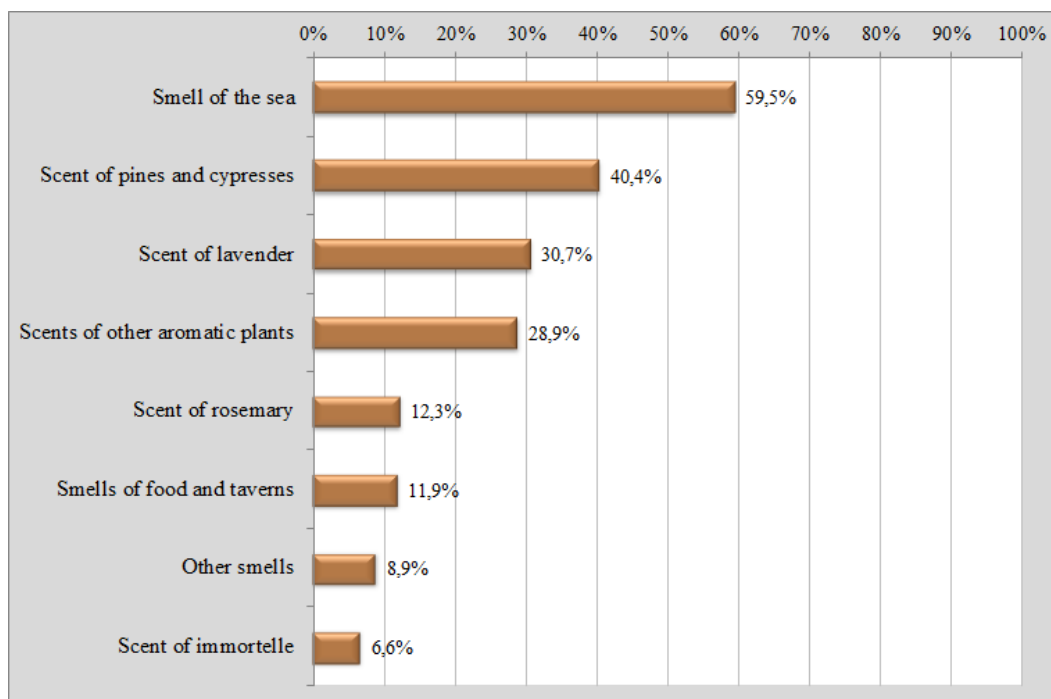


Figure 22: The smells that respondents found to be typical of Dalmatia (share)

Slika 22: Vonji, za katere so anketirani menili, da so tipični za Dalmacijo (prikazano po višini deleža)

Apart from the smell of the sea and the vegetation, 11,9% of respondents found the smells of local Mediterranean foodstuffs and dishes, as well as of taverns as specifically Dalmatian restaurants, to be typical of Dalmatia (e.g. taverns, olive oil, fish, fruit, grapes, parsley, fruits and vegetables, lamb on the spit, wine, *peka*, the smell of food in narrow streets, grandmother's *fritule* (Dalmatian for fritters), the smell of the fireplace).

The category of *Other smells* included a vast spectrum of various smells of the landscape. Some of them specific (e.g. stone, overheated stairs, the smell of heat on the asphalt, the smell of hot stone in the evening, hot soil, smell of the summer heat, sun, swelter, the smell of warmth in the air, clean air, smell of purity like after the *bora*, wind, *bora*, the smell of the sirocco, the smell of the wind coming from the sea, the smell of the sirocco and the *maestral* in the summer, and the smell of *bora* and smoke in the winter, soil, smell of the soil after the first rain around the festivity of the Assumption of Mary, the smell of soil after rain, the smell of first raindrops on dry soil, salt in the air mixed with the heat, sunscreen, sunblock, oil and fuel from ship engines, specific smell in ports, harbour, fish market, the smell of river Krka, spring water, sand, salty skin, hair; the smell of the towel as you lie on it with your skin wet, sheep, donkey dung), and some of them general (e.g. the flora and the fauna, summer, all of nature, Dalmatian hinterland, smell in the air, special smell, smell of oxygen, Mediterranean smells, island ambience smells, the smell of the air especially on islands, flowers, freshness, narrow streets, the smell you feel when you arrive from Zagreb, smells of the night).

The diversity of offered answers shows that this question encouraged respondents to think of smells that are perhaps socially less recognised characteristics of the olfactory identity, but rather represent individual associations to the Dalmatian region.

Local people and visitors expressly agree in the opinion that there are smells typical of the region (Fig. 23). Cramér's V test showed a statistical difference between the said groups ($p=0,000$), but weak or almost non-existent association between the two variables (Cramér's V coefficient 0,067), pointing to the fact that the statistical difference probably results from the large size of the sample rather than the place of living influencing the respondents' answers.

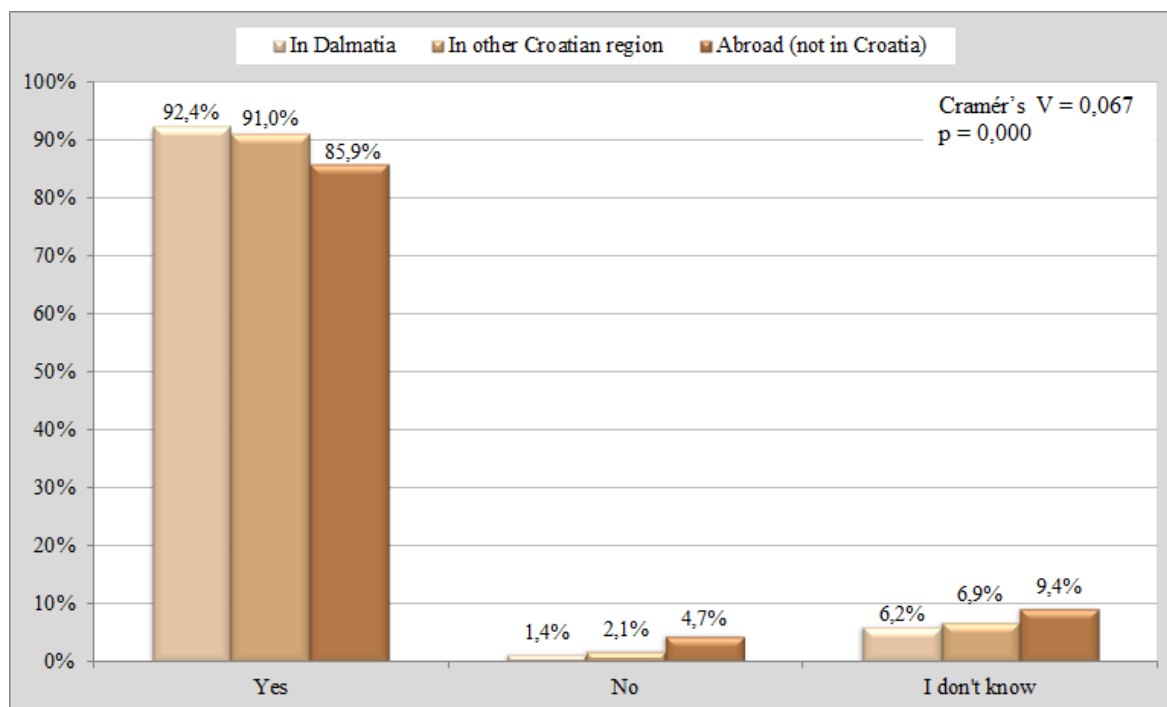


Figure 23: Opinion about the existence of smells typical of Dalmatia depending on the respondents' place of residence

Slika 23: Stališča o tem, ali obstajajo vonji, ki so značilni za Dalmacijo, glede na kraj bivanja izprašancev

Approximately the same number of visitors coming to Dalmatia once or more times per year agree on the existence of typical smells (92%), while it was noticed by a smaller number of those who come to Dalmatia occasionally (80,4%) or those who were visiting for the first time (52,6%) (Fig. 24). This is understandable, considering the fact that the length and frequency of stay deepen the knowledge of one's environment, as well as the fact that non-visual stimuli are occasional, elusive and frequently ephemeral, therefore sometimes taking more time to be perceived in space. According to Cramér's V, the differences depending on the frequency of visits are statistically significant ($p=0,000$), while the correlation between variables observed here is somewhat stronger (Cramér's V 0,180), but still counts as weak association.

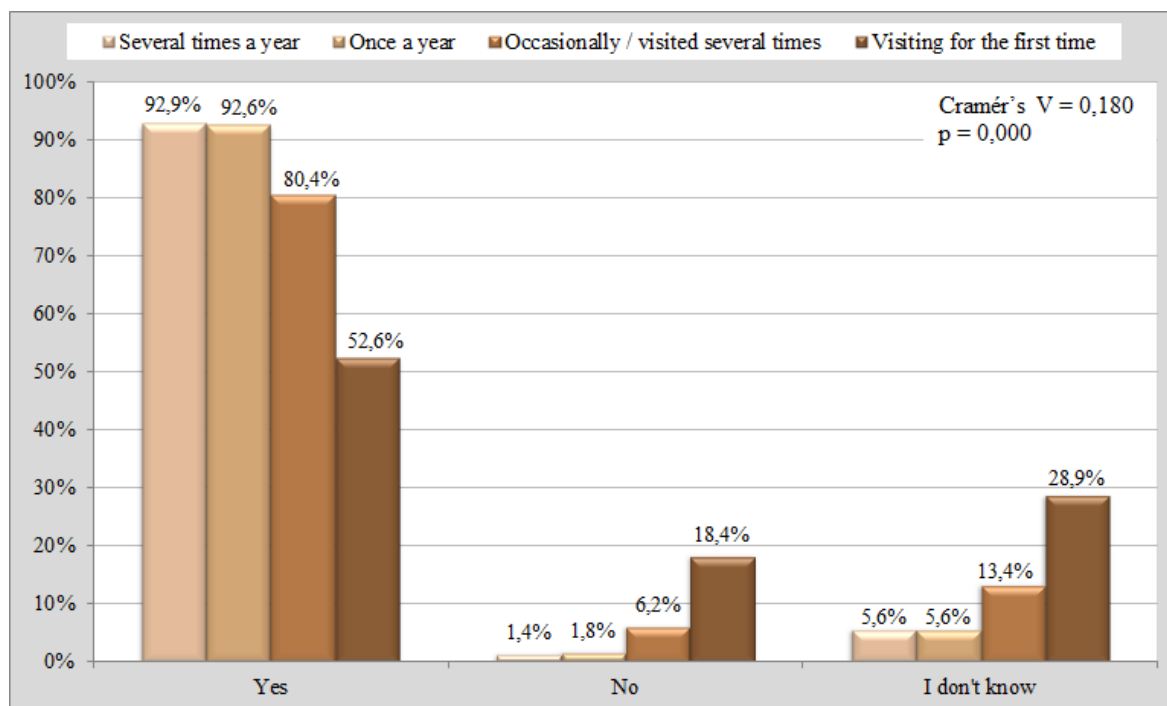


Figure 24: Opinion about the existence of smells typical of Dalmatia depending on the frequency of visits

Slika 24: Stališča o tem, ali obstajajo vonji, ki so značilni za Dalmacijo glede na pogostost obiska

The two factors – place of living and frequency of visits – somewhat influenced the choice of typical smells in somewhat different ratios, even though the basic structure of answers remained the same in both cases (Fig. 25, Fig. 26). The smell of the sea was mostly the choice of Dalmatian inhabitants (66,3%), and somewhat less of respondents from other regions (57,3%) and other countries (47,5%). The smell of lavender showed a similar trend. On the other hand, the smell of pine trees and cypresses as an olfactory characteristic was more frequently chosen by visitors (47,9% from other regions and 43,7% from other countries) than by locals (32,7%). The scent of rosemary was chosen less frequently by foreign visitors (8%) than by locals and visitors from other Croatian regions (approximately 13%). Residents from other Croatian regions mentioned the scent of immortelle more frequently than the other two groups (i.e. 10,1%), and the smell of food was mentioned by more foreign visitors (14,9%) than respondents from other Croatian regions (10,4%) and Dalmatia (11,9%).

It is interesting to note that the scents of various other plants as typical olfactory characteristics of Dalmatia are almost equally mentioned by all three groups, foreigners only slightly less frequently (26,6%) than other two groups (approximately 29%). Moreover, foreigners contributed the most to the group of 'other' smells (13,1%), while locals contributed with 9,8%. This confirms the above mentioned possibility that there are recognisable smells of Dalmatia that have still not become a part of the current social and media-accepted image of the region's olfactory character.

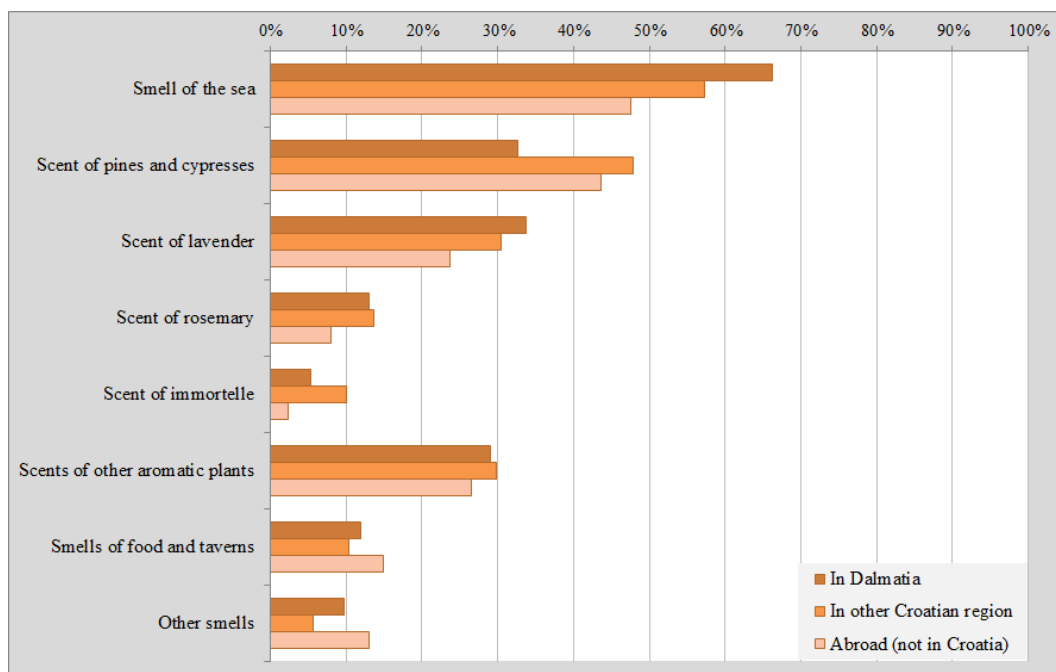


Figure 25: Examples of typical smells noted by respondents, depending on their place of residence
 Slika 25: Primeri tipičnih vonjev, ki so jih navedli izprašanci glede na kraj bivanja

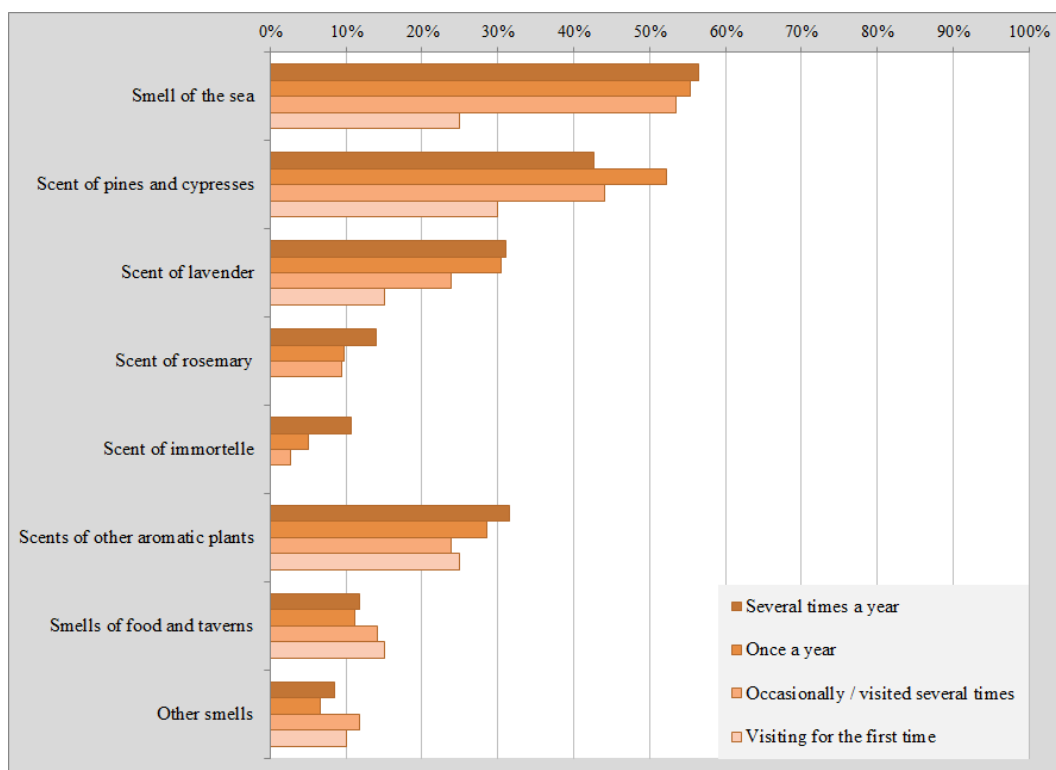


Figure 26: Examples of typical smells noted by visitors, depending on the frequency of their visits
 Slika 26: Primeri tipičnih vonjev, ki so jih navedli izprašanci glede na pogostost obiskov

The smell of the sea was noted with almost equal frequency by all visitors, notwithstanding the frequency of visits (apart from those for whom this was their first visit to Dalmatia). The smells of pine trees and cypresses were mentioned more frequently by respondents

who visited Dalmatia once per year, probably those who visit regularly during their summer vacations. The perception of smells of aromatic plants as olfactory characteristics grows as the frequency of visits grows – respondents who visit Dalmatia more frequently noted more such smells. The smells of food and taverns, as well as smells pertaining to the category *Other* were somewhat more impressionable for those who visited Dalmatia for the first time or those who had visited only several times (or occasionally).

The analysis of answers to this question can lead to the conclusion that both locals and visitors believe that there are smells typical of Dalmatia, and most of the examples they gave were similar, with some small differences.

Typical sounds of Dalmatia

The goal of the fifth question, much like the fourth, was to analyse respondents' attitudes on the existence and types of sounds typical of Dalmatia. A vast majority of respondents (86%) believed that there are sounds typical of Dalmatia (Fig. 27) and they provided examples. This number was only slightly lower than the number of those who also believed that there were typical smells (i.e. 90,6%).

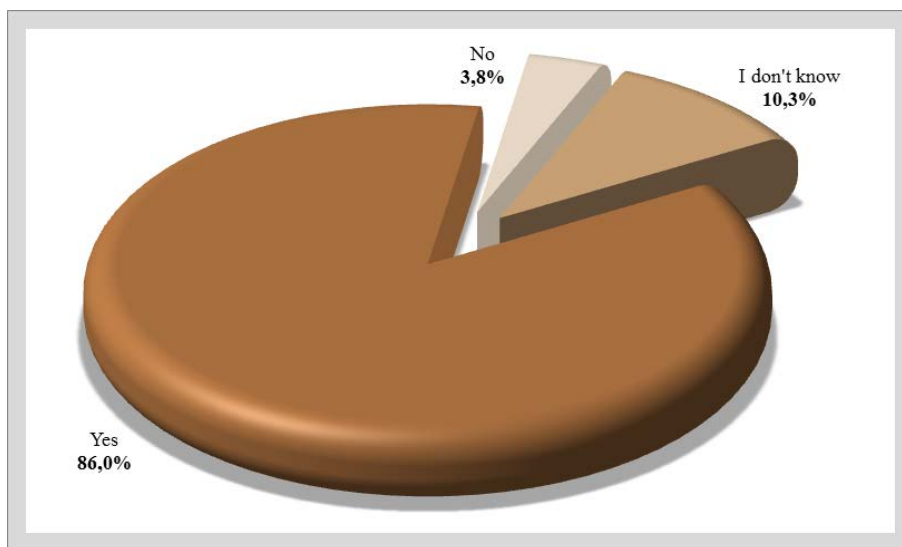


Figure 27: Respondents' opinions on whether there are sounds typical for Dalmatia
Slika 27: Stališča izprašancev o tem, ali obstajajo zvoki, značilni za Dalmacijo

The attitude of the respondents regarding the existence of typical sounds was mostly uniform between the respondents who did and those who did not live in Dalmatia (Fig. 28), especially those coming from other regions of Croatia, while respondents who did not live in Croatia gave an affirmative answer in a slightly smaller, but still comparatively large number (76,1%). Cramér's V test indicated a very weak association between the answers and the place of living (0,119).

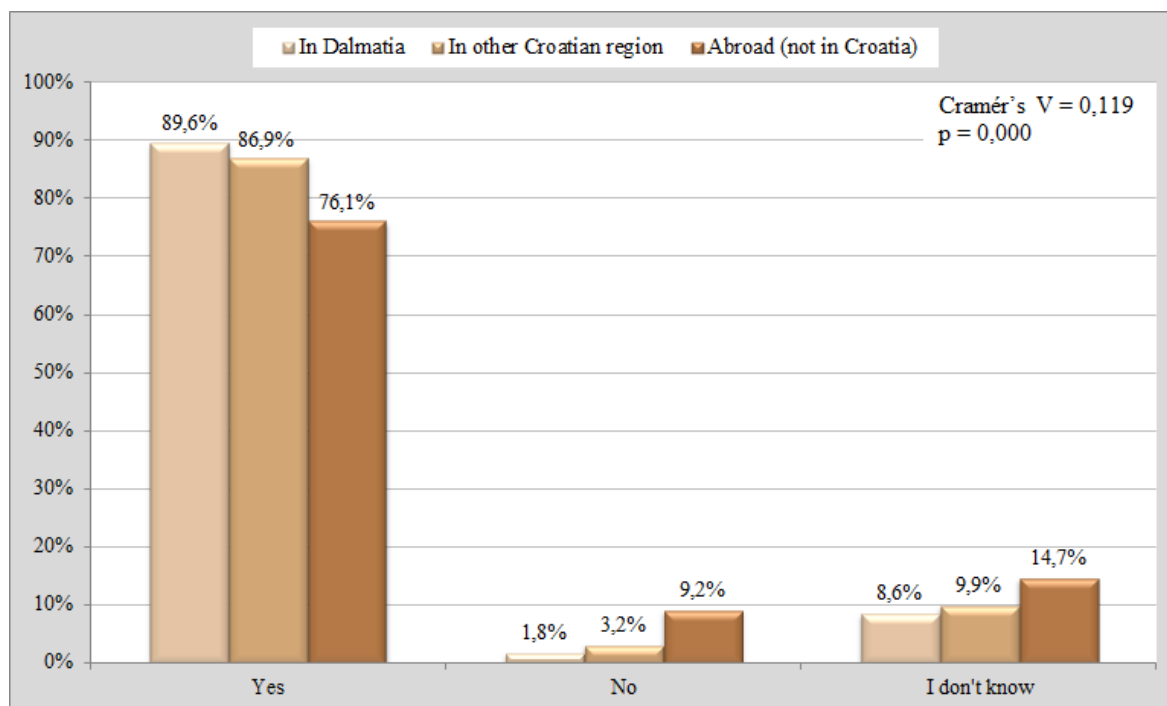


Figure 28: Opinions on whether there are sounds typical for Dalmatia depending on the respondents' place of residence

Slika 28: Stališča o tem, ali obstajajo zvoki, značilni za Dalmacijo, glede na kraj bivanja izprašancev

The same trend of ratios is noticeable when it comes to the frequency of visits to the region. As in the previous question regarding scents, most of the visitors who found that there were sounds typical of the region were those who visit Dalmatia once or several times a year (over 83%), but also 74,1% of those who visit Dalmatia occasionally (or had visited several times) (Fig. 29). Here too, Cramér's V test indicated a weak association between the frequency of visits and the respondents' answers (0,170), and, if the group of respondents who visited Dalmatia for the first time is disregarded, the association is even weaker (Cramér's V is 0,122). Significant differences ($p=0,000$) primarily result from the large sample size and can, in fact, be neglected. Therefore, the typical soundscape of Dalmatia is clearly perceived and recognised by both its inhabitants and its visitors.

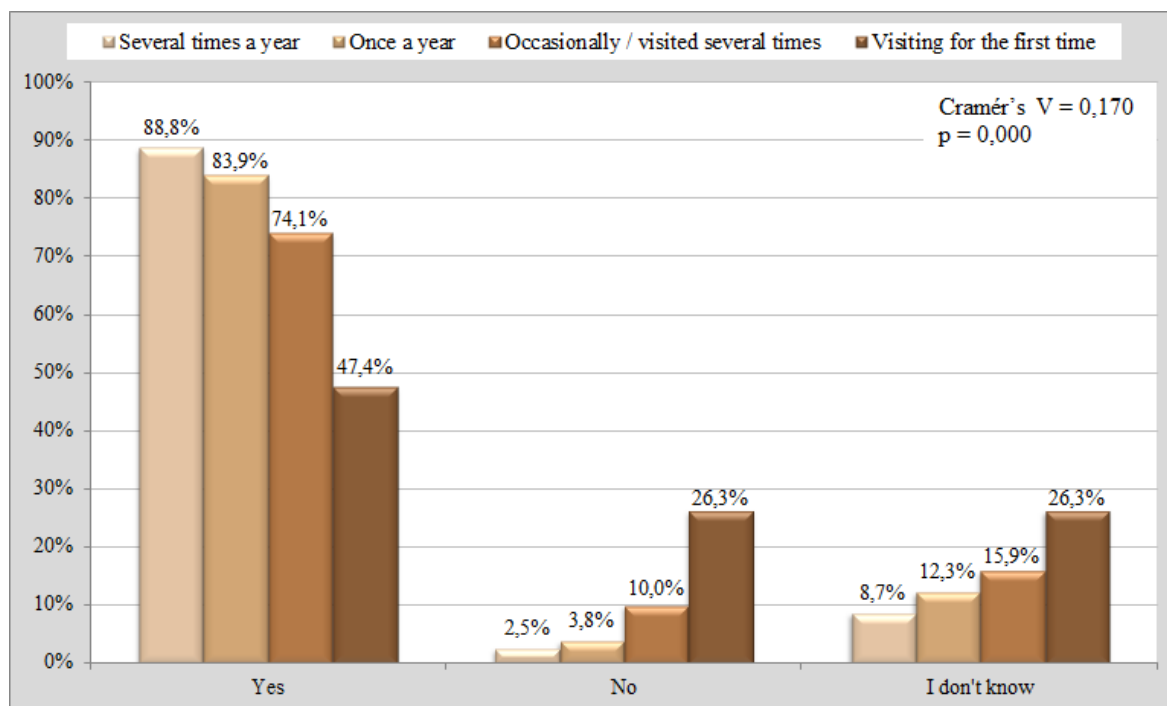


Figure 29: Opinions on whether there are sounds typical for Dalmatia depending on the respondents' frequency of visits

Slika 29: Stališča o tem, ali obstajajo zvoki, značilni za Dalmacijo, Stališča o tem, ali obstajajo zvoki, značilni za Dalmacijo, glede na pogostost obiska

Examples of typical sounds given by respondents who gave affirmative answers are placed into eight categories (Fig. 30). The most characteristic sounds of the Dalmatian landscape, mentioned by 54,7% of the respondents, were the sounds of crickets. Then came the sounds of the sea with 44,8%, most frequently mentioned as the sound of the waves and the waves crashing against the coast (rocks), and the sound of seagulls, mentioned by a fifth of the respondents. An interesting fact is that the sound of the wind was mentioned more frequently (by 14,7% of respondents) than Dalmatian music (11,5%). Similar shares were found for the sound of ships and the sound of daily life in Dalmatian towns (e.g. speech, murmur, noise, voices at the beach, children laughing in the water, old ladies calling out to their grandchildren, playful children, water splashing as people are jumping into the sea).

The category *Other sounds* included interesting other sounds that reminded the respondents of Dalmatia (e.g. birds, sudden storm, the sound of thunder – incredible, the sound of storm, donkey, sheep, silence, loud music, less noise, insects, mosquitoes, sound of the lazy part of the day (siesta or *fjaka* in Dalmatian), tranquillity, sound of roosters, rain, grasshoppers, from donkeys to the sounds of birds in the morning when the nature is awaking, scops owl, murmur of the noon, fishermen).

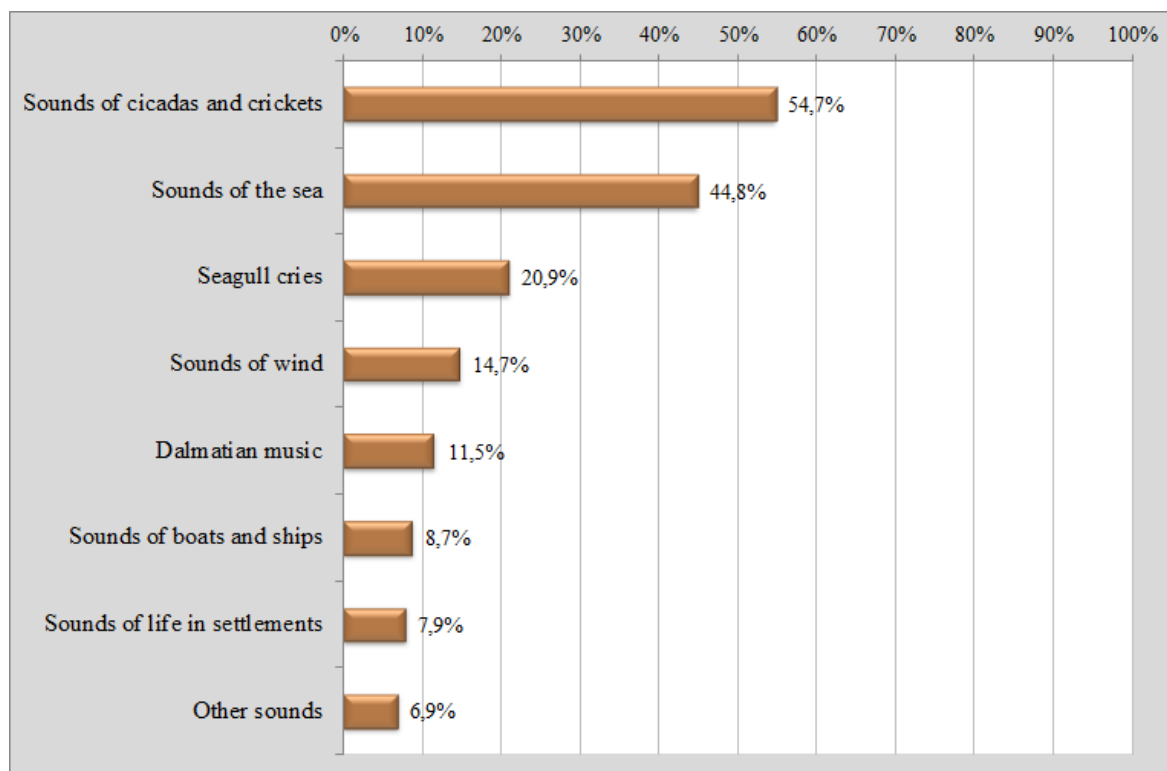


Figure 30: The sounds that respondents found to be typical of Dalmatia (share)

Slika 30: Zvoki, za katere so izprašanci menili, da so tipični za Dalmacijo (prikazano po višini deleža)

Notwithstanding where the respondents live, the provided examples of sounds typical of the region were also very similar (Fig. 31). The sound of crickets, just like the smells of pine trees and cypresses, were mostly mentioned by respondents from other Croatian regions, which can be seen as two strong elements of the typical social image of Dalmatia in Croatia. On the other hand, visitors from other countries recognised Dalmatian music (19%) as typical more often than the other two groups (10,3% and 9,4%). The sound of the wind and life in settlements were mentioned by somewhat more local residents than visitors.

The respondents' answers were rather balanced notwithstanding the frequency of their visits to Dalmatia, even though slight trends are visible in some categories. The group of those who visited Dalmatia for the first time is not compared here to others because only 18 respondents from that group offered examples of sounds. The sounds of the sea, crickets and the wind were given more often by respondents who visited Dalmatia once or more times a year and had therefore spent more time there (Fig. 32). In the case of Dalmatian music and other sounds, the trend is just opposite – they were chosen somewhat more frequently by those who visit the region occasionally or once per year and therefore perhaps are less familiar with the Dalmatian ambience.

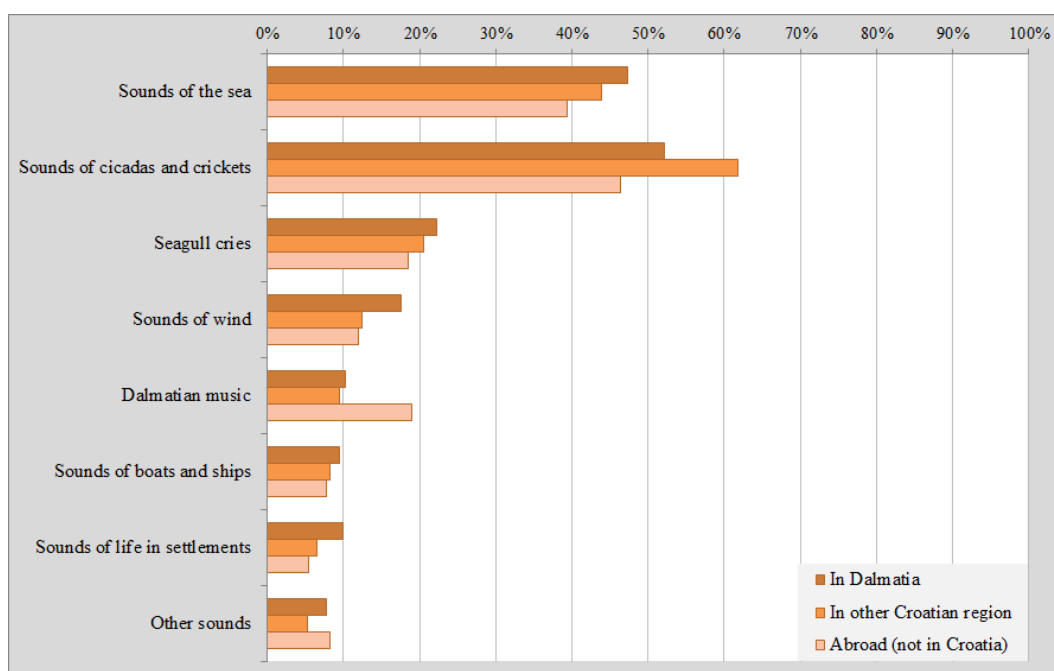


Figure 31: Examples of typical sounds given by the respondents depending on where they live (in the same order as in the questionnaire)

Slika 31: Primeri tipičnih zvokov, ki so jih navedli izprašanci glede na kraj bivanja (prikazano po vrstnem redu iz vprašalnika)

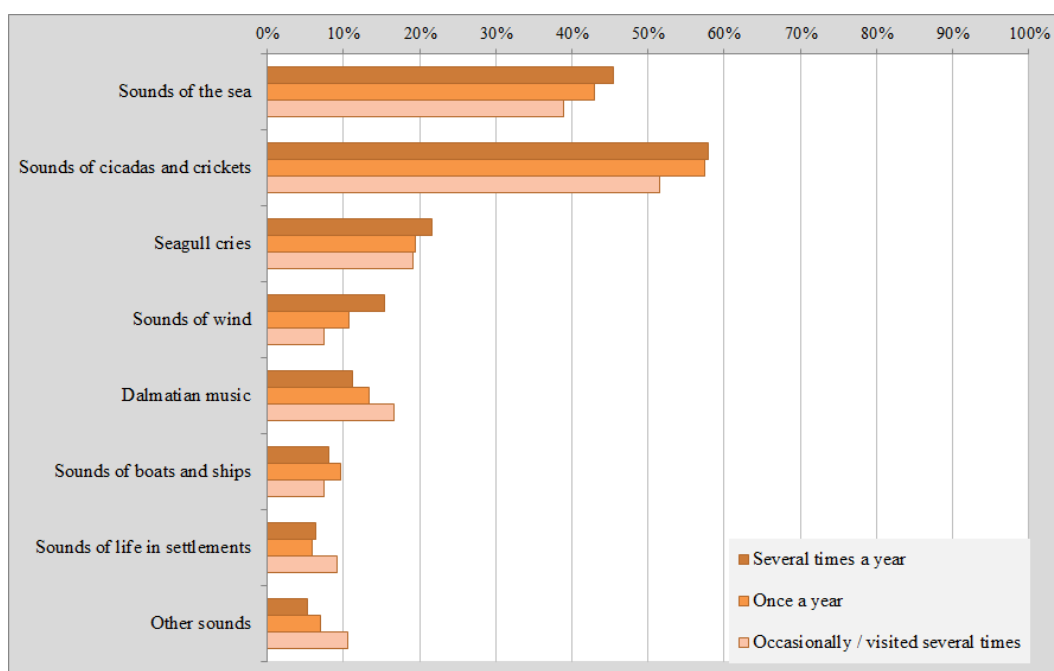


Figure 32: Examples of typical sounds given by the respondents depending on the frequency of visits (in the same order as in the questionnaire)

Slika 32: Primeri tipičnih zvokov, ki so jih navedli izprašanci glede na pogostost obiskov (prikazano po vrstnem redu iz vprašalnika)

The conclusion can be drawn from the above results that most respondents, both locals and visitors, recognise the soundscape of Dalmatia through the same acoustic characteristics and in very balanced ratios.

The pleasantness of the Dalmatian landscape and the role of certain sensory experiences

In the sixth question, the respondents were asked to evaluate how they generally experienced the Dalmatian ambience on the Likert scale from 1 (unpleasant) to 5 (extremely pleasant). The average value throughout the sample was a high 4,44, meaning that for most respondents the Dalmatian landscape represents very to exceptionally pleasant space. The difference in the score between locals and visitors was only 0,24 points (Fig. 33), where, on average, the highest values were given by locals, while foreigners gave somewhat lower values. In spite of that, analysis of variance showed that the differences can be considered statistically significant with 95% certainty.

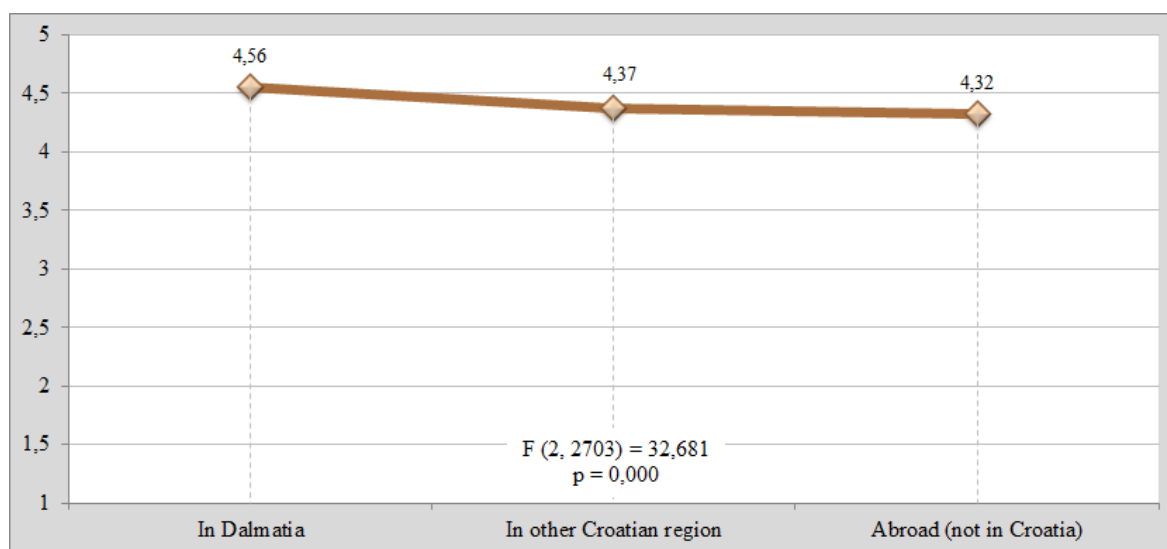


Figure 33: Average value of the experience of pleasantness of the Dalmatian atmosphere depending on the respondents' place of residence

Slika 33: Povprečna ocena prijetnosti dalmatinskega ambientsa glede na kraj bivanja izprašancev

The results also showed that the experience of pleasantness depends on the frequency of visits; therefore, those who spent time in Dalmatia more frequently, on average, evaluated the ambience as more pleasant (Fig. 34). A statistically significant difference between the four groups has also been established in this case by analysis of variance. However, the average grade in all four groups exceeded 4,0, which is within an interval of only 0,43 points.

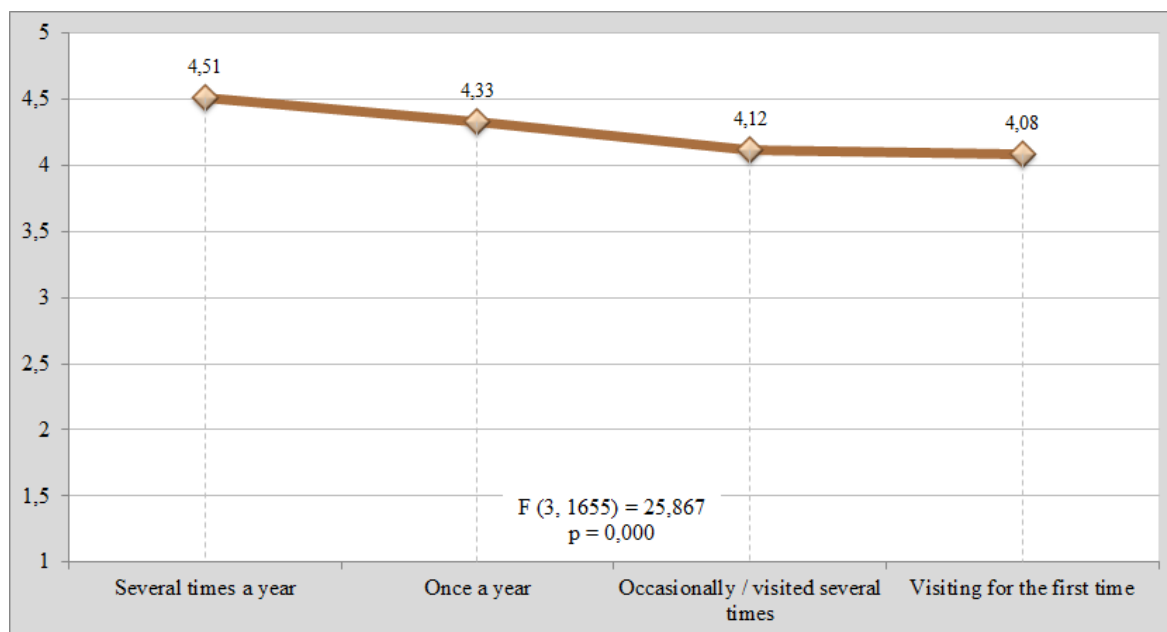


Figure 34: Average value of the experience of pleasantness of the Dalmatian atmosphere depending on the frequency of visits

Slika 34: Povprečna ocena prijetnosti dalmatinskega ambianta glede na pogostost obiskov

The following question required the respondents to provide their subjective evaluation on the extent to which certain sensory experiences were important to them in the overall experience of Dalmatia. This question was also based on the Likert scale, with 1 meaning not important at all and 5 meaning very important.

In their overall experience of the Dalmatian landscape, the respondents evaluated all the sensory experiences with a very high value, over 4,0, but those of visual and tactile nature were on average given the highest values (Fig. 35). Olfactory experiences were evaluated as being more important than auditory, which is consistent with the results obtained in previous questions (i.e. P3, P4, P5). Although the average values given by the respondents from Dalmatia as well as from other regions and countries for all sensory modalities varied within intervals smaller than 0,25 points, the differences were proven statistically significant according to the ANOVA test. Interestingly, respondents from other parts of Croatia evaluated smells as somewhat more important (by 0,12) than the other two groups, even more than the local people (Fig. 36).

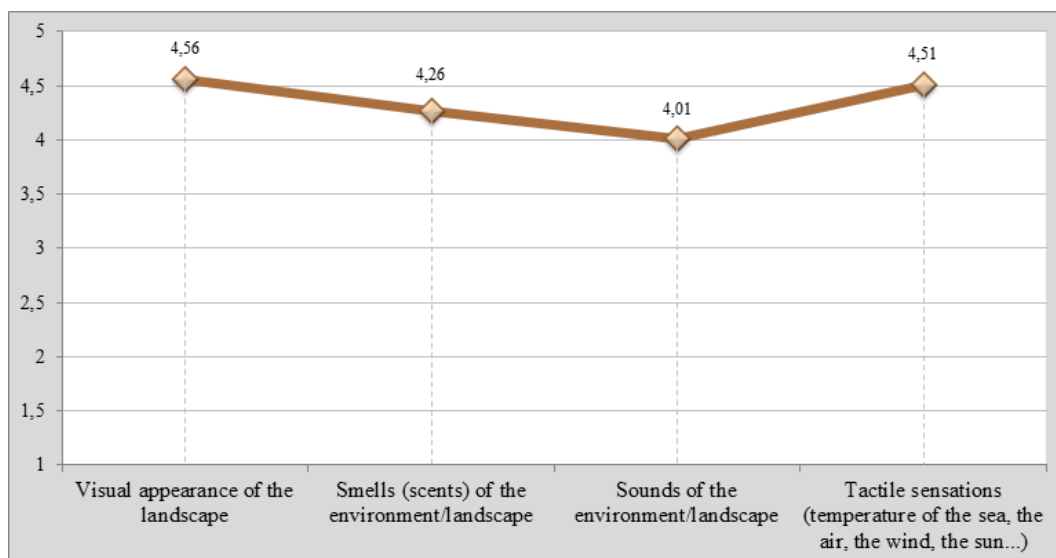


Figure 35: Average values of the importance of given sensory experiences in the overall experience of the Dalmatian landscape

Slika 35: Povprečne ocene pomembnosti navedenih čutnih doživetij v celotnem doživetju dalmatinske pokrajine

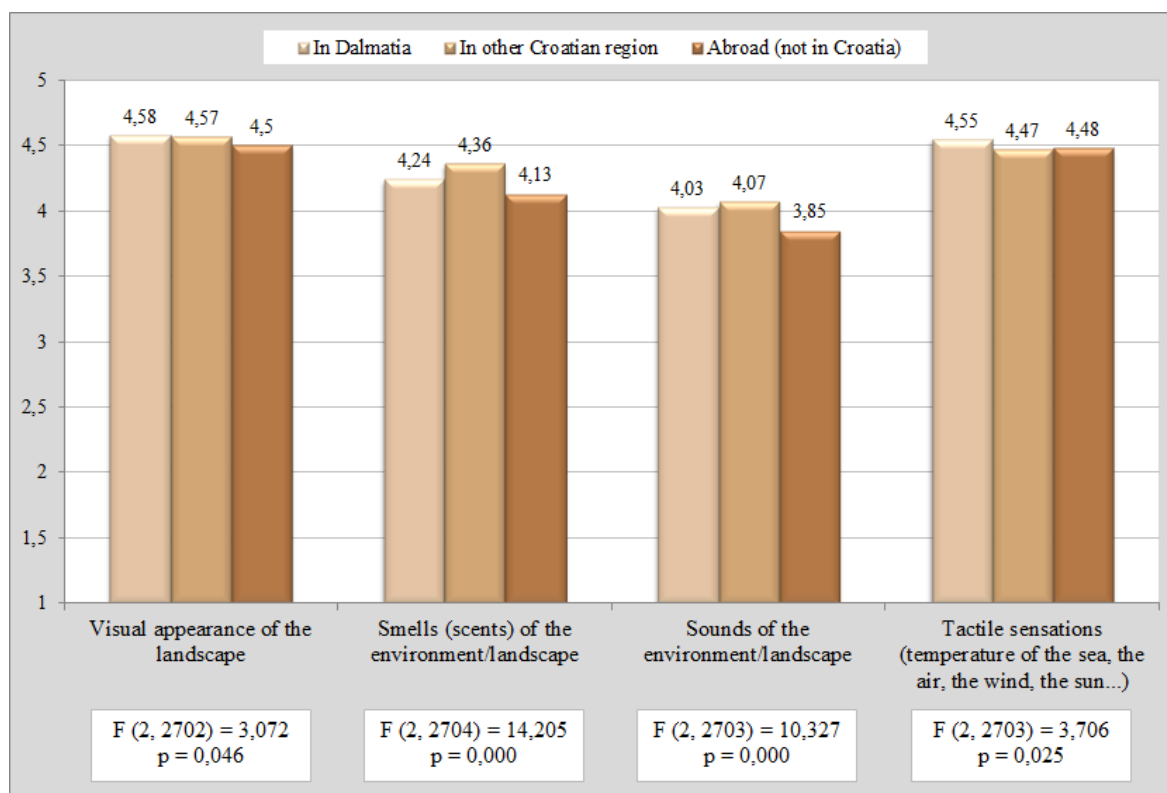


Figure 36: Evaluation of sensory experiences depending on the respondents' place of residence
 Slika 36: Vrednotenje doživetja glede na kraj bivanja

The frequency of visits reflected to a certain extent on the evaluation of these four sensory dimensions of the landscape (Fig. 37). The differences are again smaller in the case of visual and tactile experiences and are statically insignificant. However, regarding olfactory and auditory experience, a slow increase trend of average values of smellscape and

soundscape can be noticed as frequency of visits increases. In evaluating those components, analysis of variance determined statistically significant differences between groups of visitors, showing that those who visit Dalmatia more often gave these components higher values.

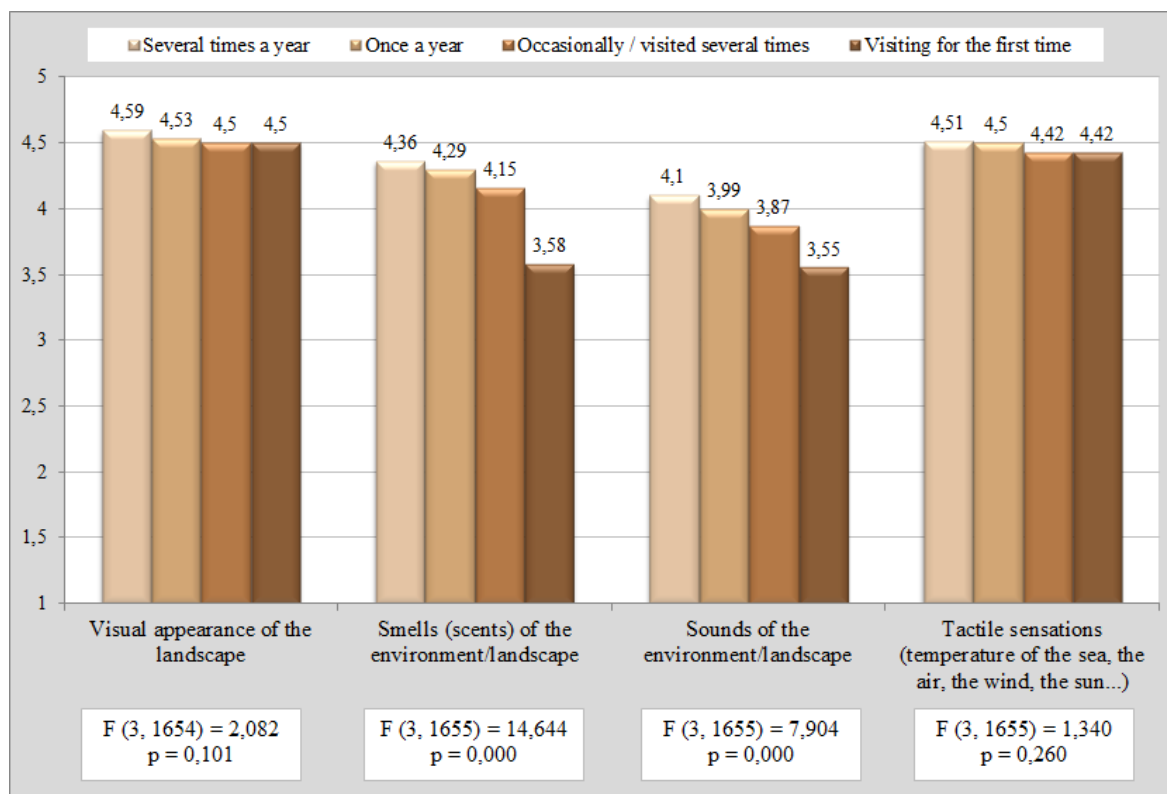


Figure 37: Evaluation of sensory experiences depending on the frequency of visits
 Slika 37: Vrednotenje doživetja glede na pogostost obiskov

Souvenirs representing Dalmatia the best

Souvenirs are the material objects of contemporary tourism that reflect the multisensory experiences of a place and also reflect and contribute to the formation of individual and collective identity (Morgan and Pritchard, 2005). Here they are understood as artefacts serving as a reminder of the place that was visited or as a gift representing and symbolising the place the person is coming from.

In the eighth question (single choice) the respondents were asked to choose one of the offered eight souvenirs that would present Dalmatia the best according to their opinion or to add an item of their choice (*Other*). The offered answers were chosen so that they imply certain types of sensory experiences: visual (painting, replica of an old stone house), auditory (CD with sounds of Dalmatia or Dalmatian songs), olfactory (potpourri), tactile (sea shells, pebbles from the beach) and gustatory and olfactory (wine, olive oil, dried figs). Although the choice of a souvenir does not necessarily have to be conditioned (only) by the preference of one sensory experience over another, the results can still, to an extent, point to the role of senses in the perception of the Dalmatian landscape.

The respondents mostly chose a bottle of olive oil and potpourri, oil or a different product with the smell of Dalmatian aromatic plants – each was chosen by approximately a fifth of the respondents (Fig. 38). This question, therefore, once again proved that smells (scents) are an important experiential aspect of the region's landscape. However, the majority of respondents chose gustatory souvenirs (i.e. wine, olive oil and dried figs), 35% in total. These are followed by visual experience souvenirs with 25,7%.

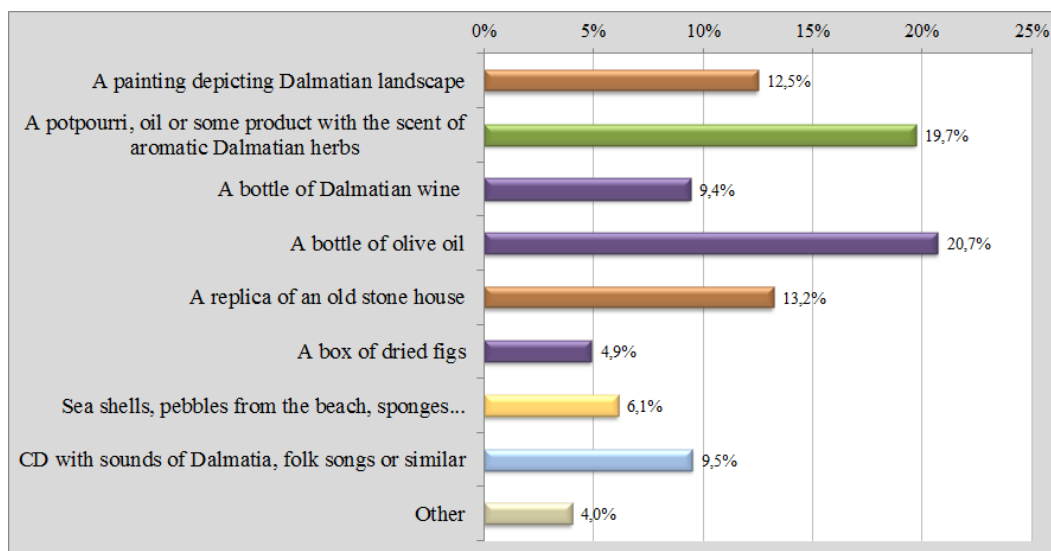


Figure 38: Share of souvenirs that the respondents believe best represent Dalmatia. Different sensory modalities are marked with different colours.

Slika 38: Delež spominkov, za katere so izprašanci menili, da najbolje predstavljajo Dalmacijo. Posamezne čutne modalitete so označene z različnimi barvami.

A souvenir with acoustic Dalmatian features was chosen by nearly every tenth respondent and it came fourth. The sounds were, therefore, here too chosen less frequently than smells. Tactile experiences were represented by only one category, by small, mostly sea and coastal objects, chosen by 6,1% of respondents.

Answers offered in the category *Other* reflect the connection between souvenirs and sensory experiences of space, and the multisensory identity of Dalmatia. Respondents who could not decide for one replied that they would choose more answers or all of the above.

I would certainly choose more answers, figs, wine, cheese, song....

Stone houses, olive oil, and item 2, *klapa* songs

Wine, oil, figs, *klapa* – all together

All together in a package :)

Uuuh, all of the above

All of the above is equally good

It is impossible to present Dalmatia in one souvenir

Depending on the person for whom the souvenir is intended: olive oil, scented oil/soap, wine, dried figs/carob, brandy (walnut/sour cherry/orange), sea shells, pebbles, pine cones, dried aromatic plants, St John's wort oil (which I make), CD with *klapa* music

Some respondents feel that the individual experience is the best way to represent Dalmatia.

Dinner by the sea

I would tell them to come here and experience it

Impossible, you have to experience it for yourself

All of the above, of course. It's difficult to choose only one, because, like any other region (anywhere in the world), it is a complete ambience experience

Go and visit Dalmatia

I'll buy him/her a ticket to visit Dalmatia

The suggestions often included gastronomic souvenirs – Dalmatian drinks, pastry, fruit and the like, that represent the region's specific flavours and aromas, as well as other fragrant souvenirs (e.g. everything that has a characteristic scent and flavour, a bouquet of dried lavender flowers, lavender, spices (laurel, ramsons), viska).

Maraschino LUXARDO, model ship

Bottle of Maraschino liqueur

Bottle of homemade brandy

Fig cake

Olive oil cookies shaped like miniature boats, stone cottages...

I always give books, salted fish, tangerines, lemons, I try to be different

Plavac mali, wine

Dalmatian pastry

With a little salted sardines, olive oil and a bottle of wine

Pickled capers from a Dalmatian island

Wine, oils, prosciutto, cheese

Cheese (e.g. Pag Island cheese), lemons/tangerines, Dalmatian pastry, sage and winter savory honey, potted Dalmatian decorative or medicinal herbs, a bottle of wine/olive oil/figs, CD, potpourri – the ones listed here are in "the same class" and I think they're OK

Hroštule and *pešurate* (traditional Dalmatian pastry)

Dried Dalmatian figs

Almonds

Some answers could be categorised into the group of audio and audio-visual media (CD, DVD) that are able to transfer a part of the complex visual and auditory dimension of Dalmatia, but can potentially elicit other sensory experiences based on past (familiar) and potential (expected) experiences.

A DVD with a recording of actively enjoying Dalmatia, sailboats and yachts sailing along the horizon or anchored in a lovely small cove out of sight, having a drink at the seaside at dusk in a small cafe with no noise and a view of the sea after taking an evening dip, accompanied by the sound of seagulls and the quiet sound of wind...

A DVD of the scenery accompanied by Mediterranean music

A multimedia CD/DVD with songs, sounds of nature, video material and textual descriptions of cultural, historic, and natural characteristics of Dalmatia.

A multimedia CD with pictures, short documentaries and *klapa* a cappella songs

I really like all of the above + a DVD with all the natural and cultural landmarks and national parks

A CD with sounds of the sea organ

The category *Other* also includes interesting items crafted from materials found in nature and items that symbolise the cultural heritage or social customs (e.g. the Briškula card game) as souvenirs.

A miniature of a Dalmatian woman with a basket of typical Dalmatian products

A boat or something like that, made out of driftwood

A stone from the sea or a driftwood (a branch, a *pajol* – movable bottom board of a ship)

A replica of an old stone house surrounded by potpourri as a representation of the fragrant vegetation to portray Dalmatia through both smell and sight :-)

A replica of an old stone house, a ship made out of driftwood, a stone pendant

Replicas of old castles

All of the above + souvenirs and works of art made of olive wood

Jewellery made of carob seeds in resin

With minor differences, respondents from Dalmatia, other regions and abroad chose a bottle of olive oil or potpourri as souvenirs that represent Dalmatia the best, with respondents from other Croatian regions opting for the above choices in a somewhat larger number (Fig. 39). A replica of an old stone house was chosen by twice the number of respondents from Dalmatia (16,9%) than the number of respondents from abroad (8,3%) and 5,4% more than respondents from other regions, which is probably partly due to the emotional relationship towards tradition, which is symbolised by the local stone architecture for the locals. In other categories, the three groups' answers diverge by only a few percentages, which is not very striking. There are more foreign respondents who would represent Dalmatia with a painting of the Dalmatian landscape (16,2%) than there are respondents from Dalmatia (12,6%) and other Croatian regions (10,3%) who chose that

souvenir. Foreign respondents also opt for a CD with Dalmatian sounds and *klapa* a cappella songs more often. Around 2% more of the respondents who do not live in Dalmatia would represent the region with a bottle of authentic wine and items such as shells, pebbles, sponges and the like. The significance of differences among the three groups was verified by Cramér's V test, according to which the correlation between the selected answer and place of living is barely noticeable (Cramér's coefficient is 0,099). The statistical significance ($p=0,000$) can be explained as the effect of the large sample.

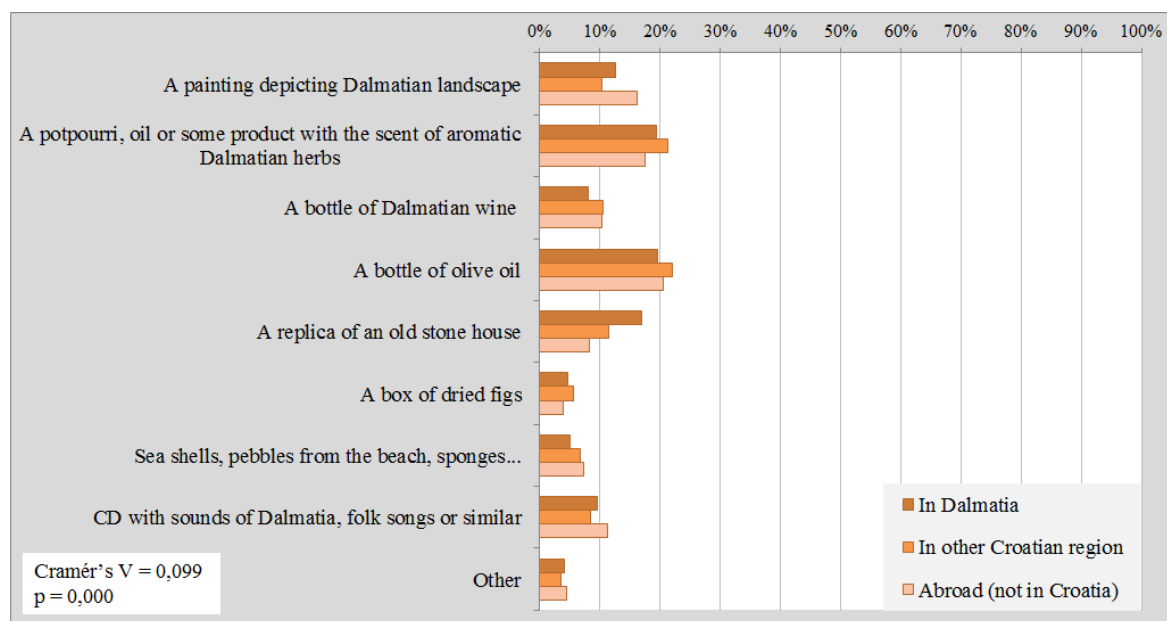


Figure 39: Differences in the choice of offered souvenirs depending on the respondents' place of residence
 Slika 39: Razlike pri izbiri ponujenih spominkov glede na kraj bivanja izprašancev

Respondents who visit Dalmatia were fairly in agreement in choosing the categories *Potpourri*, *A bottle of wine* (except for the last group), *A box of dried figs*, *CD* and *Other* (Fig. 40). Cramér's V coefficient is again very low here (0,099), pointing to the weak association between observed variables (i.e. chosen answers and frequency of visit).

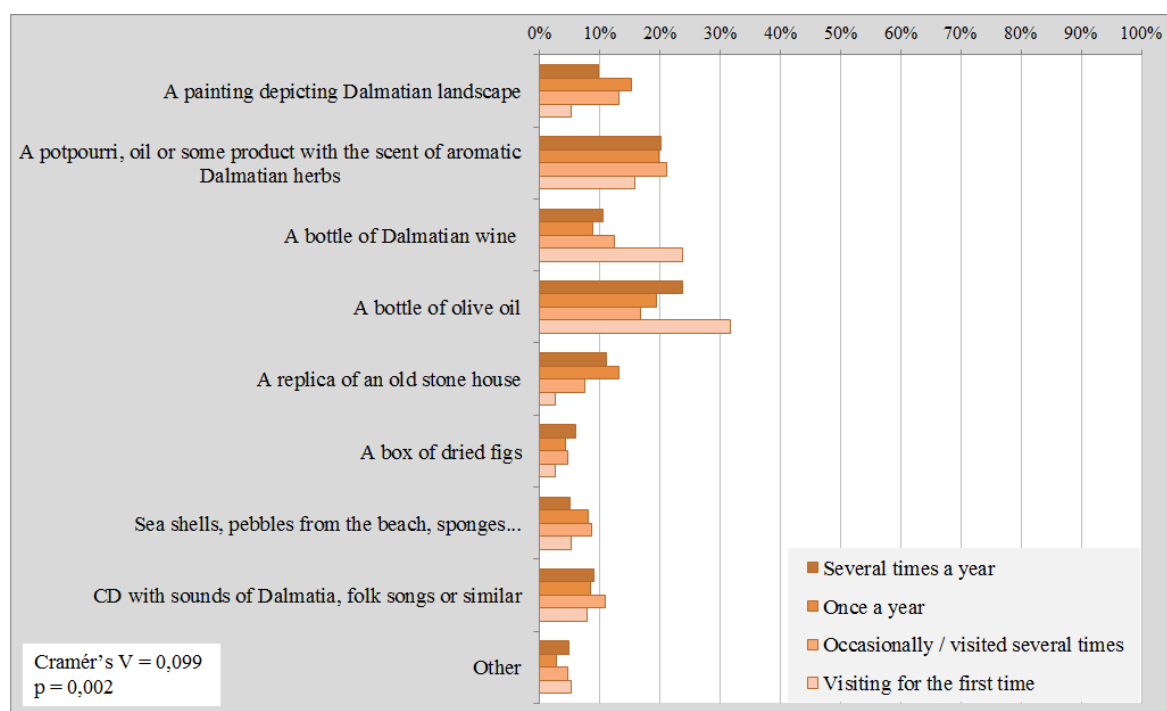


Figure 40: Differences in the choices of offered souvenirs depending on the frequency of visits
 Slika 40: Razlike pri izbiri ponujenih spominkov glede na pogostost obiska

The ones who regularly visit Dalmatia (e.g. once or several times a year) opt more often than others for the stone house replica and a bottle of olive oil – symbols of the region recognised both socially and in the media. A painting depicting landscape and sea shells together with similar items, were more often the choice of respondents who visit once a year or less frequently (i.e. occasionally) than those who visit several times a year. Out of a few respondents who were visiting Dalmatia for the first time (n=38), most would choose a bottle of Dalmatian wine or olive oil as a souvenir.

Although there are differences within some categories, they do not necessarily reflect the differences in the notion of Dalmatia between those who visit regularly and those who visit less frequently, since the selection of souvenirs can depend on several personal factors.

Characteristics that remind respondents of Dalmatia

Out of the 12 offered characteristics in question 9, the respondents were supposed to pick three that remind them of Dalmatia the most and rank them in descending order. The goal here was also to compare ratios of characteristics from different sensory modalities.

The results show that, apart from visual cues, a considerable number of the respondents are reminded of Dalmatia through smell – the scents of the landscape and the aroma of food in the taverns. These are followed by landscape sounds, and tastes of Dalmatian dishes, contained in the same two categories (i.e. *Characteristic smells and sounds of nature and Taverns, the smell and taste of food and wine*) (Fig. 41). Centres of Dalmatian cities were chosen by most respondents (62,2%).

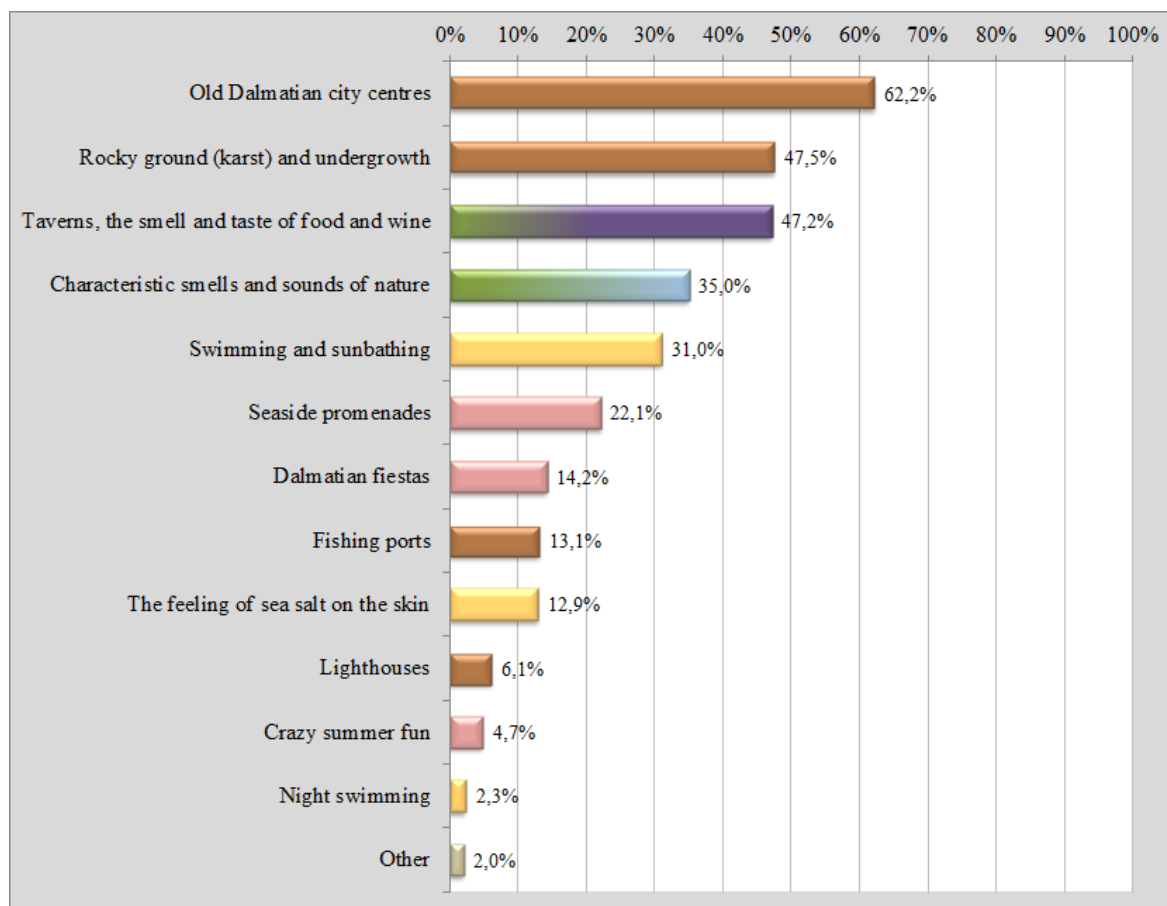


Figure 41: Characteristics that remind respondents of Dalmatia the most (displayed in descending order by % of selected answers). The sensory modalities are marked with different colours: visual=brown, scents/tastes=green/purple, scents/sounds=green/blue, tactile=yellow, ambience and multisensory=pale red. Slika 41: Značilnosti, ki izprašance najbolj spominjajo na Dalmacijo (prikazano po % izbranih odgovorov). Čutne modalitete so označene vsaka s svojo barvo: vizualno=rjavo, vonji/okusi=zeleno/vijolično, vonji/zvoki=zeleno/modro, taktilno=rumeno, ambientalno in multičutno=svetlo rdeče.

Rocky ground (karst) and undergrowth were chosen by the number of respondents equal to the number of those who chose taverns with specific smells and flavours (around 47%). This question also confirmed the significance of the tactile landscape characteristics through the categories of swimming and sunbathing (31%) and the feeling of sea salt on the skin (12,9%). Seaside promenades, chosen by a fifth of the respondents, are a source of multisensory experiences, as are Dalmatian fiestas and fishing ports. Lighthouses, crazy summer fun, night swimming and other (own choice) were chosen by fewer participants.

The two most numerous characteristics – old Dalmatian cities and rocky karst ground and undergrowth – are also the most commonly ranked as those that remind of Dalmatia the most (1st place) (Fig. 42), leading to the conclusion that these are very pronounced symbols of the Dalmatian identity. Characteristic smells and sounds of nature were also ranked 1st or 2nd by most respondents who chose them, while swimming and sunbathing took the first three places in equal shares, so those two categories can also be considered as very recognisable and impressive characteristics of the region. Taverns, accompanied by smells and tastes of food, were mostly ranked 2nd and 3rd, probably because they were often in combination with a few of the most numerous characteristics.

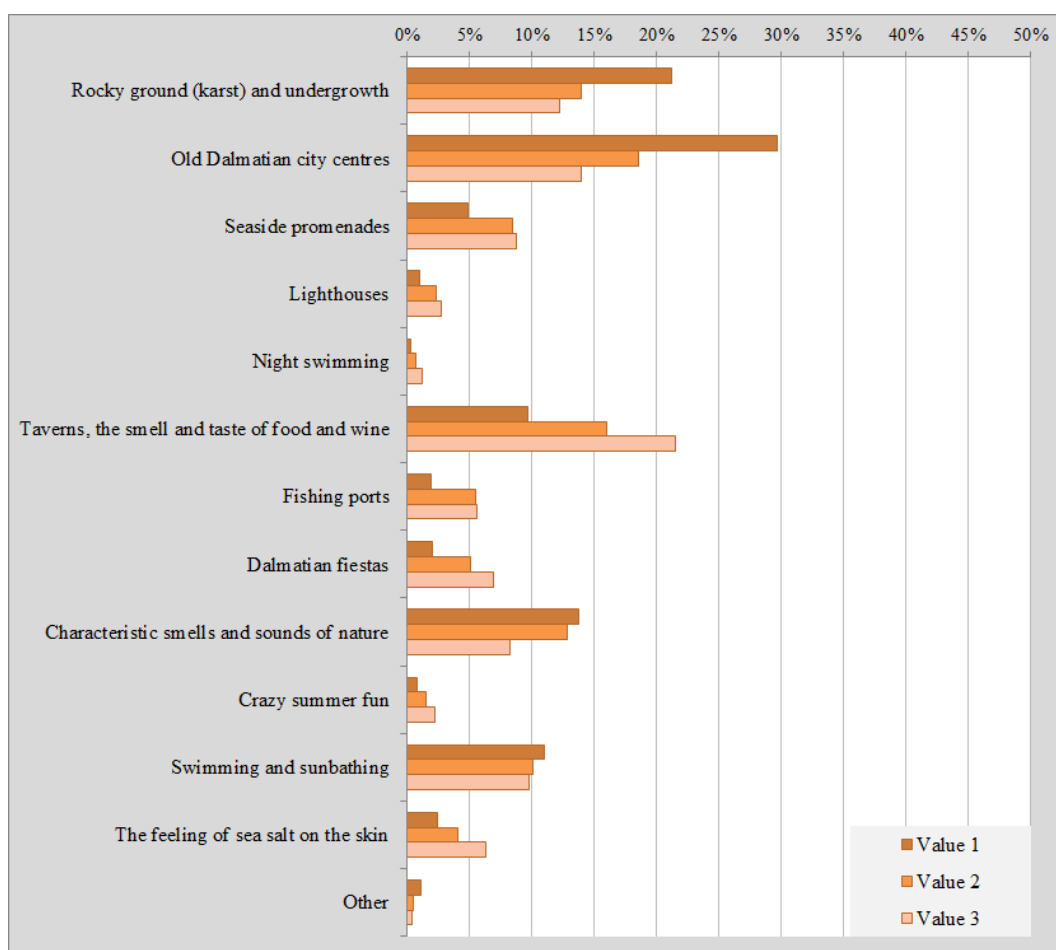


Figure 42: Ranking of the selected characteristics from 1st to 3rd place
 Slika 42: Razvrstitev izbranih značilnosti od 1. do 3. mesta

The sequence of answers chosen by respondents who live in Dalmatia and those who live elsewhere overlaps considerably (Tab. 2). The most chosen categories by all three groups were the following (Fig. 43):

- Rocky ground, karst and undergrowth,
- Old Dalmatian city centres,
- Taverns, the smell and taste of food and wine,
- Characteristic smells and sounds of nature, and
- Swimming and sunbathing.

Characteristic smells and sounds of nature were chosen by the most respondents from other Croatian regions (43,7%), who tended to choose and higher evaluate these landscape aspects also in questions P1 and P2. With locals, the category of natural smells and sounds took the 5th place (27,8%), and they also chose them less frequently than other two groups in questions P1 and P2. The reason for this could be a kind of a sensory adaptation to the smellscape, which is a distinguishable contrast to visitors when they arrive in Dalmatia. On the other hand, Dalmatian fiestas were chosen by almost twice as many respondents from Dalmatia (19,5%) than respondents from the other two groups (around 10%).

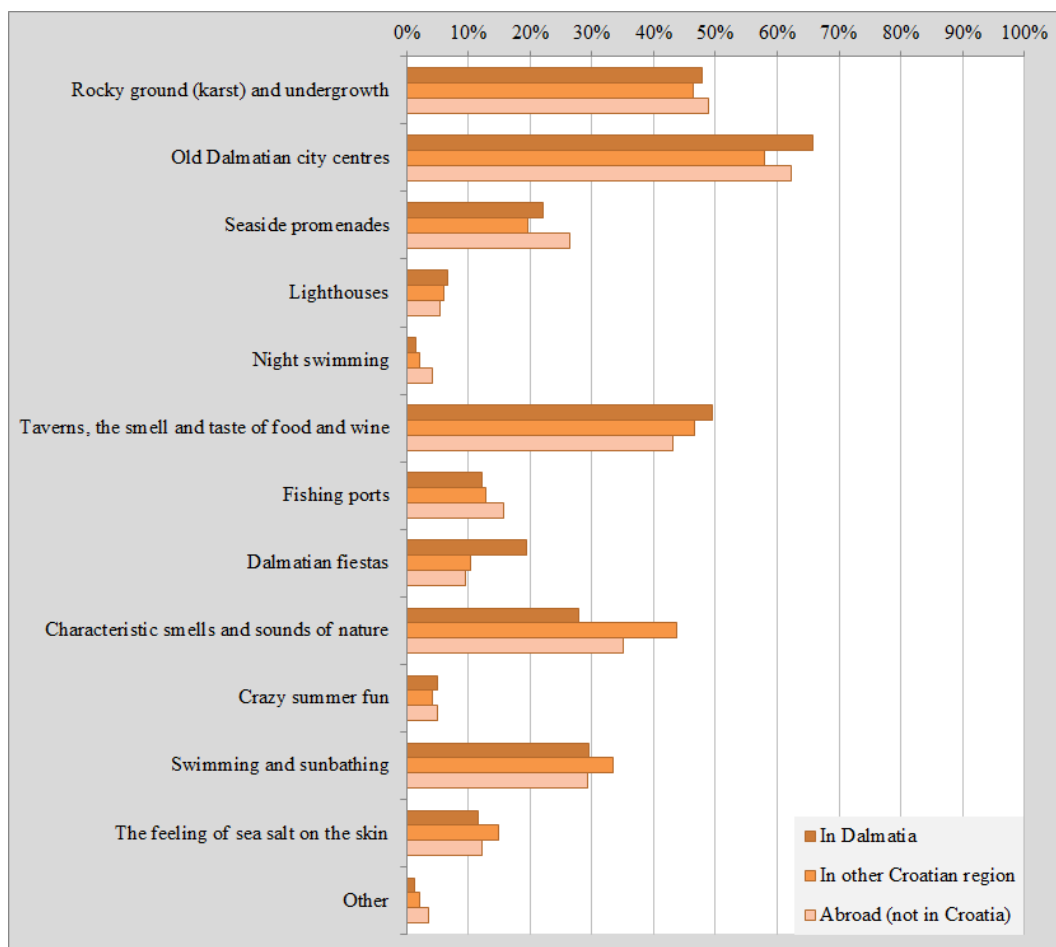


Figure 43: Characteristics that remind respondents of Dalmatia the most depending on their place of residence

Slika 43: Značilnosti, ki izprašance spominjajo na Dalmacijo, glede na kraj bivanja

A similar response structure was retained among respondents who visit Dalmatia, with the abovementioned five characteristics as the most numerous (Fig. 44). Differences between individual groups within categories do not point to an important influence of frequency of visits on the experience of the Dalmatian landscape.

Table 2: Order of respondents' responses depending on their place of residence

Preglednica 2: Vrstni red odgovorov izprašancev glede na kraj bivanja

Respondents living in Dalmatia	Respondents from other Croatian regions	Respondents from other countries
Old Dalmatian city centres	Old Dalmatian city centres	Old Dalmatian city centres
Taverns, the smell and taste of food and wine	Taverns, the smell and taste of food and wine	Rocky ground (karst) and undergrowth
Rocky ground (karst) and undergrowth	Rocky ground (karst) and undergrowth	Taverns, the smell and taste of food and wine
Swimming and sunbathing	Characteristic smells and sounds of nature	Characteristic smells and sounds of nature
Characteristic smells and sounds of nature	Swimming and sunbathing	Swimming and sunbathing

- continued -

- continuation of Table 2 -

Respondents living in Dalmatia	Respondents from other Croatian regions	Respondents from other countries
Seaside promenades	Seaside promenades	Seaside promenades
Dalmatian fiestas	The feeling of sea salt on the skin	Fishing ports
Fishing ports	Fishing ports	The feeling of sea salt on the skin
The feeling of sea salt on the skin	Dalmatian fiestas	Dalmatian fiestas
Lighthouses	Lighthouses	Lighthouses
Crazy summer fun	Crazy summer fun	Crazy summer fun
Night swimming	Night swimming	Night swimming
Other	Other	Other

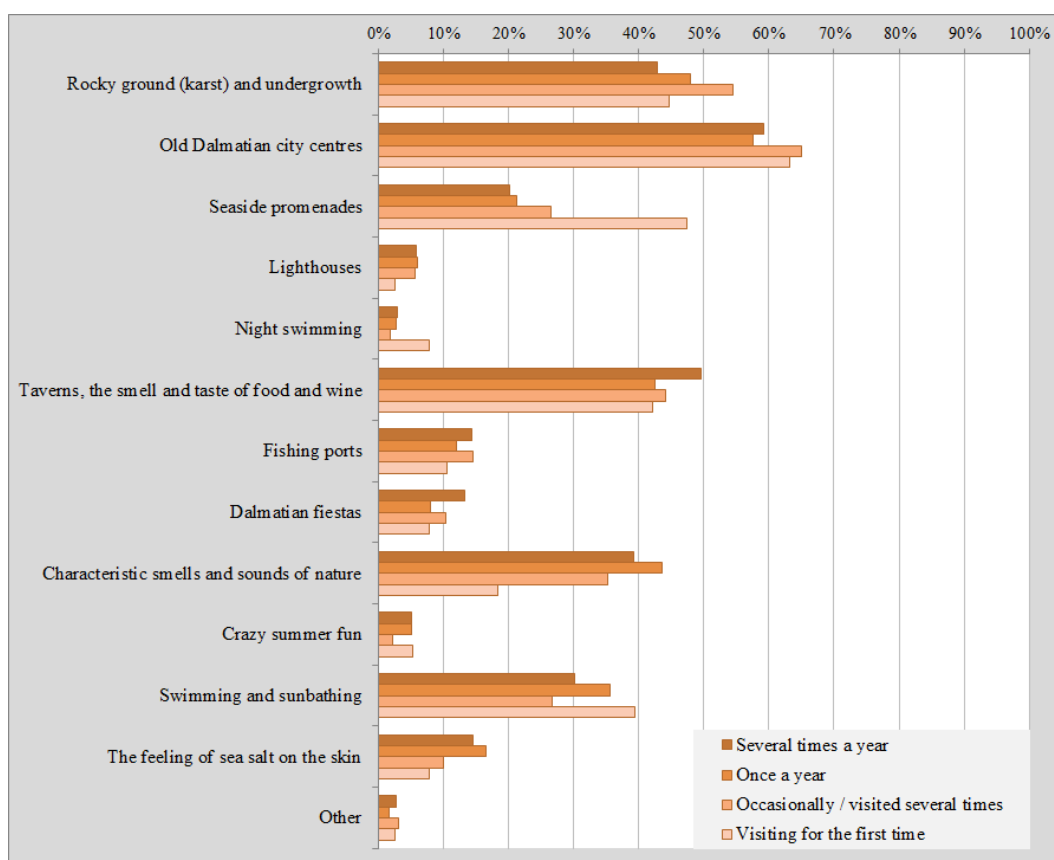


Figure 44: Characteristics that remind respondents of Dalmatia the most depending on the frequency of visits

Slika 44: Značilnosti, ki izprašance spominjajo na Dalmacijo, glede na pogostost obiskov

Characteristics respondents would use to describe Dalmatia

The tenth question offered 20 characteristics of the Dalmatian landscape and the region in general from different perception modalities. Respondents were supposed to choose five characteristics they would use to describe Dalmatia to someone. The purpose of the question, as with the previous one, was to examine through which characteristics and within which modalities the respondents recognise Dalmatia the most.

The two categories chosen by the most respondents were *Stone houses* and *The beauty of bays and beaches* (Fig. 45). However, the following four categories come from the areas of auditory, olfactory and gustatory experience – the smell of the sea, the chirping of crickets, Dalmatian *a cappella* folk songs, scents of aromatic Dalmatian herbs, Dalmatian food and drink and the scent of pines and cypresses, which were, equally as dry stone walls, chosen by 25,3% of respondents.

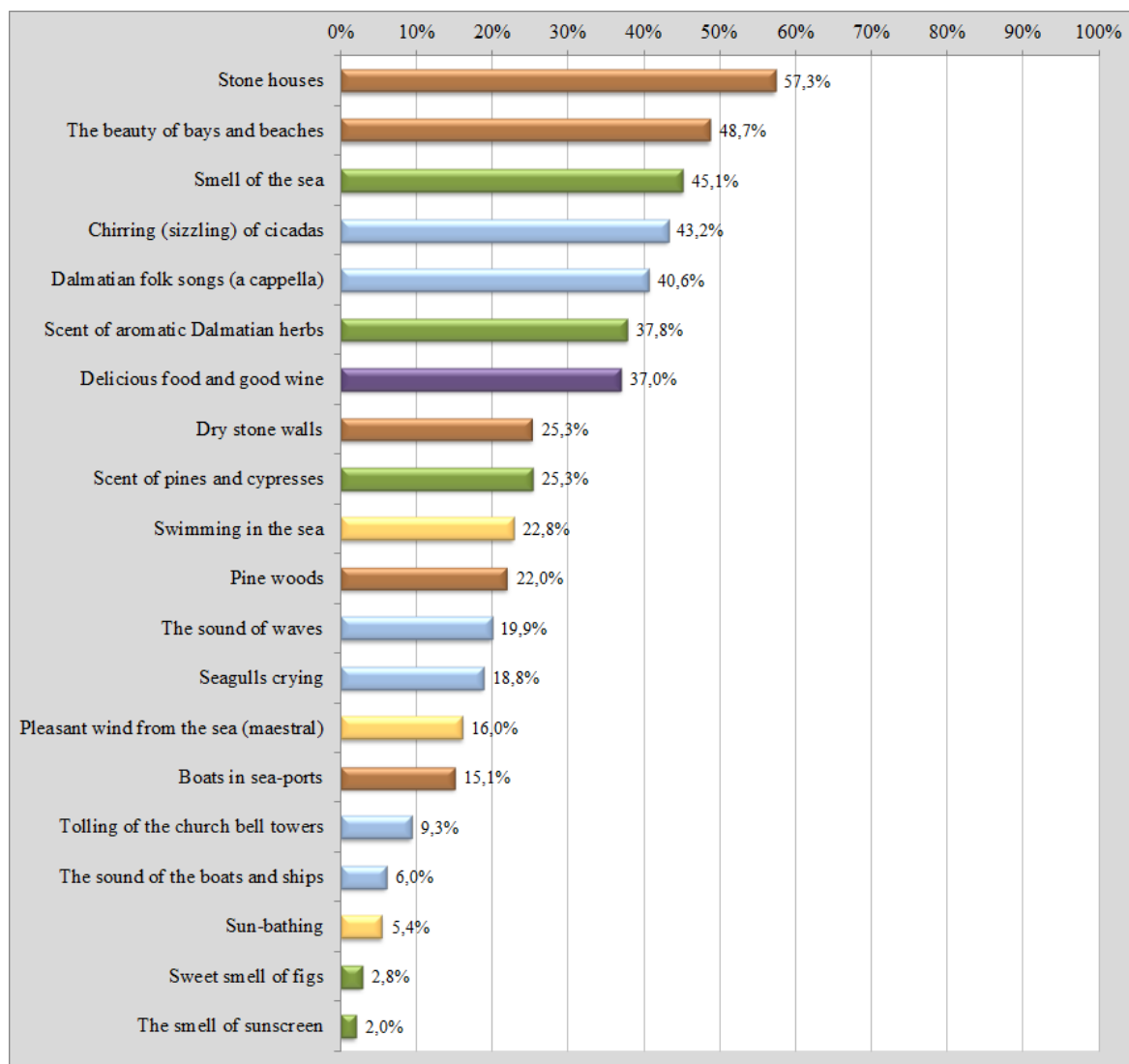


Figure 45: Characteristics the respondents would use to describe Dalmatia (in descending order according to % of answers selected). Different sensory modalities are marked with different colours.

Slika 45: Značilnosti, s katerimi bi izprašanci opisali Dalmacijo (prikazano po % izbranih odgovorov). Posamezne čutne modalitete so označene z različnimi barvami.

Around a fifth of the respondents chose three non-visual and one visual characteristic: the tactile experience of swimming in the sea (22,8%), pine woods (22%), the sound of waves (19,9%), and seagulls crying (18,8%). The results, therefore, show that a large number of respondents recognised Dalmatia in the offered non-visual characteristics that, in their opinion, evoked a characteristic ambience.

Through comparison of the answers of local respondents and respondents who do not live in Dalmatia, certain differences in some answers emerged, even though the characteristics perceived as recognisable by all three groups coincided almost fully (Fig. 46).

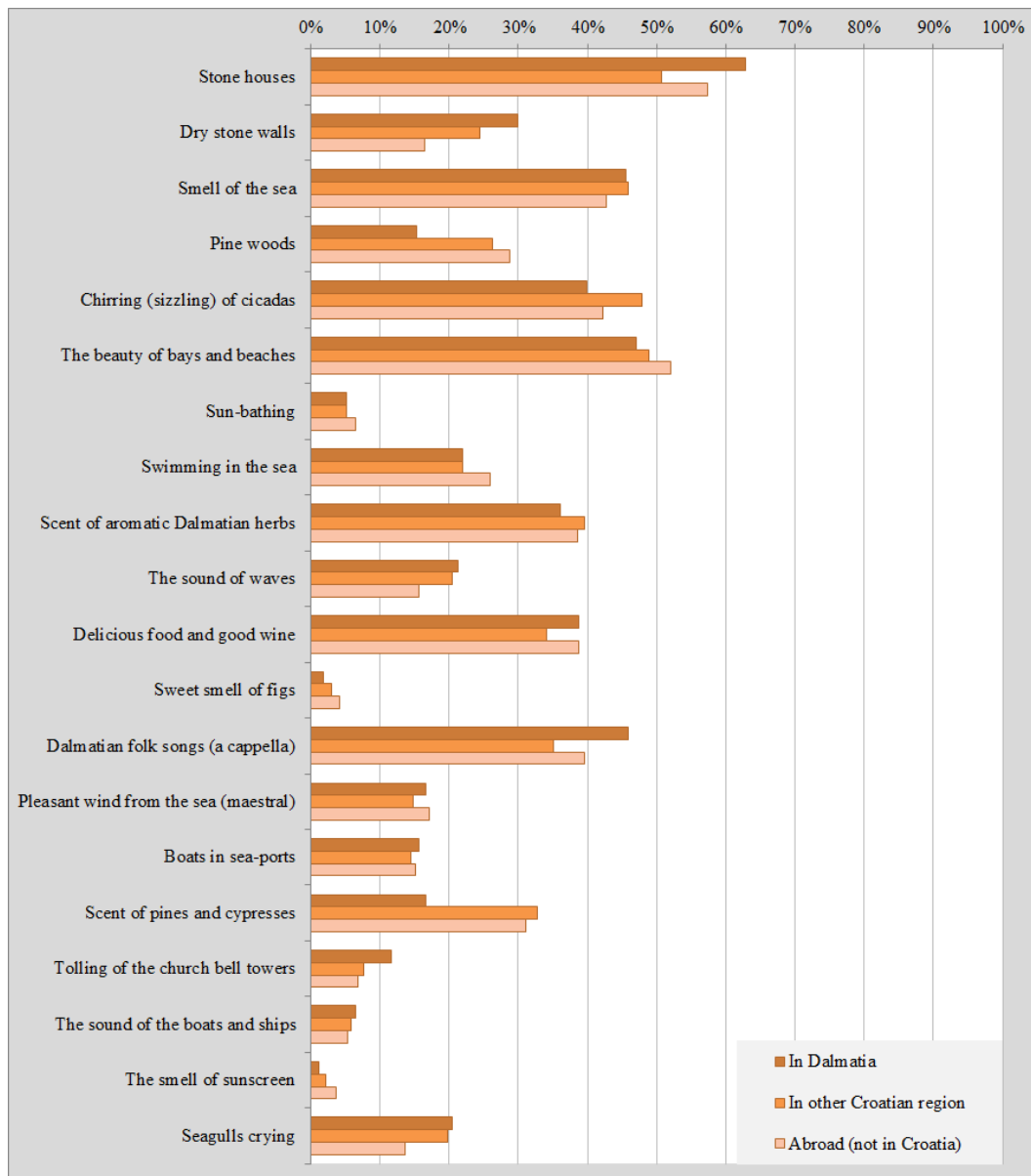


Figure 46: A selection of the given characteristics depending on the respondents' place of residence (displayed as ordered in the questionnaire)

Slika 46: Izbira danih značilnosti glede na kraj bivanja izprašancev (prikazano po vrstnem redu v vprašalniku)

Local people, somewhat more often than the other two groups, chose characteristics that are bearers of the cultural dimension of the identity and which symbolise certain values and a way of life in Dalmatia – stone houses, dry stone walls, Dalmatian *a cappella* folk songs, the ringing of church bells. The sound of waves and the crying of seagulls were more often recognized by local people and respondents from other Croatian regions, than by foreign visitors recognised. These are auditory characteristics which are, within Croatia,

commonly related to Dalmatia (although sometimes also to the northern Croatian Littoral and Istria). They are mostly manifested as subtle background sounds, which makes them more familiar to people who they live or spend longer periods of time in Dalmatia, rather than those who are only visiting for a short period of time.

In contrast to visitors, noticeably fewer local respondents chose the characteristics *pine woods* and the *scent of pines and cypresses* and, to a degree, *chirring of cicadas* (even more popular with respondents from other regions). These are especially present in summer, the tourist period, as is *the beauty of bays and beaches*, where the differences were somewhat less pronounced. Additionally, respondents from other countries chose swimming in the sea more often (26%) than the other two groups (around 22%). These differences in results are probably a reflection of the focus of attention that is not the same with locals and visitors.

It is also observable that all olfactory characteristics that have been given, apart from the smell of the sea, were chosen by somewhat more visitors than locals, and the scent of pines and cypresses by almost twice as many. This trend runs through some of the previous questions, which can signify a striking contrast of Dalmatia's olfactory characteristics in relation to other regions and countries.

A share of the visitors' answers within each category was somewhat different, depending on the frequency of their stays in Dalmatia (Fig. 47), although based on these differences it cannot be concluded that the experience of Dalmatia is crucially different among the groups (especially the first three groups). Namely, the most often selected answers are similar within all three groups, with minor differences in shares (Tab. 3).

Table 3: Order of the eight most numerous responses, depending on the frequency of visits (for the first three groups of visitors)

Preglednica 3: Vrstni red osmih najpogostejših odgovorov glede na pogostost obiskov (za prve tri skupine)

Visiting several times a year	Visiting once a year	Visiting occasionally or been in Dalmatia several times
Stone houses	Stone houses	Stone houses
The beauty of bays and beaches	The beauty of bays and beaches	The beauty of bays and beaches
Chirring (sizzling) of cicadas	Chirring (sizzling) of cicadas	Scent of aromatic Dalmatian herbs
Smell of the sea	Smell of the sea	Chirring (sizzling) of cicadas
Delicious food and good wine	Scent of pines and cypresses	Dalmatian folk songs (a cappella)
Scent of aromatic Dalmatian herbs	Scent of aromatic Dalmatian herbs	Smell of the sea
Dalmatian folk songs (a cappella)	Delicious food and good wine	Scent of pines and cypresses
Scent of pines and cypresses	Dalmatian folk songs (a cappella)	Delicious food and good wine

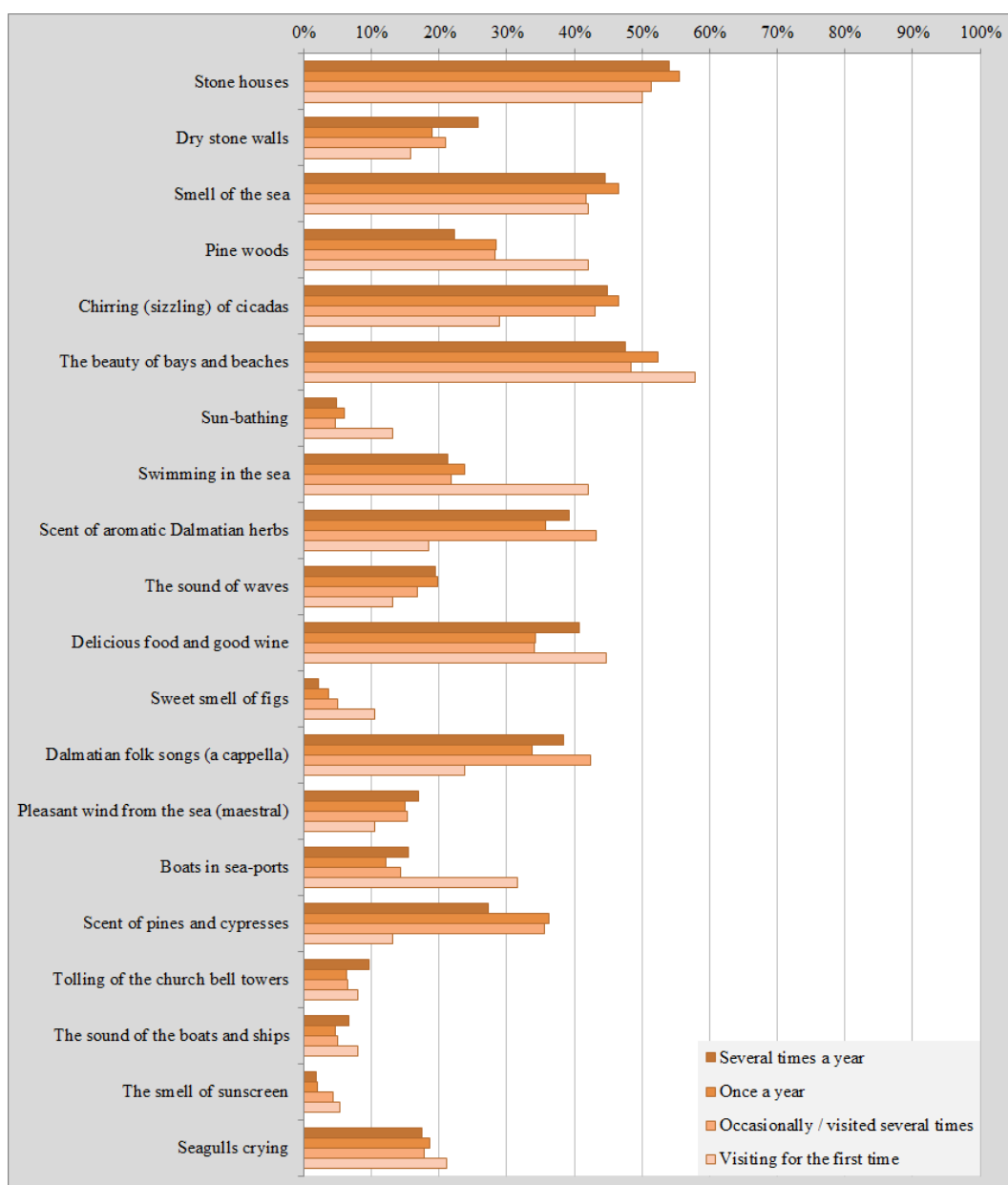


Figure 47: A selection of the given characteristics depending on the frequency of visits (displayed as ordered in the questionnaire)

Slika 47: Izbira danih značilnosti glede na pogostost obiskov (prikazano po vrstnem redu v vprašalniku)

Characteristics of the Dalmatian landscape in winter

Located in an area with temperate climate, characterised by the alteration of all four seasons, the Dalmatian ambience differs in the warm and cold part of the year, especially with respect to non-visual landscape characteristics. However, since the region is especially oriented towards summer tourism, the notion relies greatly on the characteristics of summer ambience, primarily thanks to tourist advertising. The eleventh question was asked with the intention to test which characteristics respondents associate with Dalmatia in the winter.

It was an open-ended question. At least one characteristic (and sometimes two and, more rarely, three) was listed by 86% of the respondents, while the others responded with *I do not know (I have never been in Dalmatia in the winter)* or did not answer the question at all. In the course of data processing, it was decided that a maximum of two responses per respondent will be analysed. In the coding procedure the responses were categorised into four of the most often occurring – *Bora and northeasterly wind weather*, *Mild climate*, *Winter atmosphere and lifestyle* and *Winter landscape experiences*, and the group *Other*.

According to the results, bora and north-easterly wind weather, chosen by 50,6% of the respondents, and winter atmosphere and lifestyle, chosen by another 46,5% of the respondents, are two of the most impressive categories forming respondents' notion of Dalmatia in the winter (Fig. 48).

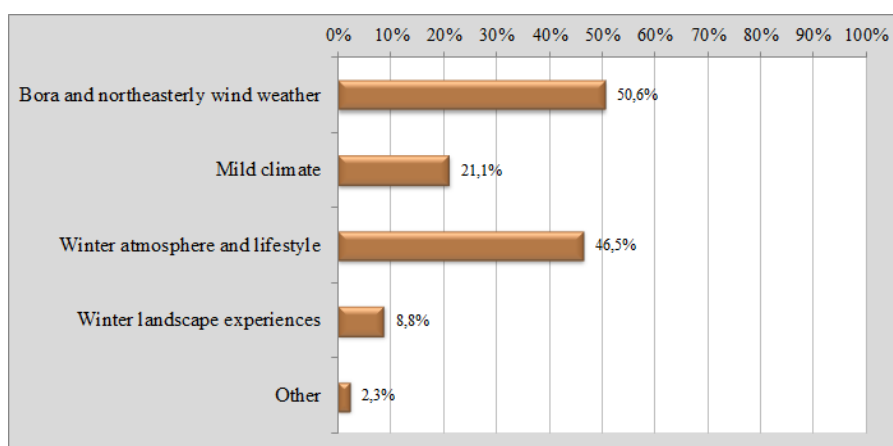


Figure 48: Characteristics of Dalmatia in the winter
Slika 48: Značilnosti Dalmacije pozimi

The category *Bora and north-easterly wind weather* encompassed all responses related to this wind, which is dominant in Dalmatia in the winter, as well as characteristic sceneries brought on by, for instance: the bora; the cold; the winter sun; a sunny day, cold and windy; cold but sunny days ideal for walks alongside the seashore; fresh and clean air; sea salt residue on plants; etc.

Winter atmosphere and lifestyle relates to the characteristics of Dalmatia winter ambience that stand in contrast to the lively, summer atmosphere and also include the usual daily and other activities of the local population during winter. Some of the typical responses in this category were: tranquillity, relaxation, desertedness, empty streets, olive picking, lack of contents, slowness, relaxation, peace and quiet, dead atmosphere in the cities, deserted promenades, less throng in the open, peaceful life, depression, fewer people, relaxedness – terraces full of people, monotony, fishing for squid, no people, deserted streets, locals, absolute quiet, emptiness, fewer people and crowds, slower pace of life in a nice surroundings, playing cards at home, walking on the promenade, taverns, cards, winter nights in taverns, *klapa* folk songs, good food, winter walks on the sunny promenades, lonely grandmothers sitting in front of dilapidated houses, sorrow, melancholy, abandonment, fishing, fish processing, daily afternoon coffees, morning weekend walks and drinking coffee in city centres, sunny days making it possible to have coffee outside even in winter, etc.

Characteristics that describe relatively mild winters with plenty of rain, but also sunshine and the sirocco, a warm wind blowing from the sea that brings rain, make up the category *Mild climate* (e.g. rain, sirocco; sirocco; wind, mild winters, rain; relatively warm weather, plenty of sunshine; mild climate, sunshine; weather changes; strong winds; no snow; mild climate, sunny periods, rain; sunny days; humidity, etc.). Together with the bora wind and the weather conditions that accompany it, it is apparent that the image of Dalmatia in the winter largely relies on the landscape's tactile features.

The category *Winter landscape experiences* represents different visual and non-visual characteristics of winter landscape elicited by the question for 21,1% respondents. Typical characteristics are, for instance, waves; the smell of the sea, plant life; seagulls; stormy sea; sound of waves; clean sea; landscape; sea, clean air; sea, waves; sky full of clouds brought on by the sirocco; the smell of the sea; the calm before the bora; crying of seagulls; smell of the sea and pine trees; different colours for the bora and sirocco; a blue-grey sky with the wind; the whiteness of the sky and stone, cities completely white; boats rocking lazily in harbours; a cornucopia of smells and colours; the intense smell of salt; a more intense smell and blueness of the sea; seagulls against the gloomy sky above the fishing port; the cleanliness of the atmosphere; the pleasant air; the smell of the sea; the smell of dried fish in the Dalmatian bora; everything is green and fragrant; rough sea; seagulls, etc.

The responses from the mentioned two most numerous categories prevailed both in the group of locals and in the two visitors' groups (Fig. 49). The bora and north-easterly wind weather, which is often the cause of traffic problems in Dalmatia, making it a news topic almost on a daily basis, were mentioned by more respondents from Croatia (54,2% and 50,5%) than respondents from other countries (37,8%). The thing they mentioned more often were the characteristics of the mild climate in the winter. It is interesting that Dalmatia is more often seen through the prism of the winter atmosphere and lifestyle by respondents that live elsewhere (51,7% from other regions and 47,7% from abroad) than by locals (42,6%), and the similar case is with the category representing winter landscape experiences in Dalmatia.

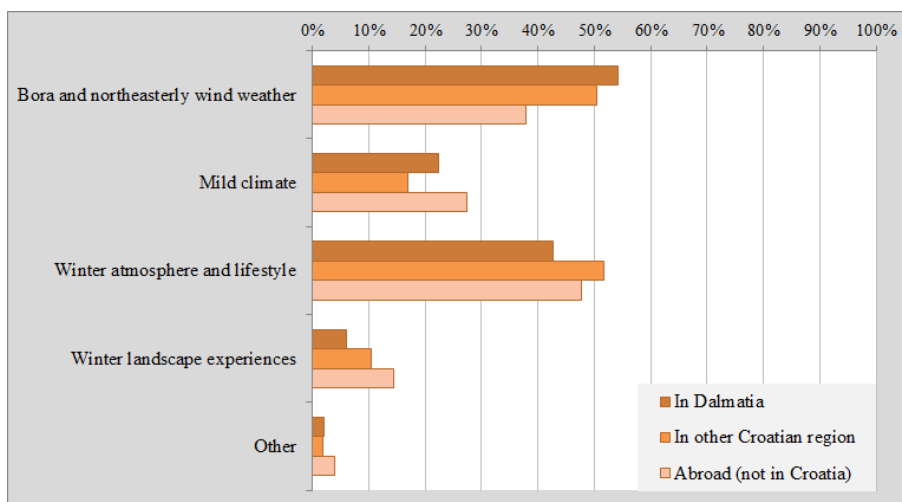


Figure 49: Perception of winter landscape properties of Dalmatia depending on the respondents' place of residence

Slika 49: Doživetja Dalmacije pozimi glede na kraj bivanja izprašancev

Visitors' answers were very uniform regardless of frequency of visits, although the bora and north-easterly wind weather were mentioned more often by those who come to Dalmatia once or several times a year (Fig. 50).

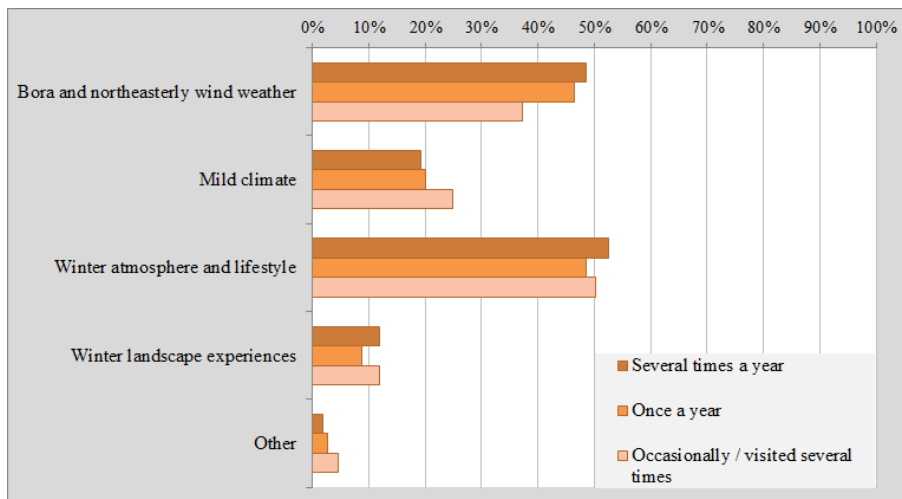


Figure 50: Perception of winter landscape properties of Dalmatia depending on the frequency of visits

Slika 50: Doživetja Dalmacije pozimi glede na pogostost obiskov

Experience of Dalmatia without sounds, smells or tactile sensations

In the last thematic question (P12), the respondents were asked for their opinion on what their experience of Dalmatia would be if they could not sense smells, sounds and tactile sensations of the landscape. Of the three responses offered and the category *Other*, 56% of respondents thought that such an experience would be a lot worse and 37,3% that it would be somewhat worse, but still good (Fig. 51).

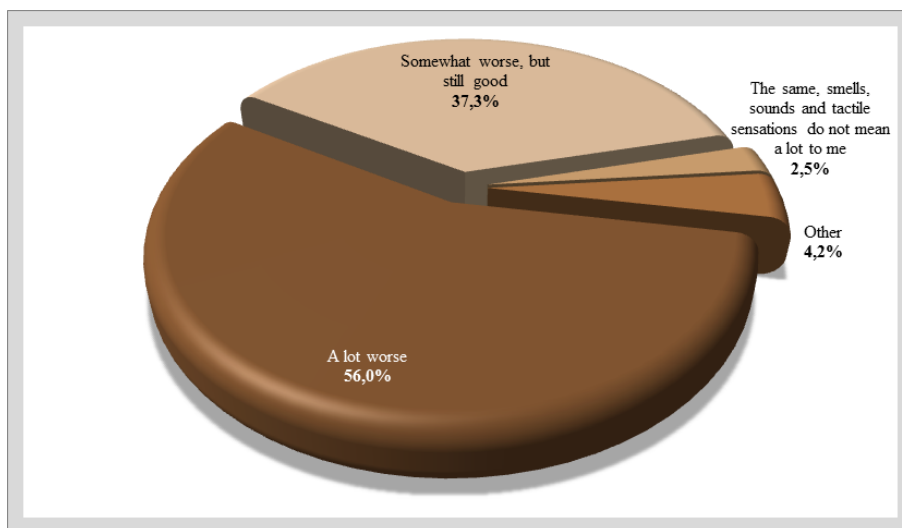


Figure 51: Respondents' opinion on what would the experience of Dalmatia be without its non-visual characteristics

Slika 51: Mnenje izprašancev o tem kakšno bi bilo doživetje Dalmacije brez njenih nevizualnih značilnosti

This means that 93,3% of the respondents thought that the inability of perceiving non-visual properties of the landscape would at least to a certain extent diminish the quality of the experience. Only 2,5% of the respondents answered that non-visual experiences do not matter very much to them.

The answers of the majority of the 4,2% of respondents that answered *Other* can be classified in the first of the offered answers (i.e. a lot worse). Apart from short answers (e.g. incomparably worse; lacking, incomplete; poor; sad, very sad; completely different), some respondents stressed that the recognisability of the Dalmatian landscape arises precisely from its non-visual characteristics.

Dalmatia wouldn't be Dalmatia!

Probably a lot worse. It's what makes Dalmatia what it is.

Horrible, that's the essence of Dalmatia – smells, sounds and all other experiences

It would be just an image

It would be different, it wouldn't be the same space as I experienced it

I don't know what I would recognise Dalmatia from if that were the case

Without *klapa* a cappella songs and the smell of the Mediterranean and the sea, it would just be a theatre backdrop [...]

I would never go back if there wouldn't be smells, sounds...

I would probably never return because I care more about the authentic nature and the sea

Impossible to answer, you experience it right away.

A tragic feeling of helplessness and the loss of something really important in my life.

It wouldn't be Dalmatia without the smells of nature and the sounds of the cities. It would be missing a lot.

From certain answers it is noticeable that non-visual experiences are firmly integrated into the overall notion of the landscape that would not change with the potential loss of one or more senses, but would continue to exist in previously formed memories and impressions.

I would be an invalid with good memory – everything is always here

Anyone who once perceives the smells, sounds and touches of Dalmatia from the soul has them forever, even when they are not experiencing them. The experience is always the same.

Equally, the feelings are there even when they are not heard, seen and felt

The ratios of individual answers were near equal regardless of where the respondents live and the frequency of their stay in Dalmatia (Fig. 52, Fig. 53). Cramér's V test showed that there were no statistically significant differences between the answers of locals and visitors and that the association coefficient among the variables was very low (0,042). The same was true for the differences according to the frequency of visits, where Cramér's

coefficient was 0,057. Therefore, the experience of Dalmatia would be somewhat or much worse without non-visual stimuli for most respondents, notwithstanding their place of residence and the frequency of their visits.

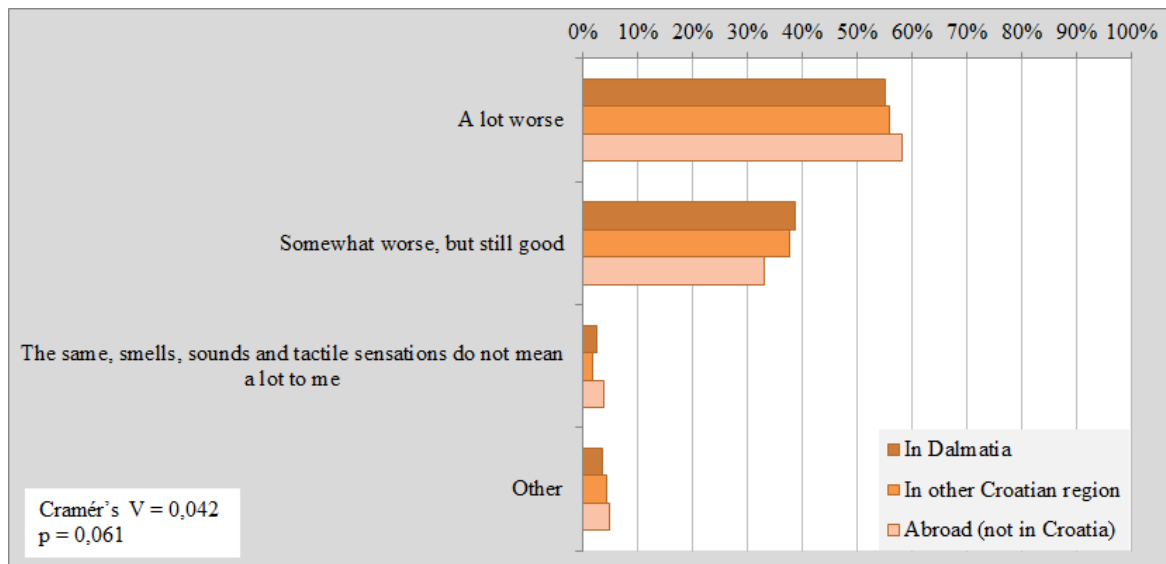


Figure 52: Respondents' answers depending on their place of residence
 Slika 52: Odgovori izprašancev glede na kraj bivanja

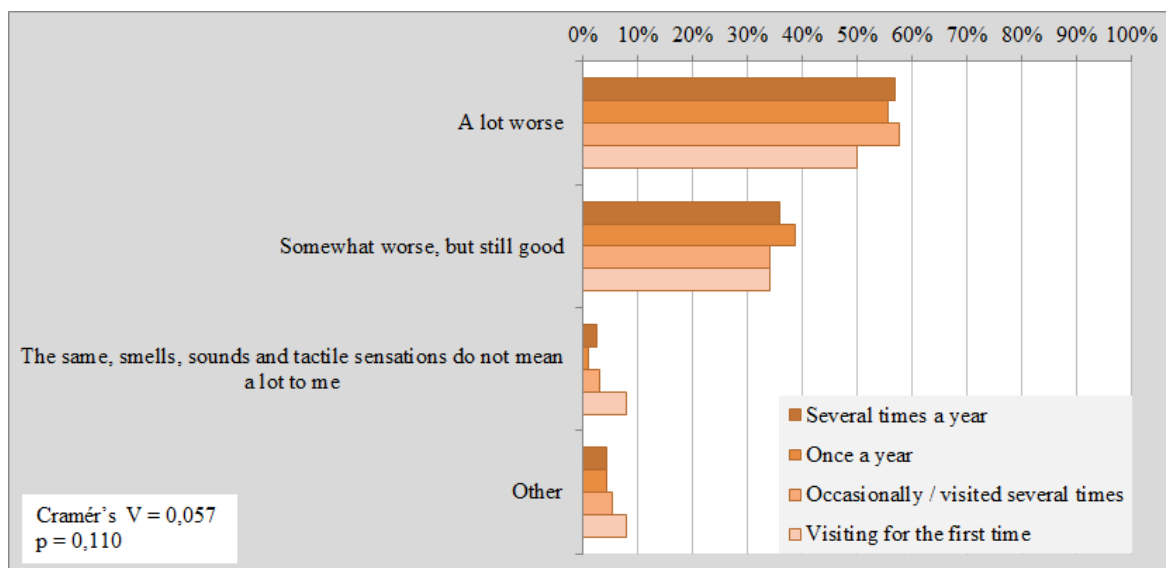


Figure 53: Respondents' answers depending on the frequency of visits
 Slika 53: Odgovori izprašancev glede na pogostost obiskov

5.1.4 Summary of the public opinion survey results

The goal of posing the twelve thematic questions in the survey questionnaire was to determine whether Dalmatia was for the most part recognized by its visual characteristics or whether non-visual characteristics, too, played a role in the notion of the region. Considering the manner in which the questions were structured, it was not foreseen that a precise hierarchy of sensory modalities and sensory features within identity structure be

determined (e.g. the ratio of sensory modalities and types of features differed in multiple-choice questions). However, the results indicated to some very prominent features of the recognition of Dalmatian landscape through modalities.

The most important piece of knowledge extracted from the results is that Dalmatian identity is to a significant extent built on non-visual characteristics (Fig. 54). This is manifested in the variety of answers to all questions with multiple offered or open-ended options (i.e. P1, P2, P8, P9, P10).



Figure 54: The structure of Dalmatian sensory landscape identity according to the results of the survey questionnaire. The figure shows the most prominent features within each sensory modality.

Slika 54: Struktura čutne krajinske identitete Dalmacije po rezultatih anketnega raziskovanja. Slika prikazuje najbolj poudarjene značilnosti v vsaki čutni modaliteti.

Expectedly, visual features dominate the notion, and the most prominent of such features is the sea as one of the primary associations of the region (P1, P2). Apart from the sea, there are other landscape elements that hold a prominent place in the perception of the region: karst landscape (P1, P2, P9), indented coast with numerous islands and coves (P1, P2, P10), as well as pines trees and cypresses and various other landscape features (P1, P2). Traditional stone architecture with stone houses, squares, narrow streets and specific elements (e.g. wooden shutters, pergolas, staircases) and historical monuments is a very outstanding element of cultural identity (P1, P2, P9, P10). Agrarian landscape elements, especially olive groves (P1, P2) and drywalls (P10, and P1 and P2 where they belong to the karst landscape category) are also recognizable visual features of Dalmatia.

Sounds and scents are more rarely found among the first associations to Dalmatia (i.e. P1 and P2), but auditory and olfactory identity were verified in other questions, especially P3, P4 and P5. Apart from, among other things, rating the smells and sounds of Dalmatia as very different from those in other regions and countries, over 90% of respondents listed smells and another 86% listed sounds they considered characteristic for this region. The most recognizable smells are the smell of the sea, the scent of pine trees and cypresses, lavender, rosemary, and other aromatic plants, while the most typical sounds are cricket

song, the sound of the sea, the sound of seagulls, the sound of the wind and Dalmatian music.

Scented souvenirs (potpourri, oil or scented products) were chosen by 19,7% of the respondents, while a CD with recorded sounds of the nature or Dalmatian music was chosen by 9,5%. Inclination to scented experiences is also manifested in the choice of gustatory souvenirs – olive oil, wine and dried figs. Only in question P10 did the respondents choose somewhat more auditory than olfactory regional characteristics. The olfactory identity of Dalmatia is mostly based on the scents of the nature (P4, P10), while scent as an element of cultural smellscape (e.g. the smell of food) is less represented, but also found in answers to some other questions (P4, P9). Natural sounds also prevail when it comes to auditory identity (P5, P9, P10), but Dalmatian *klapa* song also stands out as an element of cultural auditory identity (P1, P2, P5, P8, P10). The above data are a very convincing indicator of the existence of an olfactory and auditory identity of Dalmatia.

According to the results, the region's tactile identity is mostly contained in characteristics as mild climate, the sun, warmth, the heat, and dominant winds (P1, P2). Bathing in the sea was also mentioned by the respondents as a recognizable (primarily) tactile experience (P9, P10).

Gustatory features were offered in multiple-choice questions primarily as a group category, in order to avoid the influence of the (non-)preference of an individual dish or ingredient. In this way, the respondents validated Dalmatian gastronomy in general (or what an individual considers valuable and typical within it). The first two questions show that gustatory features are also some of the strongest associations of the region, and the respondents stated different ingredients (frequently sea food), local dishes such as grilled fish and wine. The importance of the sense of taste in regional identity is also apparent in the choice of the previously mentioned gustatory souvenirs (P8) – a total of 35% (even more if the gustatory souvenirs from the group *Other* are included). The culinary specialties, but also the ambiances (i.e. taverns) rank highly in questions P9 and P10.

Survey results produced a sixth category of sensory experiences – the one relating to the ambience and other multisensory characteristics (P1, P2). Among those, a salient place is taken by the perception of Dalmatia as a region characterised by a relaxed rhythm, relaxedness and a calmer and healthier lifestyle in general. Many, especially those who do not live in Dalmatia, associate the region with vacations, summer and summer experiences such as bathing and activities by the sea. In the summer, the recognizable features of the ambience in Dalmatian cities are their liveliness, events and fiestas, while in the winter the typical characteristic is its contrastive desertedness, which is best reflected in answers offered to question eleven.

Another question was whether these landscape characteristics, especially the non-visual ones, were known only to the locals, to whom the Dalmatian landscape is the everyday environment, or if the visitors also found them distinctive.

The results show that the answers to some questions differ between locals and visitors, as well as between those visitors that visit frequently and those that visit less frequently. As

could be expected, in the five multiple-choice or open-ended questions presenting different Dalmatian characteristics (P1, P2, P8, P9 and P10), there are smaller or greater differences in the choices of different groups. The variety in the distribution among the chosen answers in general as well as among the observed groups within the sample goes in favour of the hypothesis on the diversity of the Dalmatian landscape, showing that the notion is built upon multiple landscape properties.

Statistical tests were made for seven of 12 thematic questions in the survey questionnaire and two variables – place of living (P14: Where do you live) and frequency of visits (P15: How often do you visit Dalmatia?). Analysis of variance (ANOVA) determined statistically significant differences ($p < 0,05$) for certain answers in three questions (P3, P6 and P7) – those that included validation on a scale from 1 to 5. It was determined that an increased length of stay in Dalmatia and the frequency of visits correlate with a slight growth trend in the average evaluation of ambience pleasance and the importance of experiences, particularly visual and tactile, in the overall experience of the landscape. Interestingly, olfactory and auditory experiences did not fit into that trend, but were rather a more important property of the overall experience for respondents from other Croatian regions than to locals and foreigners. Even though the differences between groups in these questions proved to be statistically significant, the graphs of average values clearly show that the differences between average grades in those groups are less than 0,5 points, pointing to the probable influence of a large sample on the test results. Moreover, the determined differences are understandable, since everyday life in a certain environment conditions a deeper and more multi-layered familiarity with its character, as well as the creation of place attachment, which reflects, to a certain extent, on the validation of the environment.

Regarding the other four questions, Cramér's V test has shown very weak to weak association between the observed variables, and the statistical significance in some cases stems from the large sample and can be considered as negligible. In other words, the place of living and frequency of visits did not have an influence on the differences between the groups (or influenced them to a negligible extent).

It can be claimed, based on the above, that the factors of living in Dalmatia or a different place or the frequency of visits are not decisive when it comes to the formation of the notion of the region and the perception of its non-visual characteristics. Both local people and visitors experience Dalmatia through its visual and non-visual characteristics and consider a series of properties within each modality to be typical. Within the above, a role is also played by natural as well as cultural characteristics of the region, making it clear that the *genius loci* is the result of the interaction of natural conditions and social (cultural) influences.

5.1.5 Discussion of the public opinion survey

Surveying is a common method for exploring landscape identity (Bullen et al., 1999; Butula, 2009; Nitavska, 2011), because it gives insight into the opinions of the wider populations (or of its segments, for instance, experts) on the characteristics of a space. However, interest in non-visual sensory landscape identity is relatively new and, during the

writing of this thesis, there were no similar studies found to which the results obtained here could be compared.

The presented results confirmed the initial research questions and hypotheses. They showed that there are socially recognised non-visual characteristics of the Dalmatian region. Within every perception modality several of them came to the fore, and the notion of the region through these characteristics, despite certain differences (some of which were shown to be statistically significant), was more or less uniform among the groups of local people and visitors. It is, thus, important to point out that the image of Dalmatia rests on visual and non-visual characteristics, when it comes to both locals and visitors.

The aim of the first two questions was to get the first associations of Dalmatia and its ambience in order to get an approximate insight into the elements which make up the structure of the notion of the region, and only then to find out what share in this perception have the non-visual landscape characteristics. In both questions, the answers included a series of different characteristics and were grouped in 25 (P1) and 20 (P2) categories. A large number of answers fit into the visual categories, which is not surprising considering that the concept of space is understood primarily from the visual perspective. The results, therefore, reflected the factor of non-awareness (or taken-for-grantedness) of the existence of auditory, olfactory, tactile, gustatory and other characteristics of landscapes. Nevertheless, a good deal of other answers belonged to other sensory or multisensory categories: tactile (climate, sun, warmth), gustatory (local food, wine), olfactory (scents of Dalmatia, aromatic plants), auditory (music, sounds of nature, other sounds), multisensory (sea, pines and cypresses, activities by the sea).

The existence of non-visual, especially olfactory and auditory identity of Dalmatia was confirmed through the following survey questions. Apart from rating the smells and sounds of Dalmatia as very different from other regions and countries, over 90% of them listed smells and another 86% listed sounds they feel are characteristic for this region. These are very plausible indicators of the existence of an olfactory and auditory identity of Dalmatia. Recognising Dalmatia for its characteristic sounds, smells, but also other non-visual characteristics (tactile, gustatory, compound) was further confirmed through other questions in the questionnaire.

It is interesting to point out that the respondents generally selected and evaluated olfactory characteristics of the landscape over the auditory ones, which is surprising considering the comparatively more elusive nature of smells. It is the smellscape of Dalmatia that came to the fore as a very prominent and distinguishing dimension of the landscape.

Tactile features, even though they proved to be a recognizable aspect of the Dalmatian landscape, mostly regarded the properties of air in the mild and warm climate, the warmth of the sun, heat and humidity, the winds. Tactility in terms of recognizing the properties of objects and surfaces (e.g. texture, hardness, temperature) is something that respondents pay less attention to. The tactile properties of the landscape, especially those regarding air temperature, wind and surface texture, are not easily made into souvenirs, which limited the scope of possible answers to question P8 (With which of the souvenirs listed below would you best present Dalmatia to your friend?). Some tactile properties can be read from

the visible landscape, either directly in space or in a depiction (e.g. photo or image). “Viewing the still images, especially progressively as a ‘slideshow’ *could* provoke a haptic impression of the sensory texture of the environment if the viewer is familiar with such an environment,” claim Rubidge and Stones (2009), which was one of the findings of their study. The question P8 only partially reveals the significance of tactile landscape since the offer of such souvenirs is limited and because tactile experiences can be contained in visual souvenirs such as paintings or even replicas of an old Dalmatian stone house.

Answers to question P7 also pointed towards the fact that the respondents held the visual experience of the landscape in somewhat higher esteem than the non-visual ones. Also, even though more than half the respondents answered P12 by stating that without the ability to perceive non-visual characteristics, their experience would be much poorer, 37,3% felt that it would be diminished, but still good. Henshaw, who systematically explores smell experiences and smellscape, presented how today’s society evaluates certain senses by displaying insurance claims advice (indemnity) for the loss of individual sense in the United Kingdom. According to the data available for 2008, the largest sums by far were paid out for the loss of vision, then hearing, smell and finally taste (ColumbiaGSAPP, 2012). Such a position of sight is largely due to the fact that the average healthy person collects the most environmental information by way of that sense, thus its loss causes the greatest deal of difficulties in daily life (and probably the greatest expenses). It may also be due to the fact that the consequences of the loss of other senses are less well known. As was stated in the introduction, perception is also conditioned through socio-cultural factor, and in Western culture especially the awareness of other senses is not sufficiently developed. For example, blindness and deafness are damages known to most people, whereas the inability to perceive smell (anosmia) is probably known to a considerably smaller number of people. This kind of inability, claims Tafalla (2012: 515), who suffers from innate anosmia herself, alters the aesthetic experience of the surroundings – sometimes for the better and sometimes for the worse:

This can even lead us anosmics to appreciate something as beautiful which for other people just is not (a pile of dung in the sunshine; a skunk secreting its scent) or to conceive as boring something that is beautiful for other people (aromatic herbs). That is, in some cases, anosmia can actually invert aesthetic judgment. ... [For anosmic people] the *smellscape* is out of reach. As a consequence, the world is *not so beautiful* for us, and also *not so ugly*.

In this context, the subjective evaluation of senses is partly a reflection of the lack of understanding how and how much non-visual senses contribute to experiencing one’s environment. Raising the awareness of the role of sounds, smells, tactile sensations and tastes in everyday life through research and education, as well as learning of the focused perception of these characteristics, would create a better starting point for evaluating senses.

5.1.5.1 Shortcomings and possible improvements to the method

One of the method’s deficiencies can be found in the non-probabilistic sample, which was available and suitable within the framework of the given possibilities. A probabilistic

random sample cannot be achieved on a population of visitors because the population of people who have visited Dalmatia at least once is not known. However, in the population of local inhabitants of Dalmatia, that is, the four Dalmatian counties, a random sample could be achieved on the basis of data from the Croatian Bureau of Statistics. The results gained in that way could then be generalised to the population of Dalmatia's inhabitants.

The research of the sensory landscape identity was focused on five senses in this case, which meant that the questionnaire had to reconcile a relatively extensive content and a sufficiently short form that would reduce the dropout rate. Research of the aforementioned problem can be carried out in stages, for each sensory landscape dimension (i.e. sensory modality) separately. Even though this requires more human and financial resources and more time, it would be a way for each individual questionnaire to encompass more questions on one form of perception in a sufficiently short format.

This is the first surveying of a sensory landscape identity of Dalmatia (and maybe a region in general). There is no previous knowledge of its non-visual characteristic, which presented a difficulty in the formulation of questions, especially closed-ended ones that require a series of predefined answers. A good knowledge of the characteristics of the researched area can help in creating the questionnaire. The results obtained here are valuable because they allow for further research to form more precise and more polished questions, not only for Dalmatian region, but also for other regions as well as spaces of larger and smaller scales.

5.2 SENSORY WALK IN THE RESEARCH OF SENSORY LANDSCAPE IDENTITY OF DALMATIA

This doctoral thesis, which researches qualities of characteristics forming the regional landscape identity, puts an emphasis on those landscape elements and phenomena that have a symbolic meaning for both inhabitants and visitors of Dalmatia rather than landscape characteristics per se. Symbolic values are not inherent to a landscape but are a product of human perception, largely conditioned by the cultural heritage of a society, expectations, attitudes and recollections.

Sensory walks have been employed for the purpose of this thesis with the following aims:

- to investigate whether non-visual landscape characteristics also partake in the formation of the landscape identity of Dalmatia
- to detect which of these are considered typical
- to test the method for the application in the research into sensory landscape identity

The sensory walk method has been utilized here in a new way. Firstly, instead of just one, as hitherto common in the scientific framework, it has investigated into multiple sensory dimensions of the environment – visual, auditory, olfactory, tactile, gustatory and compound (multi-sensory, emotional, and environmental). Based on assertions of certain authors, Rubidge and Stones (2009) discuss potential benefits of exercising separate sensory walk for each individual perceptual modality, thus allowing the focus of attention to a single sense and a more detailed perception within that modality. However, such an approach, they note, opens up the question as to how and to which extent do the dominant focus of attention and increased thoroughness of perception within a modality transform the final overall experience of space. Since the research subject of this thesis is the experience of landscape and characteristics forming its identity in everyday conditions of natural, complex perception, so is also the method conceived as a multisensory task, focusing on all senses while walking through the chosen route.

Secondly, this is the first research based on sensory walks in which a whole region is both a research object and a scope. Previous studies have almost solely presented the knowledge on perceptual characteristics of urban ambiances.

And thirdly, sensory walk has not been utilized here to explore the diversity of spatial characteristics, but primarily with the aim at detecting those acting as emblems of the regional identity. Therefore, the method has been a tool in the research into the multisensory place identity.

Sensory walks have been employed in this thesis not only for the purpose of identifying characteristics of the region's sensory landscape identity, but also for testing the method as a potential tool for the research into and analysis of a place's character and identity. Furthermore, a comparison with the results of the other two methods should show whether such a field approach is suitable for an investigation of spaces larger than a town or a city, such as a region or even a country. Since it is physically not possible to walk the entire region, this poses the question as to whether the place identity investigated through sensory

walks on typical locations of the region corresponds with the identity determined through the questionnaire and content analysis.

It is important to note that each sensory walk is necessarily selective and that not all that is perceived can be recorded (Rubidge and Stones, 2009), especially if multi-sensory attention is required. This is partly conditioned by the very selective nature of perception in everyday life, but also by the fact that the process of perception involves a dynamic cooperation of sensory systems, in the course of which it might sometimes be difficult to ascribe a certain experience to one sense. Therefore, it is *a priori* acknowledged here that a sensory walk does not fully represent all sensory experiences of a selected location at a given point in time, but just its fragments. And precisely these fragments – experiences a participant directed their attention to, singled them out from the information flux in the environment and recorded, as well as numerical values of their typicality that they ascribed to them – are the subject of this research.

5.2.1 Planning sensory walks

The method's utilization has been devised as field data gathering through a series of multisensory walks at selected locations of typical Dalmatian environment, with a qualitative approach to the interpretation thereof.

A total of seven sensory walks were conducted in summer, in August and September 2010. Summers in Dalmatia are specific, rich in environmental stimuli for all senses. Due to high temperatures and high evaporation, the air is more saturated with fragrances of herbs, the smell of the sea and other elements; people are more out in the open and wear less clothes, so that their contact with textures and temperatures in the landscape is closer and more frequent. Since summer is the time of school holidays and vacations, the region is crowded with people and various events are organized in the open air, so that it is filled with vistas, sounds, smells, tactile sensations and tastes.

Seven locations in two Dalmatian counties – Zadar County and Šibenik-Knin County – have been selected for the implementation of the method. The locations include urban (Zadar- Vladimir Nazor Park and Kolovare, Poluotok, Biograd, Vodice), peri-urban (Zadar – the Vitrenjak bay, Petrčane) and countryside (the island of Prvić) areas, each of which shows some typical characteristics of Dalmatia. It is acknowledged here that the chosen locations do not represent Dalmatia in all its diversity as well as that the aforementioned ambience types (urban, peri-urban and rural) are not evenly represented. Limiting factors in the selection of locations were the available resources, safety criteria, distance and transport possibilities as well as the availability of participants and the time they were able to set aside for the participation. Consequently, no locations in Split-Dalmatia County and Dubrovnik-Neretva County have been selected. Nevertheless, the quantity and types of locations included in the research shall provide sufficient information for the testing of the method and hypothesis.

Being a qualitative method, sensory walk is suitable for a smaller number of participants. Participants in this field investigation included individuals willing to partake in the investigation, among which were also friends, acquaintances and relatives of the researcher

(cf. Degen and Rose, 2012). As summer is a holiday season in Dalmatia, when people spend their vacations and free time on islands and elsewhere, in vacation houses, it was relatively demanding to gather a larger group of people, so that four to eight participants were included in each of the walks, depending on their availability at the agreed time.

Each of the seven walks was conducted with a different group of people, so that each person participated in one walk only. A total of 41 people, both men and women, participated in the walks. Their age ranged between 22 and 59 years, with the majority of participants between the ages of 25 and 35. In terms of educational structure, most participants were highly educated (two-year and university degree), but a few of them had secondary (high school) education. Most participants were residents of Dalmatia, however not necessarily of the location the sensory walk took place at. Two participants were regular visitors of Dalmatia – one from a neighbouring country (Hungary) and the other from another region of Croatia (Slavonia). It can be said that all participants were well familiar with locations visited. The above demographic data have only an informative character – they had no practical role in the data processing and interpretation.

5.2.1.1 Task description and implementation

Prior to the commencement of walks, participants and the researcher would gather at the agreed location, where the purpose of the task was explained to the participants, along with their role in the research and the walk procedure. They were required to take walks on selected routes under the guidance of the researcher, in the course of which they had to concentrate on observing the environment with all senses (primarily sight, hearing, smelling, touching or feeling, and compound as their combinations) and record as much of their experiences as possible. Within a sensory walk, resting points are sometimes scheduled for the purpose of discussing and commenting on spatial characteristics the participants observed up to that point or those present at the time (Adams et al., 2008; Davies et al., 2013; Henshaw and Bruce, 2012; Henshaw et al., 2009). Such stands have not been *a priori* set for the walks in this research, but occasional stops during the walks – standing, sitting on a bench, a wall and similar – were allowed, in accordance with participants' individual needs and feelings.

Aside from observing, participants were required to note down their experiences as well. For this purpose they had been given, prior to the walk commencement, a tabular template (form) as well as instructions on how to complete it.⁸⁶ The table consisted of three columns, in the first of which specific experiences from the environment were to be entered (e.g. the warmth of the sun, green trees etc.). It was pointed out to the participants that perceived sensory characteristics should be noted down briefly, in a few words, and that they can express themselves freely and use jargon, as well as that there are no incorrect or funny answers, since all they note down reflects their perception of the surrounding landscape. The number of (required) experiences was of course not set, but each participant recorded what they perceived and considered necessary or interesting to be noted down.

⁸⁶ See Annex E: template for the recording of experiences during sensory walks

In the second column, participants were requested to assess numerically each experience in terms of its typicality (how typical the experience was of Dalmatia), on the scale from 1 (not typical at all) to 5 (pronouncedly typical). The third column, *Note/Comment*, was given for any possible additional comments each individual participant wishes or feels the need to note down (e.g. it reminds me of my childhood, I like this very much, it strongly contributes to the atmosphere, etc.).

Various authors employed various forms of experience assessment during sensory walks. So did for instance participants in V. Henshaw's investigation into smell expectations rate how much they liked the smells they perceived on the scale from 1 to 5 (Henshaw and Bruce, 2012). Watts and Pheasant's (2013) research into the countryside included the assessment of tranquillity on the scale from 1 (least tranquil) to 10 (most tranquil). In addition, their research participants were asked to fill out a short site assessment form. Researches into sounds within the Positive Soundscape Project by Davies et al. (2013), have resulted in some interesting findings. In addition to other methods, they recorded soundscapes during soundwalks and then used the recordings for laboratory listening tests and soundscapes' evaluation.

However, as can be inferred from an overview of relevant literature, this research is the first to assess experiences in the context of the typicality of the area they are perceived in. The assessment of typicality for each recorded experience should indicate the extent to which it is perceived as a typical element of the landscape of Dalmatia (i.e. a characteristic of the landscape identity).

Sensory walks conducted within the thesis research lasted for about 30 to 45 minutes and were carried out in silence, without talking, so as to avoid that participants influence each other's observations and ensure that only personal experiences are perceived and noted down. At the end of each walk, the researcher gathered the completed templates.

5.2.1.2 Data processing

The approach taken for data processing is primarily qualitative and descriptive. The data from the participants' templates, which represent the experiences of each and their respective assessments, have been translated into Excel spreadsheets, on the basis of which the analysis was then conducted.

Each location has been analysed individually. For each location, experiences of all participants are shown jointly in five tables – one for each modality⁸⁷. Experiences are categorized by their typicality, in columns 1 to 5, listed in random order. Since the method was utilized with the purpose of identifying experiences that represent the identity of Dalmatia, in an attempt to emphasise those characteristics of locations that were assessed as very typical (4) and pronouncedly typical (5) of Dalmatia, these two columns are highlighted in grey. Additional participants' notes and comments were relatively rare and the interesting ones are mentioned in tables' interpretations.

⁸⁷ See Annex F: A tabular overview of the results of the sensory walk

In the interpretation of results, for each location the sum of recorded experiences has been shown on an informative basis, for all participants within a single modality. The sum includes the same experience(s) described repeatedly by more participants (e.g. if three participants recorded a vista of the sea, it was counted three times). Furthermore, it is shown how many of the total number of experiences were mentioned once and how many repeatedly (at least two or more times).

Characteristics of the region that were evaluated as typical represent potential characteristics of its identity. However, even those characteristics that were evaluated as less or not typical at all are shown, for they also reveal much about the experience of the region's identity and recognisability.

5.2.2 Interpretation of the results of sensory walk

The results are indicated as per the date of sensory walk, from the first (earliest in time) to the last. Visual, auditory, olfactory, tactile and compound (multisensory) experiences were commonly found on each location, while gustatory perception appeared only a few times at three different locations. Some characteristics were perceived by more participants so that these accordingly recur in the table.

The number of recorded experienced characteristics per location varies, depending both on the number of participants and their perception skills as well as the need to write down their experiences. Although it is preferred in researches of this type that the number of recorded experiences is as greater as possible, here the typicality assessments of those recorded are equally, if not even more significant.

5.2.2.1 Location 1: Zadar – Vladimir Nazor Park and the Kolovare beach

The first visited location was the city park Vladimir Nazor and the city beach Kolovare in the southeast of Zadar. This park, located on top of the city's fortress Forte, is the biggest park in Zadar (cca 5,5ha), richly planted with mostly evergreen vegetation. The park has well-tended shingle pathways (Fig. 55), but there are no usual park facilities such as playgrounds, sports courts, walking and bicycle trails and the like. Thus, beside occasional joggers and passers-by, a relatively small number of people visit and dwell in it for a longer time, so that the atmosphere is mostly quiet, calm and relaxing. The second part of this walk included the city beach Kolovare, located in the immediate vicinity of the park, almost adjoining it. It includes sports facilities such as an open air seawater swimming pool, diving boards, beach volleyball courts and changing booths. When it comes to hospitality facilities, there is only one café, by the sea.

Four persons aged 27 to 29, three female and one male, participated in the walk. In terms of their education, three were highly educated (university degree) and one had secondary education.

Site conditions data at the time of the walk

Date and time of the walk commencement: 12th August 2010, 18:00h
Meteorological data at 18:00h (CMHI, m. s. Zadar)⁸⁸:

Temperature (°C)	28,0
Relative humidity (%)	50
Atmospheric pressure (hPa)	1011,4
Wind velocity (m/s)	03 WNW
Weather conditions	Sunny, partly cloudy 2/10



Figure 55: Shingle pathways in the Park of Vladimir Nazor
Slika 55: Prodnate stezice v parku Vladimirja Nazorja

Route description

The west entrance to Vladimir Nazor Park was the meeting point. The participants, accompanied by the researcher, noted down their experiences while walking through the park (Fig. 56), in which, due to lush and dense vegetation, a calm atmosphere and pleasant temperature prevailed. In order to get to the Kolovare beach, the participants had to cross a parking lot and a road, during which time the sensory walk was suspended. The participants then took the shingle pathway by the beach, which is for the most part under pine trees, with a sweeping view of nearby islands. Since it was a summer day, the general atmosphere at the beach was very lively and thus, in contrast to that in the park. A summer day at a beach is also a typical Dalmatian ambience.

⁸⁸ CMHI = Croatian Meteorological and Hydrological Institute; m. s. = meteorological station



Figure 56: Location 1 – cartographic display and selected photos (the photographs were not taken on the day of the sensory walk)

Slika 56: Lokacija 1 – kartografski prikaz in izbrane fotografije (fotografije niso posnete na dan čutnega sprehoda)

Experiences from the Park of Vladimir Nazor and the Kolovare beach

The participants in this first sensory walk noted down less experiences than on some other locations. There have been altogether 89 experiences through all modalities, but that what the participants perceived and noted down is very informative.

Visual experiences

A total of 33 visual experiences have been recorded in Vladimir Nazor Park and the Kolovare beach by all participants together, whereat 23 of these were mentioned once and 5 of the experiences were repeated more times (with the total sum of 10). Twenty-four experiences have been evaluated as very typical (4) and pronouncedly typical (5). Characteristics perceived by two or more participants (though sometimes in different forms) can be grouped as follows:

- **Visual experiences of the sea** such as *waves, the sea shimmering in the sunlight* or simply *the sea*,
- **Mediterranean vegetation** observed generally, as *the verdure* or through individual sorts (*pine trees, fig tree*),
- **Ships at sea** (e.g. *ships, a ferryboat in the distance*),
- **A view of the islands**,
- **Various beach facilities and equipment** such as *pedaloos, diving boards, beach volleyball courts*, and
- **People**, who constitute a significant segment in visual experiencing (*strollers, cyclists, swimmers, sunbathers, people playing beach volleyball*, etc.).

The above characteristics are those that more participants considered typical of Dalmatia. However, evaluations for one and the same experience varied from a participant to participant sometimes. Some participants for instance did not think that the presence of people is a typical element, so that they evaluated people running, walking or taking recreation in the park as not particularly typical (2) or moderately typical (3). It can be assumed that they consider these activities not typical only of Dalmatia but occurring elsewhere as well, which is of course correct; however it does not mean they are not typical of Dalmatia too. However, the question is which aspect of an experience was evaluated. It is common to see people in all inhabited areas, but a larger number of people involved in recreation and relaxation activities in the context of time (summer) and space (Dalmatian settlements and the coast) may imply the vibrancy and rustle often associated with Dalmatian atmosphere in summer. It seems some of the participants experienced and evaluated the presence of people precisely from this perspective.

Experiences that were negatively evaluated (in terms of typicality) also discover a lot about the perception of Dalmatia's landscape identity. The participant that observed *rare but existing puddles* in the park and evaluated these as not typical at all (1), noted down as well:

“There is some water after all! Dalmatia is known for summer drought.”

The fact that Dalmatia is seen as a very dry region in summer can be discerned from experiences of *verdure* (3) and *well-tended verdure and flowers* (3), which were not evaluated as very or pronouncedly typical and to which the following comments were given:

“Everything dries in summer, evergreen plants [in the park] give the impression of life, and colours have a calming effect.”

“Flowers are not typically found in the heat of summer.”

Auditory experiences

Just like with visual perception, most auditory experiences (26 of total 31), were evaluated as very and pronouncedly typical. A total of 12 different sounds were recorded, whereat 10 of these were repeated twice or more times (and these total to 29). They include:

- **sounds of the sea** (*the murmur of the sea, waves breaking against the shore* after a ship passes),
- **cicada chirping**,
- **sounds made by people** (*people talking, murmur of swimmers’ voices* at the beach, *din of children* at the beach, *laughter*),
- **sounds resulting from human activities** such as the *sound of shingles* in the park and *pounding of a ball*,
- **ships** (the sound of *ships* and *speedboats*),
- **birds** (the *sound* and *chirping* of birds),
- **tolling** of church bells.

One of the participants commented on cicada chirping: “I perceive it as a noise sometimes”.

Even here the evaluation varied, in the case of *the sound of shingles* in the park and especially *the sound of traffic* which the participants discerned in the distance. All four participants perceived it, but, while one of them assessed it as pronouncedly typical (5), the others said it was not particularly typical or was moderately typical. This suggests that such ‘common’ sounds were confusing for the participants, for they were not sure in which sense they were supposed to assess their typicality. Precisely due to the fact that the sound of traffic is present more or less everywhere, it is also not unusual in Dalmatia, which makes it, at the same time, not typical at all and completely typical. However, the participants generally agreed in the evaluation of other sounds.

Olfactory experiences

In comparison to visual and auditory experiences, olfactory ones were recorded relatively rarely – there were only 10 of them, and almost all (9) were evaluated as pronouncedly typical of Dalmatia. The smell of grass and laurel were perceived once, while the smell of sunscreen, of the sea and pines were perceived by several participants.

Interestingly, although the laurel dominates in comparison to other plant species in the park (Nasadi d.o.o. Zadar, 2013), only one person (not living in Dalmatia) paid attention to its

smell, evaluating it as very typical (4). One participant recorded *the smell of grass* as a typical olfactory experience, probably not sure to which species they were supposed to assign it.

At the city beach Kolovare, even three of four participants experienced *the smell of sunscreen* and *the smell of pine trees*, ascribing these, as well as *the smell of the sea*, to pronouncedly distinguishing Dalmatian olfactory experiences.

Tactile experiences

The number of recorded tactile experiences is relatively small as well (13), twelve of which was evaluated as typical of the region (4 and 5). Most of them referred to sensations related to the air – temperature, humidity and air streaming. There were four types of tactile experiences, of which all were mentioned at least twice.

Tactile sensations that were evaluated as typical of Dalmatian ambiance are *the heat*, *sultriness*, *the warmth of the sun*, *a light summer breeze* and *shade*. While in the park, three participants recorded an experience of a mosquito bite; one evaluated it as moderately typical and the other two as pronouncedly typical.

Compound experiences

When it comes to compound experiences on location 1, the participants mentioned only *tranquillity*, *harmony* – which actually depicts the general atmosphere of the park – and evaluated it as a pronouncedly typical (5), and *the pleasant verdure* (5), where the pleasantness might refer to the appearance of the vegetation, the feeling of the refreshing shade the vegetation provides on the otherwise hot day, as well as its aromatic scents.

An overview of all recorded experiences has shown that distinctive Dalmatian landscape characteristics dominate in Vladimir Nazor Park and the Kolovare beach, thus creating a sense of a typical atmosphere of the region.

5.2.2.2 Location 2: The island of Prvić

Prvić is a small island in Šibenik-Knin County, located across the town Vodice and about 800 meters away from the mainland. It has two fishing villages – Prvić Luka and Prvić Šepurina, interconnected by an approximately a one-kilometre-long road. With the surface of only 2,4 km², it is so small there is no road infrastructure and car traffic on it, but only walking trails that connect the two villages and areas within them.

Both villages together, according to the 2011 census, do not have more than 500 permanent residents (Popis stanovništva..., 2006). In summer months, especially July and August, there are considerably more people on the island, who come for a vacation to their vacation houses. Prvić is not a tourist-oriented island; tourist accommodation is relatively scarce (Podgorelec and Klempić Bogadi, 2013: 70–73). Consequently, the island is characterised by well-preserved nature and vernacular architecture, and, in comparison to coastal towns, a more traditional and relaxed lifestyle. The whole island of Prvić has been, as a cultural

and historical entity, included in the List of protected cultural goods with the Ministry of Culture of the Republic of Croatia.

Altogether seven persons, two male and five female, recorded their experiences on this location. Two persons had secondary education and five had a two-year or university degree. Their age ranged from 26 to 59, with four persons aged 54 or more.

Site conditions data at the time of the walk

Date and time of the daily walk commencement: 14th August 2010, 13:00h
Meteorological data at 13:00h (CMHI, m. s. Šibenik):

Temperature (°C)	30,8
Relative humidity (%)	34
Atmospheric pressure (hPa)	1005,8
Wind velocity (m/s)	03 S
Weather conditions	sunny, cloudy 6/10

Date and time of the evening walk commencement: 14th August 2010, 21:00h
Meteorological data at 21:00h (CMHI, m. s. Šibenik):

Temperature (°C)	27,4
Relative humidity (%)	49
Atmospheric pressure (hPa)	1003,6
Wind velocity (m/s)	01 WSW
Weather conditions	mainly cloudy, cloudy 8/10

Route description

Since it was not possible to organise that all participants meet at the same time, this walk was conducted in two stages. Accompanied by the researcher, two of the participants started the walk in front of the local church, while the other four joined them in the wharf, from where the route led to the fringes of the village (Fig. 57). Three of the six participants suggested a short evening walk, in which they were joined by yet another person. The evening walk, during which the participants recorded impressions of the evening landscape, was carried out the same day around 21:00, on the same route – from the wharf to the village periphery.

Two of the participants started their walk in front of the local church, in which the holy mass was held at the time, so that chants were heard. The square just outside of the church gave a view of a part of the village situated on the hill, with densely packed stone houses (Fig. 58). From there, the walk continued towards the north side of the island.



Figure 57: Location 2 – cartographic display and selected photos (the photographs were not taken on the day of the sensory walk)

Slika 57: Lokacija 2 – kartografski prikaz in izbrane fotografije (fotografije niso posnete na dan čutnega sprehoda)



Figure 58: Stone houses on the island of Prvić
Slika 58: Kamnite hiše na otoku Prvić

The walk included walking through pine trees over a natural road made of pine needles and a concrete road towards the wharf situated on the northern coast of the island, where the other participants joined them. From the wharf, around which there are a few, both modern and traditional stone houses, the participants walked towards the eastern fringes of the island. Here the road goes by the sea. It is 2 meters wide, only about half a meter above sea level, with dry stone walls forming a borderline on its other side. There are not so many houses here and the touch with nature is more intense.

Experiences from the island of Prvić

Given the fact that the island is natural and rural in its character and the routes selected are not in the centre of the village, experiences from Prvić primarily related to the natural landscape and less to the cultural (villages and man-made landscape). In that ambience the participants recorded, in addition to 78 visual, a relatively large number of non-visual experiences, especially auditory ones (64).

Visual experiences

Out of 78 visual experiences, 16 were repeated twice or more times and 26 were mentioned only once. Most vistas on this location were identified as pronouncedly typical (59) and very typical (9) of Dalmatia and they can be grouped into the following categories:

- **the sea**, which all the participants considered a typical vista (*the sea, the clearness of the sea, fresh, light blue colour of the sea, the turquoise sea, fish glistening in the sea, the blue sea, the sunlight flickering on the sea*),
- **ships**, which form a part of the sea vista (*ships, sailboats at sea, ships at sea, boats in the wharf* (Fig. 59), *an old wooden boat tied to a pier*),
- **Mediterranean vegetation**, which was often perceived through typical species, such as *the oleander in blossom, the red Pelargonium* (*Pelargonium* sp.), *the cypress, a pine forest, olive trees, the wild or purple flowers by the shore*

commonly known as Lattice sea lavender (lat. *Limonium cancellatum*) or generally as *the verdure* and *the dry grass, the roadside bramble*

- **architecture**, in the context of which *stone houses, stone houses and courtyards, the church, green and wooden shutters* were mentioned,
- **dry stone walls**,
- **the seagull**,
- **lights shimmering in the night** (*lights in the distance and their reflection in the sea*).



Figure 59: Boats in the wharf
Slika 59: Ladje v majhni luki

One of the participants noted that *the stone* and *ships* are “the environment they live in”, common and distinctive vistas.

Two participants observed the *sultry haze* on the horizon and evaluated it as a typical characteristic. The following were considered distinguishing characteristics of the summer Dalmatian landscape as well: *the stone* and *the rocky shore*, *a ripe fig on a tree*, *the starry sky* and *view of the shore* (similar to the view of the islands in walks by the shore), a local *inhabitant*, *beach equipment*, *fish shimmering in the sea*, *the blue of the sea and the sky*, *a bocce court* (Dalmatian ‘bučalište’), *the glaring of the sun*, *the contrast between the green vegetation and the blue sea*.

For one of the participants, a cat basking in the sun represented a typical midday “*dolce far niente* feeling” (i.e. siesta or ‘fjaka’ in Dalmatian).

Auditory experiences

According to the recorded, auditory experiences were numerous on the island of Prvić. Out of total 64 sounds, 13 were perceived by one participant, while 12 were repeated twice or more times with the total sum of 51. Even 59 sounds were evaluated as very or pronouncedly typical, the most prominent of which were:

- **chirping of cicadas**,
- **chirping of crickets** (at night),

- **sounds of the sea**, described here in various forms (*the murmur of the sea and waves, lapping waves, beach shingles slithering after a ship passes, fish wiggling in shallow water, the sea rustling*) (Fig. 60),
- **sounds of the low tide** in the evening when the sea retreats (*the sea breathing, the crackling of the shore, the sound of tiny animals in the shallow water*),
- **sounds of ships** (*the sound of ships, the sound of a speedboat, the sound of a ship engine in the distance, the sound of an old ship, the sound of an old ship engine*),
- **music**, recognized as a *klapa's* singing and church chanting,
- **screeching of seagulls**, and
- **a church bell** from the local church tower.



Figure 60: A path by the sea – low tide and the murmur of waves
Slika 60: Stezica ob morju – oseka in šum valov

The sound of a ship engine was described by one participant as “a pleasant sound from the childhood”, which reflects a recollection of sensory landscape experiences, their emotional component as well as time continuity, interwoven into the identity concept.

One of the participants expressed a strong connection between the sound of cicadas and the summer in Dalmatia:

“If there are no cicadas, there is no summer.”

Several other sounds in these two categories (very and pronouncedly typical) were assigned to typical Dalmatian landscape. Two participants perceived *the murmur of waves*, as well as *the silence*, but not complete, as a participant described: “sounds are muffled and distant” and “there is no noise of car traffic”. *A distant sound of the traffic on the mainland, the sound of a tractor, the murmur of people at the beach, the vernacular (dialect), dishes clanging* (“heard from houses whose windows and doors are open”) and *clanging of a metal sling on the mast* were each perceived once and, just like on some of the other locations, evaluated as typical Dalmatian characteristics.

Only *music coming from café terraces* on the mainland was evaluated as moderately typical. It was perceived by participants in the evening walk, when entertainment programmes started at hotels in the town of Vodice. Music coming from open-air clubs was heard clearly because of the sea, which is a good transmitter of sound. It can be assumed that the music was evaluated as moderately typical because it was mostly modern, foreign one. Only one person evaluated it as pronouncedly typical, probably taking into consideration the fact that music is omnipresent in the open in Dalmatian towns and villages, especially tourist ones such as Vodice, during summertime.

One participant of the evening walk evaluated *the sound of ships* as moderately typical, although they had evaluated it as a pronouncedly typical sound during the day walk. The comment added here reveals that, during the evening walk, they thought the tranquillity and absence of sounds typical; ships are then mainly moored in wharfs or anchored in bays.

“Loud ships disturb the tranquillity and silence at night.”

Olfactory experiences

It can be inferred from the table of olfactory experiences that smells on the island of Prvić were generally perceived as typical of Dalmatia. Thirty olfactory experiences can be grouped into 15 categories, 8 of which were mentioned twice or more times and the remaining 7 once. Owing to a natural, countryside character of the island, the prevailing smells are those of nature, mainly of the sea and vegetation:

- **the sea** (*the smell of the sea, the smell of wet rocks during low tide, the smell of seaweed along the shore, the smell of shingles (seaweed) along the shore, the smell of low tide on the shore*),
- **Mediterranean vegetation** (*the smell of tamarisk, the smell of plants, the smell of parched grass, the smell of overripe grapes, the smell of dry pine needles, the smell of Mediterranean plants, the smell of pine trees, the smell of aromatic herbs, the sweet smell of a fig tree* (Fig. 61)).

The smells of Mediterranean plants, the sea and low tide in the evening were evaluated by one participant as moderately typical (3), adding that they did not perceive it as frequently as some other characteristics of the environment: “I do not notice these smells in the environment often”. Although associated with the region, they were evaluated as less typical precisely due to the ephemeral nature of smells.

Other smells perceived as pronouncedly typical (5) during the daily walk include *the smell of a homemade soup, the smell of barbecue, the smell of a wooden boat taken out of the sea and the smell of the stone warmed by the sun*. Although the sound of a tractor was seen as a pronouncedly typical characteristic (probably taking into consideration the Dalmatian countryside), its *exhaust gasses* were, similar to that of other motor vehicles, evaluated as not particularly typical.



Figure 61: A fig tree growing next to a stone house
Slika 61: Ob kamniti hiši raste smokva

Tactile experiences

A total of 32 tactile sensations were recorded, out of which 31 were perceived as very and pronouncedly typical. Four experiences were perceived twice or more times (25 in total). Among these, sensations referring to the air characteristics prevail:

- **temperature** (*the heat, the warmth of the sun, the heat of the sun, the warm air*),
- **humidity** (*sultriness*),
- **air flow** (*a breeze, a wind, the streaming of hot air, a fresh wind from the land during the evening walk*).

Besides air temperature, *the strong heating sensation of the sun*, the unpleasant *burning and scorching sensation on the skin, the sun blazes down, the strong sun* and the like, resulting from a direct sun exposure, were perceived.

A light sea breeze provides refreshment on a hot day, as can be seen in comments of two of the participants:

“The breeze makes spending time at the beach even more beautiful.”

“It provides a pleasant cooling sensation on a hot day.”

On the other hand, a fresh wind coming from the mainland (i.e. the inland of the island) was evaluated as typical during the evening walk.

As typically Dalmatian characteristics only once were mentioned *parched grass tickling one's legs, sea salt prickling on your skin, a soft layer of pine needles on the ground and the cold stone* (in the shade), *the warm stone* and *mosquito bites* which were perceived during the evening walk.

Sultriness was evaluated as medium typical by one participant, explaining that it is “untypical at night”.

Compound experiences

Altogether 17 modally-combined experiences were recorded and all were evaluated as typical, with the exception of *a speedboat near the shore*. Three experiences (i.e. insects, the calm sea and siesta) were recorded more than once, while there are seven experiences that were mentioned only once. Tranquillity was recorded by five participants as: *tranquillity and silence*, which are often perceived together, *the calm sea* (Croatian: ‘bonaca’) – the stillness occurring mainly in the early morning and early evening, and *siesta* (Dalmatian: ‘fjaka’) and *midday desolation*, characteristic at approximately 13 o’clock in summer, when most people are in their homes because of the intense heat. Some of the comments were:

Siesta: “You can feel that this is a part of the day when people rest.”

Midday desolation: “Rare strollers.”

A *mosquito bite* is mentioned here as well, just like within tactile experiences, but a participant also mentioned its *buzzing*, which makes the experience both tactile and auditory. Similarly, several of the participants perceived various insects: *wasps and butterflies around grapes*, *butterflies*, *insects*, *lizards*, *wasps* and *flies*, in which experiences at least visual and auditory sensations were intertwined, if not tactile ones as well.

One participant mentioned swimming, which can indicate the connection between a current experience of the landscape and a previous or a potential one (i.e. the walk did not involve swimming but thinking about it).

While one participant evaluated *the passing of a ship* (visual, auditory) as pronouncedly typical, the other said that *speedboats near the shore* (visual, auditory) are moderately typical, but *ships at sea* in general as pronouncedly typical (5).

Gustatory experiences

During the Prvić-walks some of the participants tasted fruits that they picked along the way, so that a few gustatory experiences were recorded, and evaluated as pronouncedly typical (5): saltiness of the skin, freshly picked grapes, sweet figs from a tree and the feeling of thirst.

5.2.2.3 Location 3: Zadar – the Vitrenjak bay

In the Vitrenjak bay, in the western part of Zadar, there is a well-tended promenade, a sailing club, one of the city’s marinas, a dry dock and a beach, with a café (a one-storey building of the sailing club, with a large hospitality facility on the ground floor (Fig. 62)) and a playground adjoining it. Owing to a large number of facilities, this is a very lively

place, especially in summer. Regardless of where one stands, the sea, islands and the old city centre, situated on a peninsula, can be clearly seen.



Figure 62: The ground floor café overlooking the beach and the sea
Slika 62: Kavarnica v pritličju stavbe z razgledom na plažo in morje

Six persons, thereof three male and three female, aged 26 to 32, were gathered for the sensory walk on this location. Two of them had a university degree and four completed secondary education.

Site conditions data at the time of the walk

Date and time of the walk commencement: 18th August 2010, 18:00h
Meteorological data at 18:00h (CMHI, m. s. Zadar):

Temperature (°C)	26,2
Relative humidity (%)	49
Atmospheric pressure (hPa)	1011,6
Wind velocity (m/s)	02 NW
Weather conditions	Sunny, partly cloudy 5/10

Route description

The walk along the Vitrenjak bay started at the very starting point of the promenade adjoining the marina. Various Mediterranean plants grow by the stone-paved road – pine trees, the holm oak (*Q. ilex*), the oleander, the lavender, the cotton lavender (lat. *Santolina sp.*), etc. (Fig. 63).

The Vitrenjak bay is one of the city's common locations for leisurely walks, coffee drinking, socializing, children playing and recreational activities (cycling, rollerblading, jogging etc.) (Fig. 64). In the afternoon, when the walk took place, there were a lot of people there. The well-tended promenade leads to the building of the sailing club 'Uskok',

in which there is a hangar for sports sailing vessels, and the building on the ground floor of which there is a cafe overlooking the beach. From here, the participants walked to the dockyard, which was also lively with people strolling, repairing or renovating their ships and boats, calling out to each other and talking, ships coming into and leaving the marina, etc. The walk ended at the end of the dockyard (Fig. 65).



Figure 63: Low aromatic herbs (groundcovers)
Slika 63: Nizke aromatične rastline (prekrivajo tla)



Figure 64: The promenade as a place for relaxation and recreation
Slika 64: Sprehajalna pot kot prostor za sprostitev in rekreacijo

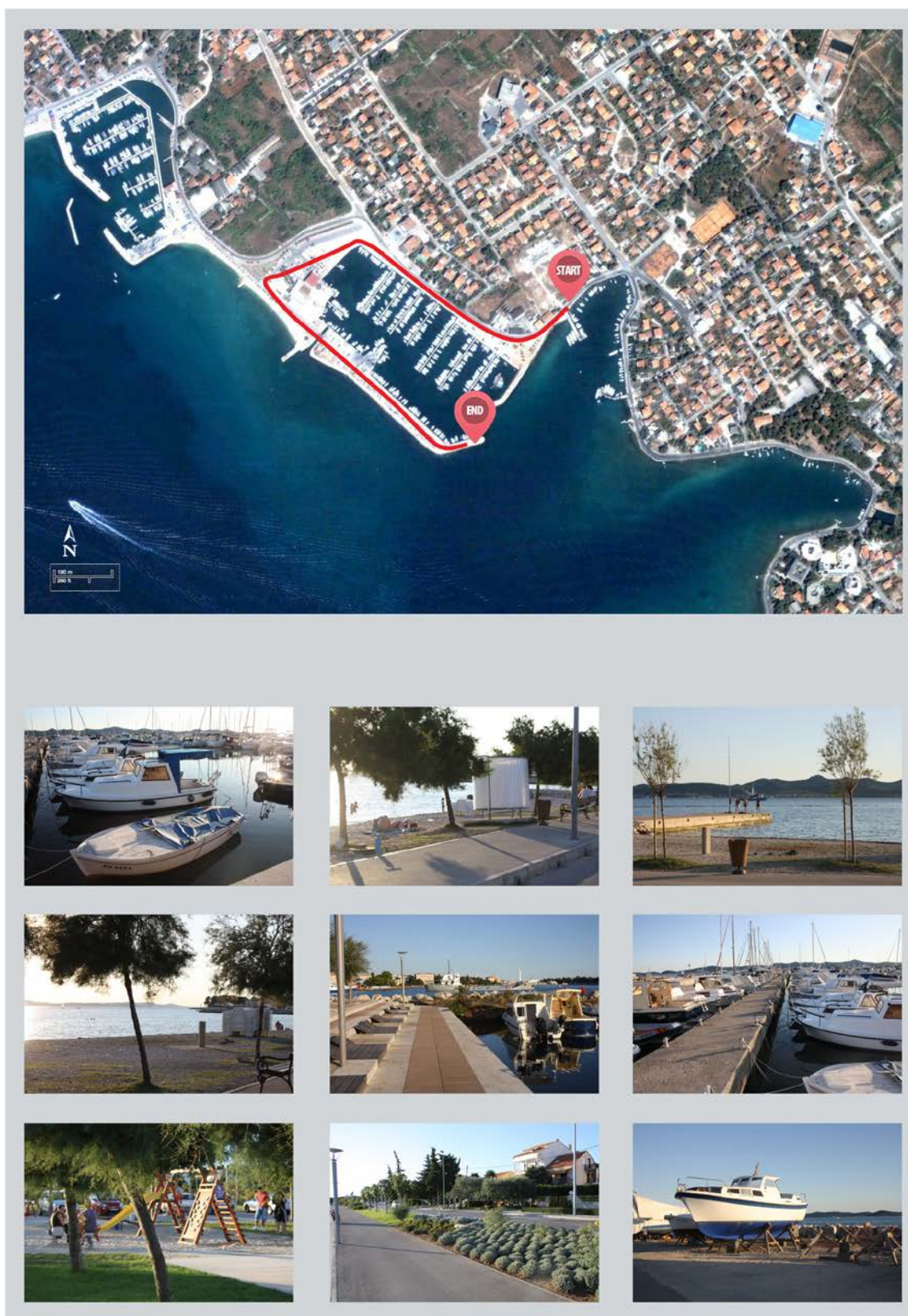


Figure 65: Location 3 – cartographic display and selected photos (the photographs were not taken on the day of the sensory walk)

Slika 65: Lokacija 3 – kartografski prikaz in izbrane fotografije (fotografije niso posnete na dan čutnega sprehoda)

Experiences from the Vitrenjak bay

Altogether 142 experiences within all modalities were recorded in the sensory walk on this location. The distinctiveness of Dalmatia is here perceived through many of characteristics recorded also during the two previous walks and evaluated as typical (values 4 and 5).

Visual characteristics

Visual perception was dominant here as well. There were 68 visual experiences, 53 of which were considered very and pronouncedly typical. Among these, 25 were mentioned once and 16 were repeated twice or more times. These especially include the following:

- **the sea** (*the sea, the sea is calming down, seaweed, the blue colour, the sun reflecting in the sea, fish in the sea*)
- **ships** such as *sailboats, boats, boats rolling, an old sunken ship, a trawler at dusk, ship ropes, a beautiful sailing ship, ships at dock, small boats in the marina are swaying, masts, a beautiful ship anchored at sea, ships in the shipyard*
- **Mediterranean vegetation**, perceived through single species such as *palm trees, fig trees, olive trees and pine trees by the promenade*,
- **people** (*tourists, a cyclist, a couple in love, people fishing*), and
- **seagulls**.

In addition to the above, *the grey stone* was seen as a typical visual characteristic of Dalmatian landscape as well as some vistas such as *the vista of the church tower*, which dominates in the view at the old town, *the view of islands* and *the vista of the old town*, for which a participant commented that it is “a typical Dalmatian scene”, elements of the marina – *a stone breakwater, a lighthouse and a ship crane*, and certain types of space such as *a well-tended promenade, a dockyard and a beach*.

Some of the abovementioned visual characteristics, such as *palm trees* (Fig. 66), were considered as moderately typical (3) by other participants, one of whom commented that “considering the climate, their number is small”, which indicates that the participant considered palm trees a typical characteristic and their absence unusual. Moreover, palm trees are an introduced and not an indigenous species in Dalmatia, so that some people consider them untypical of the region. However, since they became common in the 20th century, both at waterfronts, promenades by the sea, representative green areas and in private gardens, others consider them a distinguishing element of the Dalmatian environment.

Some scenes in the marina were evaluated as moderately typical – especially those referring to its dry areas: *speedboats in dry dock, dry dock, a forklift truck and the hangar of the sailing club*, on which the participants commented that it is “messy” and “a visual horror”, referring here to the working area which is, due to its specific function, less pleasant than other parts of the bay.

A *parasailer* was perceived by two participants and they evaluated it differently, one as not particularly typical (2) and the other as pronouncedly typical (5), but adding “I do not know if it is typical. Interesting . . .” Parasailing is a recreational activity which represents

a segment of tourism entertainment offers in some Dalmatian villages, towns and cities, so that parasailers can be described as both typical and not particularly typical.

The perception of *a rusty old boat* as an untypical vista was surprising at first, but such an evaluation can be explained through the following comment of a participant: “It can be seen rather rarely in the vast sea of new vessels”. Thus, it did not refer to the boat in general, but rather to its appearance in the context of modern times.



Figure 66: Palm trees by the promenade leading to the hangar of the sailing club
Slika 66: Palme ob sprehajalni poti, ki vodi do hangarja jadralnega kluba

Auditory experiences

A total of 39 sounds were recorded, 26 of which were categorized as typical (4 and 5). There are 21 distinct experiences, 9 of which were perceived by two or more participants. Most frequent sounds are those of:

- **ships** (*clanging of mast cables* (Fig. 67), *the sound of a ship engine*), and
- **people**, mostly in the form of *a murmur* coming from a café, *people talking*, *children shrieking*, but also *a foreign language* and ‘*beštimanje*’ (Dalmatian expression for swearing).

To pronouncedly typical auditory experiences belong also *seagull screech*, *the whirring of the wind* and *cicadas ceasing their chirping in the early evening*, with the note that this is “typical at the end of the summer”. The sound of cicadas, which is perceived as a noise sometimes, is a dominant one throughout summer, so that the silence caused by their disappearance at the end of summer is completely in contrast to the former and thus distinguishing auditory experiences. *The sound of summer footwear* (sandals or flip-flops), evaluated as moderately typical in the previous location, was evaluated here by two participants as pronouncedly typical.

The discrepancy in the perception of typical characteristics occurred within sounds related to dockyard – *the sounds of grinders, forklifts and metal tools* – which some of the participants considered moderately and other pronouncedly typical. The same was the case

with the sound of *the road traffic* and *music from the bar*. In the latter case, the difference might have arisen due to different aspects of music that were evaluated. A person might evaluate the typicality of its occurrence in general, the type of music (genre) or even its type in relation to the general atmosphere (context). Accordingly, the perception of typicality of music coming from hospitality facilities may vary considerably.



Figure 67: Masts of sailboats moored in the marina
Slika 67: Jambori jadrnica privezani v marini

Olfactory experiences

Nineteen smells were recorded in the Vitrenjak bay, five of which were repeated – altogether 12 times. Pronouncedly typical and repeatedly recorded were *the smell of the sea* and *the smell of pine trees*. To both of these one of the participants commented “Dalmatia”, thus emphasising that these experiences are typical of the region. Furthermore, distinctive Dalmatian smells included *the smell of a fish restaurant* by the promenade and *the smell of sunscreen*, to which the comment “summer” was added and which was evaluated as pronouncedly typical, just like on the Kolovare beach. There were plenty of Mediterranean plants along the promenade, and *the smell of oleander* was perceived:

“I’ve just found out the name of this fragrant flower. It smells beautifully!”,

as well as the smell of lavender, planted as a dense groundcover on a part of the promenade, to which it was commented that “there should be even more of it”. The smells of *fuel oil* and *motor oil* in the marina were perceived here as a very typical olfactory characteristic. Summer perfumes of passers-by that the participants came across on the promenade were perceived differently regarding their typicality. Again, it might have come to this because of the perspective; perfumes are worn all around the world, but the experience of perfumes among passers-by in the warm summer air for some participants represented a distinguishing olfactory, primarily summer, experience in Dalmatia.

Tactile experiences

Only 9 tactile experiences were recorded and all of them refer to sensations of temperature and air streaming. The heat was mentioned by one of the participants, and pleasant warmth of the afternoon sun and a light breeze (*mistral*) by several participants. As on other locations, distinguishing tactile experiences of Dalmatia include *the warmth* and *the heat*, *warmth of the sun*, and *mistral*, for which a participant added: “the wind blows almost all the time”.

Compound experiences

All of the seven recorded compound experiences in Vitrenjak bay differ from one another (i.e. none of them was perceived more than once). Among compound experiences, common are those comprised of visual and auditory perception, thus creating a specific impression. In this case these are: *two men fishing and talking*, *a man washing his boat* (the sound of water gushing listed in the table of auditory experiences is connected with this situation) and *people listening to a transistor radio* at the beach.

Leisurely walks imply a specific character of the ambience, experienced through multiple senses, as well as a relaxed state of mind of an individual experiencing it. In Dalmatia, such walks are not typical only in summer, but in winter as well, and can be associated with the specific Mediterranean relaxed pace of life.

Some experiences were recorded in a way that their modality was not clearly expressed. *Walking on beach shingles* triggers visual, auditory and tactile stimuli and was evaluated as moderately typical (3), just like in most cases on some other locations as well. This is understandable given that the gravel surfaces are no more typical of Dalmatia than of some other regions. For *waste containers* it can be assumed that they triggered olfactory sensations alongside the visual one, since the stench of waste was mentioned twice in the table of olfactory experiences.

One of the participants evaluated the multisensory experience of the sea *at the outer side of the breakwater* as pronouncedly typical (5), and added:

“The smell, the sound, the appearance, the touch and taste (I’ve tasted it).”

5.2.2.4 Location 4: Petrčane

Petrčane is a small village about 15 km northwest of Zadar, to which it administratively belongs. Being a tourist village on the coast, the number of residents rises in summer, due to both domestic and foreign visitors. However, the village is more oriented to family tourism, so that the atmosphere is more tranquil and relaxed.

The researcher and participants gathered on this location around 21:45 and the walk commenced at 22 o’clock. Seven participants were included in this walk, aged 22 to 35, four male and three female. Four participants had a university degree or a two-year degree and three completed secondary education.

Site conditions data at the time of the walk

Date and time of the walk commencement: 18th August 2010, 22:00h
Meteorological data at 22:00h (CMHI, m. s. Zadar):

Temperature (°C)	22
Relative humidity (%)	73
Atmospheric pressure (hPa)	1012,0
Wind velocity (m/s)	01 NNW
Weather conditions	Mostly clear, partly cloudy 2/10

Route description

The meeting point as well as the starting point for the sensory walk in Petrčane was a parking lot at the entrance to the village and in the immediate vicinity of the main beach. There was a beach café there, from which lights and music were coming as well as the murmur of people, so that it seemed lively. The participants and the researcher set off for the more tranquil part of the village (opposite to the centre). They took the road around the peninsula, which is often referred to as Pinija because of the dense pine forest. There is a hotel on the peninsula, bearing the same name, and associated sports and hospitality facilities. During the sensory walk there were not many people in this part of the village – just an occasional tourist strolling and young people hanging out at the beach. Having passed by the restaurant (Fig. 68), the route ran for the most part along the beach that had facilities such as a beach bar under the pine trees (which was empty at the time of the walk), a beach volleyball court and an amusement park for children. The participants took the road adjoining the hotel to return to the starting point (Fig. 69).



Figure 68: Terrace of tavern Pinija
Slika 68: Terasa konobe Pinija

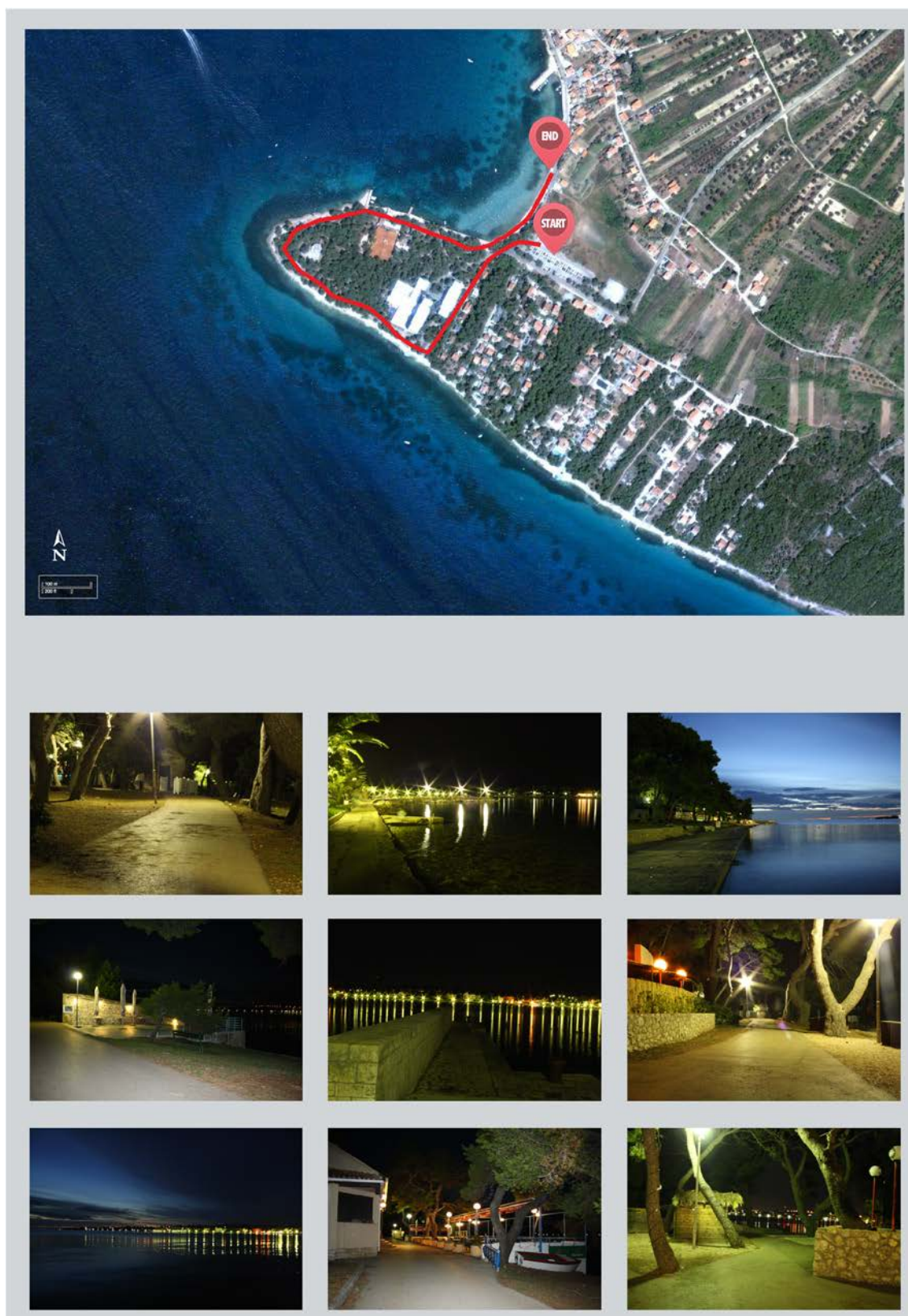


Figure 69: Location 4 – cartographic display and selected photos (the photographs were not taken on the day of the sensory walk)

Slika 69: Lokacija 4 – kartografski prikaz in izbrane fotografije (fotografije niso posnete na dan čutnega sprehoda)

Experiences from Petřčane

A total of 186 experiences was recorded during the sensory walk in Petřčane, most of which fall into the category of visual perception, which is followed by auditory perception. Taking into consideration that the walk took place in the late evening, the prevailing characteristics in all modalities are those of the night ambience of a Dalmatian village. The number of experiences that the participants in this walk recorded exceeded those on other locations. Some of these are given in the following passages.

Visual experiences

There were 84 visual experiences, 67 of which were evaluated as very or pronouncedly typical (4 and 5). Nineteen experiences were mentioned only once and 20 were recorded by two or more participants. Many of these may be classified into several common categories in which similar or commonly related motifs were repeated:

- **the sea** (*the view of the sea – the feeling of infinity, the dark open sea in the distance*),
- **the night sky** (*the moon, the moon shining, the clear sky and stars*),
- **the reflection of moonlight on the sea** (*the reflection of the moon on the sea, the moon swaying in the sea, waves shimmering in the moonlight*),
- **lights flickering in the night**, such as *lights at the waterfront in the distance, lights on the shore, lighting along the shore, lights at the waterfront, lights reflecting in the sea, lights on islands, the light of a lighthouse*)
- **vistas**, in addition to vistas of the aforementioned sea and islands in the distance, a view of *the old village in the distance* and a view of *the bay* (i.e. the old part of the village),
- **pine trees** (most of the route led through a pine forest by the sea) as individual trees or a forest (*thick tree crowns, pine trees and cones, pine trees, a pine forest, pine tree crowns resembling a cathedral vault*)
- **architecture** mostly referred to traditional stone elements such as *a church tower, the waterfront, a stone pier, old Dalmatian window shutters, an old little church and stone chapels*, but as typical were also evaluated *a lighthouse* and *vacation houses* (modern, newer edifices in the weekend cottage settlement),
- **ships** – a tourist boat was tied at the waterfront and three participants evaluated it as a typical Dalmatian motif,
- **the beach and associated facilities** (*the beach, the beach in the darkness, the rocks by the shore, the old stone, a beach volleyball net, changing booths, a beach shower, pedaloes on the shore, a bench by the sea, children's park at the beach, playing facilities for children, an empty beach bar, a beach bar under pine trees*).

Other characteristics evaluated as typically Dalmatian include *a rusty bollard, a bocce court* (bocce-playing is an old form of socializing in Dalmatia), *a signboard rent-a-boat on a stone wall, a Zimmer frei sign* (ger. rooms available) and *barrels in the beach bar*.

Pine trees in the beach bar, decorated with lights resembling holiday ones (Fig. 70), were regarded as untypical by most of the participants. One of the participants added:

“It is not Christmas, but it looks great.”



Figure 70: Beach bar under pine trees by the sea
Slika 70: Beach bar v borovem gozdu ob morju

Auditory experiences

Fifty sounds were recorded on this location. Eleven of these were mentioned only once and eleven repeatedly totalling to 39. Only 15 were evaluated as less typical of the region (1 to 3), which included primarily music coming from certain hospitality facilities, mainly that which was not local Dalmatian music or did not fit into the general atmosphere and the spatial and cultural context. So did the participants comment on for instance music coming from a tavern (2), music coming from a beach bar (1) and music coming from a restaurant (2) that:

“This is not local Dalmatian music”,

“This is some kind of Latino music”,

“This is house music. It’s irritating”.

One of the participants evaluated *the sound of an air conditioning unit* as moderately typical, probably due to the fact that it can be heard everywhere, so that it is common in Dalmatian villages as well.

The evaluation of a night owl’s (lat. *Otus scops*) hoot varied between moderately (3) and pronouncedly (5) typical, although one of the participants who evaluated it as moderately typical noted down: “I hear it every evening”. According to Dumbović (2013: 6), “it is more often in the Croatian littoral and rare in the continent.”

Most recorded sounds (35) were perceived as a recognizable characteristic of the region. These include the following sounds:

- **cicadas** and **crickets**,
- **ship** (*a small boat*),
- **the sea** (*a gentle lapping of the sea, the sea crushing against rocks, the murmur of waves on the beach, the murmur of the sea, bigger waves lapping after a boat passed*),
- **people** (*murmur of children's voices in the distance, children's laughter near the sea, tourists talking in English – a foreign language, a murmur – night conversations of people at the beach*), and
- **music** (*Dalmatian music, live music, music from the hotel, a Dalmatian song*).

Comments were made on sounds of cicadas and crickets, such as “it is nice to hear it”, “it is nice to hear them” and “they keep chirping”.

Sounds of the sea were generally perceived as relaxing:

The murmur of waves on the beach: “it is so relaxing”

The sea crashing against rocks: “There is nothing better for the soul than hearing the sea crashing against rocks.”

Those participants who recorded the sound of *tourists talking in English* noted that it is “typical for this time of the year”.

Notes made by participants reveal that two criteria influenced the perception of the typicality of music: (1) its indigenoussness (Dalmatian traditional and pop music) and (2) its integration into the ambience (non-Dalmatian or foreign music was sometimes also perceived as typical, for it creates, together with other characteristics, a typical summer ambience). An example for the latter is lounge music; it is embedded into the relaxing summer atmosphere, the time of vacations and hanging out in the open. According to the participants' notes, live Dalmatian music coming from the hotel terrace, evaluated as a recognizable characteristic of the region, was perceived as a common entertainment for tourists:

Live music for tourists:

“It's singing ‘Samo simpatija’” (a Dalmatian pop song)

A Dalmatian song ‘Samo simpatija’: “It evokes some good memories.”

A Dalmatian song: “Simpatija – M. Cetinić.”

Music coming from the hotel terrace: “classic tourist entertainment: Skitnica”. (A Dalmatian pop song)

Live music can be heard from the hotel terrace – a female voice is singing Dalmatian songs: “Entertainment for old married couples – discofox)”

Other interesting sounds classified as very or pronouncedly typical include *a church bell chiming 22 o'clock, pine needles crackling under the feet* and *the silence*.

Olfactory experiences

Almost all of the 20 smells recorded during this sensory walk were classified as typical of the region – 6 very and 13 pronouncedly typical. Six of them were mentioned once, and four by two or more participants (totalling to 14):

- **smells of the sea,**
- **smell of pine trees,**
- **smells of restaurant food** often identified as *grilled meat* or *grilled fish*,
- **unpleasant smells**, which include the stench of the *hotel's waste collector*, *a waste container* and *a scooter exhaust gases*.

One of the participants commented on the smell of food coming from hospitality facilities that “during summertime, tourism is at its peak”.

Further, the participants also considered the following smells distinguishing: *the scent of laurel, the smell of the soil and plants in the fresh air, the smell of pedaloes taken out of the sea* and *a women's perfume*, which was evaluated the same way on some other locations too, and here commented as “typical of summer evenings”.

Unpleasant smells coming from waste containers and sewer were recorded here as well, and mostly evaluated typical, thus indicating that many participants come across these often (at least in summer). One of the participants said that *the stench of the hotel's waste collector* was “unfortunately, typical”.

Tactile experiences

Out of 9 tactile experiences 8 were regarded as typical of Dalmatia (4 and 5). Those referring to temperature and air flow prevailed, and since the walk was conducted in the late evening, the participants perceived *a pleasant temperature* and *a breeze* (mentioned once) and *the fresh air* (freshness), which are typical of nights near the sea. Four persons observed the sense of a fresh evening; two of them associated it with the end of summer:

The air is fresh: “typical of the end of summer.”

The time for wearing warmer t-shirts is almost here: “Autumn is beautiful as well”.

It is interesting to note that three of seven participants described the softness experienced while *walking over a bed of fallen pine needles* and evaluated it as pronouncedly typical of Dalmatia.

Compound experiences

Out of 24 compound experiences recorded in this location, 9 were mentioned by one participant and 5 occurred repeatedly, totalling to 15. Several participants evaluated the

presence of people, mostly tourists from other parts of Croatia and from abroad, as a distinguishing characteristic of Dalmatia, especially in summer: *young people hanging out at the beach, tourists strolling* (talking in a foreign language), *children from Zagreb* (dialect of northern Croatia). These impressions include both visual and auditory perception.

There is yet another experience which most of the participants mentioned at least in one form – tranquillity, described as *stillness, serenity, a quiet atmosphere, silence and darkness, the overwhelming stillness, family atmosphere, romance, summer rolling by, quiet sea and calm sea*, with the comment “real summer”. Tranquillity implies, among other things, the absence of too loud, aggressive sounds and is often closely associated with silence:

Overwhelming stillness: “silence”.

The sense of tranquillity partly arises also due to fewer people, which one participant evaluated as untypical (1), commenting: “Location unused. Where’s the crowd?”

This additionally confirms that the crowd – an experience opposite to tranquillity – is an expected and typical ambient characteristic of Dalmatian towns and cities during summertime. The live atmosphere of the village, recorded by one of the participants, was perceived at the starting point of the sensory walk – closer to the village centre.

5.2.2.5 Location 5: Biograd

Biograd is a small Dalmatian coastal town with around 5500 inhabitants (Popis stanovništva..., 2013), strongly tourism-oriented in summer, so that it is crowded with visitors during the season, which creates a characteristic atmosphere. From the old town to the southeast, along the coast, there is a promenade, with shingle and sand beaches lying directly next to it, both set in a dense pine forest. Precisely this route (Fig. 71), in early evening hours, had been chosen for a sensory walk.

Five participants aged 26 to 30, three male and two female, took part in the walk. Three of them had a university degree and one a secondary education.

Site conditions data at the time of the walk

Date and time of the walk commencement: 19th August 2010, 20:00h
Meteorological data at 20:00h (CMHI, m. s. Zadar)⁸⁹:

Temperature (°C)	24,4
Relative humidity (%)	87
Atmospheric pressure (hPa)	1015,4
Wind velocity (m/s)	2 NNW
Weather conditions	Mostly clear, partly cloudy 3/10

⁸⁹ Zadar data were used here, for that meteorological station is closest to Biograd

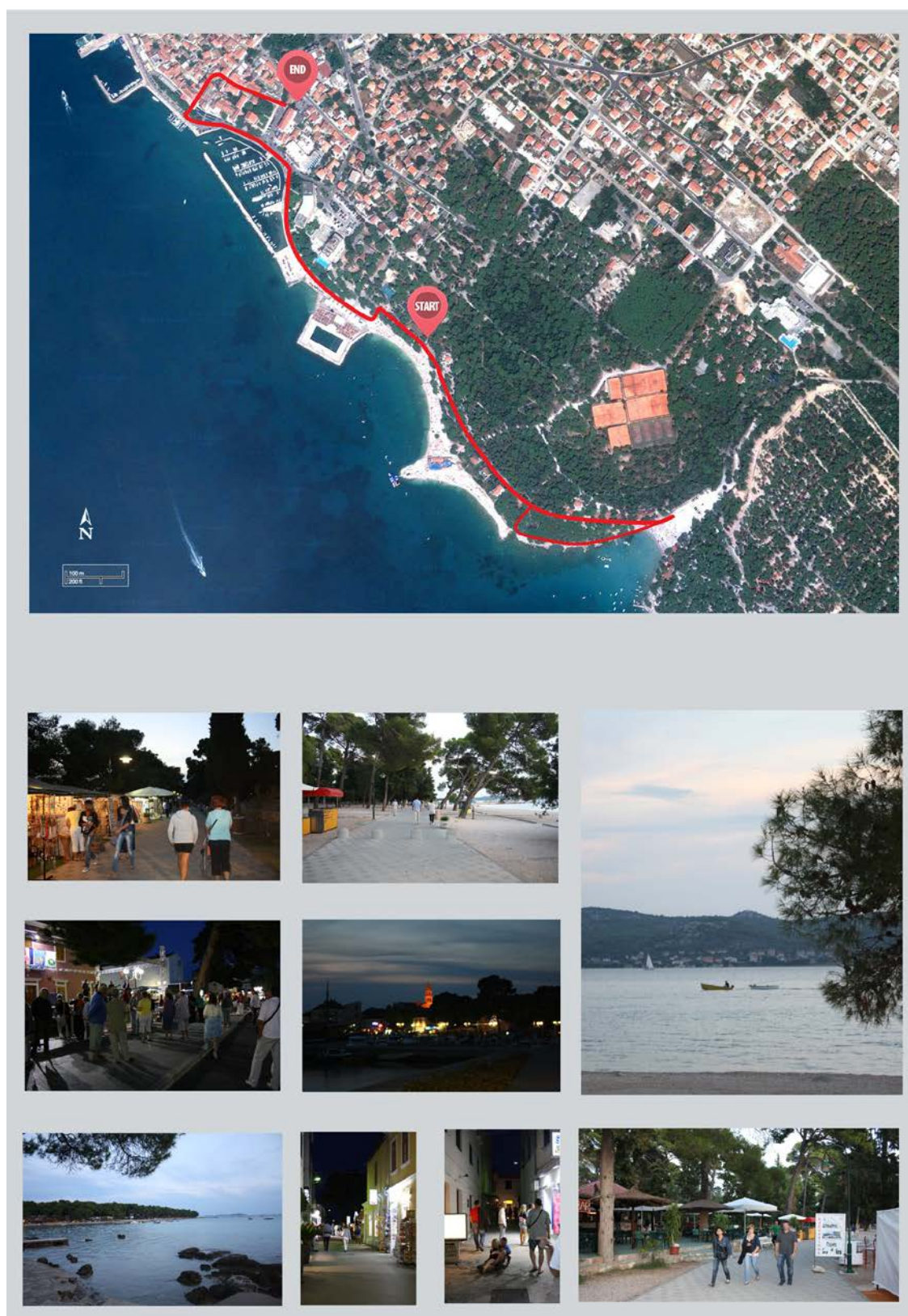


Figure 71: Location 5 – cartographic display and selected photos (the photographs were not taken on the day of the sensory walk)

Slika 71: Lokacija 5 – kartografski prikaz in izbrane fotografije (fotografije niso posnete na dan čutnega sprehoda)

Route description

The walk commenced at approximately the halfway of the promenade (at its connection point with the access road), from where it led to the sand beach Soline on southeast. The walk commenced at 20 o'clock, so that the twilight was already falling. This is the time between afternoon sea bathing (and other activities) and nightlife, so that the promenade was still not crowded with people. Various kinds of music were coming from nearby terraces of cafés, cocktail bars and restaurants. The promenade gave fine views of the sea, ships lying in anchor in the bay for the night and nearby islands. From the Soline bay, the group took again the promenade and headed for the town centre, then went down to the beach, which was here partially set in concrete. Through the pine forest it returned to the promenade, along which, as it approached the town, there were various stalls with domestic products, souvenirs and food (pancakes, corn and like). Here is where it became very lively. Further towards the centre there are hotels along the promenade on one side and a marina on the other. The promenade connects here to the waterfront with numerous cafés and restaurants, from which one can get into narrow streets in the heart of the town. After a brief passing through the crowded centre, the walk was ended on a nearby parking lot.

Experiences from Biograd

There were five participants in this walk, who recorded 177 experiences, most of which were visual (75) and auditory (54). Among olfactory, tactile and compound ones some interesting landscape characteristics occurred, which were not recorded in the first 4 locations.

Visual experiences

Seventy-five visual experiences were recorded in Biograd, 27 of which were mentioned by one person, and 15 by two or more (altogether 48). Sixty typical Dalmatian vistas (4 and 5), regardless of how many participants mentioned them, can be classified into following categories:

- **the sea** (*the clear sea, view of the open sea, rocks sticking out of the sea, rocks in the sea, a rocky seabed, the sea rippling at dusk*),
- **the moon reflecting in the sea**,
- **dusk and the night sky** (*the clear sky, dusk, sunset, colours of the sunset, Morning Star, stars in the sky, the moon*),
- **lights flickering in the night** (*the well-lighted promenade, the well-lighted hotel, the well-lighted church tower in the distance (Fig. 72), lights on islands, the reflection of street lighting in the sea, beach cafés starting to light up, ships with well-lighted masts*),
- **ships** (*a wooden ship in the distance, ships at sea, anchored ships in the bay, a ferryboat in the distance*),
- **Mediterranean vegetation** (*pine trees, bare pine tree roots, a dense holm-oak, pine tree and cypress forest, olive saplings*),
- **view of islands**,

- **the beach, promenade and supporting facilities** (*a beautiful promenade, benches along the promenade, stalls, cocktail bars along the promenade, a café with thatched umbrellas, a shingle beach, a beach shower, a beach toboggan, beach deck chairs, entertainment facilities in the sea*),
- **people** (*swimmers, night swimmers, people strolling*).

Some of the above elements were not evaluated as very or pronouncedly typical by some participants, such as *thatched umbrellas* on café terraces, *rustic lamps* and *stalls along the promenade* (Fig. 73). These belong to those ambiguous characteristics, the evaluation of which depends on the considered aspect – their presence might already be deeply rooted and thus typical, and the character itself (type and appearance) might not. Many associate thatched umbrellas (usually made of reeds and palm tree leaves) with images of tropical landscapes; as one of the participants noted: “an imitation of Hawaiian umbrellas in cafés”. Although they are often made of locally grown raw material (reed, which, as many do not know, grows abundantly and is even cultivated for this purpose in marsh areas of Dalmatia, such as the Neretva River Delta), these umbrellas might still be considered an untypical kind of shade. Prior to the intense development of tourism on Dalmatian coast, for shade were mostly used trees (often mulberry) and pergolas covered in climbing plants.



Figure 72: A well-lighted church tower
Slika 72: Osvetljeni zvonik

Another element influencing the assessment of typicality is the time and spatial context, which can be illustrated on the example of *the moon*. It was mostly evaluated as very typical Dalmatian scenery – probably seen in the context of a summer night by the sea. However, one participant evaluated it as moderately typical (3), probably thinking that the moon is not visible only in Dalmatia.

Since *the empty marina* was evaluated as not very typical (2), this suggests that one full of boats and ships is a typical vista. *Concrete hospitality facilities* (beach bars, cafés and restaurants) were evaluated as completely untypical (1), probably so as to point out the

contrast with traditional stone architecture, just like *concrete beach* (Fig. 74) stands in contrast with natural rock, shingle and sand shores.



Figure 73: Stands with products made of Dalmatian plants
Slika 73: Prodaja izdelkov iz dalmatinskega rastlinja



Figure 74: Concrete beach-path by the sea with the view of cafés in the bay
Slika 74: Betonirano kopališče-pot ob morju z razgledom na kavarnice v zalivu

Auditory experiences

Out of 54 recorded sounds, 13 were mentioned at least twice (their total sum is 46). Only 8 of the recorded sounds were mentioned just once. Very and pronouncedly typical auditory characteristics in Biograd (37 in total) include the following:

- **the sea** as *murmur of the sea* or *waves*, *strong crashing of waves* and *the sea crashing against the shore after a ship passes*, *beach shingles slithering*, *waves splashing against rocks*,
- **ships** (*the sound of a distant ship*, *the sound of a speedboat*, *the sound of a ship engine*, *a muffled sound of the ferryboat*),
- **people** – these include *the murmur on the promenade and the beach*, *foreign languages*, *children's laughter*,
- **sounds resulting from human activities** – in addition to *the sound of a volleyball ball* and *a swing*, even three of the participants perceived and evaluated as distinguishing *the sound of summer sandals*,
- **chirping of cicadas**,
- **twitter of birds**, and
- **music** coming from hospitality facilities along the promenade (Fig. 75).

Discrepancies regarding the typicality of characteristics arose mainly in the perception of music coming from bars near the promenade and the beach. A reason behind this might be that some of the participants evaluated the typicality of the type of music (the indigenoussness of Dalmatian music), while the other evaluated the typicality of the presence of music in the given spatial, time and cultural context. So it was possible to evaluate for instance modern foreign music coming from bars as either untypical (seen from the perspective of its indigenoussness) or as a common auditory characteristic of Dalmatian summer ambience.

Birds twittering, *murmur of people's voices on terraces* of hospitality facilities and *the sound of foreign languages* were identified by some of the participants as moderately typical, possibly because although they are common here, Dalmatia does not differ by them to such an extent from some other Croatian regions.



Figure 75: A café terrace by the promenade
Slika 75: Terasa kavarnice ob sprehajalni poti

Olfactory experiences

A total of 25 recorded olfactory experiences included 9 which were mentioned once and 6 twice or more often (totalling to 16). Twenty smells were identified as very and pronouncedly typical of the region. These can be divided into four groups:

- **the sea**, as *the smell of dry beach shingles, the smell of the sea, the smell of seaweed*,
- **cosmetics' smells** include *the smell of sunscreen* and *summer perfumes*, both of which were identified as distinguishing on other locations as well, and *the smell of Autan* (a mosquito repellent),
- **vegetation** – here the participants recorded *the smell of pine trees and cypresses* and *the smell of lavender* planted by the hotel, and
- **food**, especially *the smell of meat* and *grilled fish*.

The perception of other food smells, such as *the smell of pancakes* or *the smell of corn* coming from food stands, showed certain differences. Namely, some participants evaluated them as less typical, possibly because these are not perceived as food and dishes indigenous to Dalmatia. This suggests that food is seen as an integral aspect of landscape.

Next to *numerous summer perfumes* it was noted down that they are “Typical of evening walks.” Further, *the smell of the humid air* and *the smell of ships and boats at the waterfront* were evaluated as pronouncedly typical as well.

Tactile experiences

The participants recorded 11 tactile experiences. There were six distinct experiences, three of which were mentioned by just one participant and three were mentioned more than once (totalling to 8). Nine out of eleven experiences were evaluated as typical of Dalmatia (4 and 5). In contrast to previous sensory walks, during this one a few tactile sensations which referred to textures in the environment were recorded as well. *Soft grass* of the landscaped hotel garden was not recognized as a typical ‘touch’ in Dalmatia, but the feeling of *pine needles under the feet* and *the warm stone*, which one of the participants sat on, were described as very and pronouncedly typical Dalmatian characteristics.

Four out of five participants evaluated the sense of a *light evening mistral*, which brought freshness here and there, as well as the sense of *sultry air* at an early stage of the walk as pronouncedly typical.

Compound experiences

Twelve compound experiences recorded on this location include four distinct compound experiences, two of which were mentioned once and the other two repeatedly (their total sum is 10). Seven experiences were regarded pronouncedly typical. The largest part of the sensory walk route took place on the relatively long promenade by the beach and the sea. However, brief passing by the old centre of Biograd, which took place around 21 o'clock, at the very end of the walk, resulted in the perception and recording of multi-sensory, atmospheric spatial characteristics, most frequent of which is *a crowd* (Fig. 76). The

experience of crowd implies visual, auditory (conversations, murmur of voices, laughter, the sound of footwear, mobile phones, etc.), olfactory (perfumes, food, body smell, etc.) and tactile sensations (colliding with people) generated by moving through a large group of people.



Figure 76: Live music on the town waterfront
Slika 76: Glasba v živo na mestni rivieri

One of the participants, who noted down the experience of people *dancing at the terrace* to soft music, commented that it is not usual nowadays anymore and added: “there should be more of this, just like in good old days”. This shows that summer dances at terraces are perceived as a characteristic of Dalmatian identity once typical and nowadays outdated.

5.2.2.6 Location 6: Zadar – Old city centre (Peninsula)

The sixth sensory walk was conducted on the Zadar peninsula, the historical heart of the city. Although formed already in Roman times, due to its frequent destruction in the course of various wars throughout history, especially during the World War II, relatively few stone houses have been preserved in the old city. However, a characteristic street layout and a large part of city walls have been preserved, and in time, a number of typically Mediterranean urban environments were shaped, which have been changing up to the present day at a slow pace, in accordance with the lifestyle and the needs of the society. Some of these were included in this walk, taken at a summer Saturday morning – a usual time for locals to do the things they do not manage to do over the week (shopping, meeting and hanging out with friends, drinking coffee), while tourists do sightseeing tours over the city, both generating a very lively atmosphere.

Seven people took part in the walk, two male and five female, aged 22 to 35, five with a university degree, a student and one with secondary education completed.

Site conditions data at the time of the walk

Date and time of the walk commencement: 28th August 2010, 09:30h
Meteorological data at 09:30h (CMHI, m. s. Zadar):

Temperature (°C)	26,5
Relative humidity (%)	70
Atmospheric pressure (hPa)	1005,6
Wind velocity (m/s)	2 ESE
Weather conditions	sunny, partly cloudy 3/10

Route description

The city harbour, near the bridge on the Zadar peninsula, was chosen as the meeting point. Participants, joined by the researcher, started the sensory walk along the harbour waterfront, at which fishing and tourist boats were tied (Fig. 77). At 9:30 in the morning the temperature was already around 27 °C, so that it was warm, even hot. The group then headed for the ferryboat dock, just at the time when automobiles were embarking. Having entered the city walls, they headed for the already very lively city market and fish market. They then strolled down city streets, which were still not full with tourists and local inhabitants, and headed for the south waterfront, which is arranged as a park and a promenade by the sea, with a distinguishing holm oak (*Q. ilex*) alley and flower beds. The view of the sea, ships and boats and islands across dominates in the area. Passing by the classicistic building of the former hotel 'Zagreb', on the ground floor of which there is a restaurant with a terrace facing the sea, the participants turned to the south-eastern part of the waterfront, where there are another two classicist buildings (from the late 19th and early 20th century). There were a few swimmers at the waterfront. The last part of the route included walking through the wharf Foša, where small ships and boats are moored. In it, enclosed in stone walls, there is a well-known fish restaurant 'Foša'. Having left the wharf, the group ended the sensory walk (Fig. 78).



Figure 77: Ships tied at the city harbour
Slika 77: Privezane ladje v mestni luki

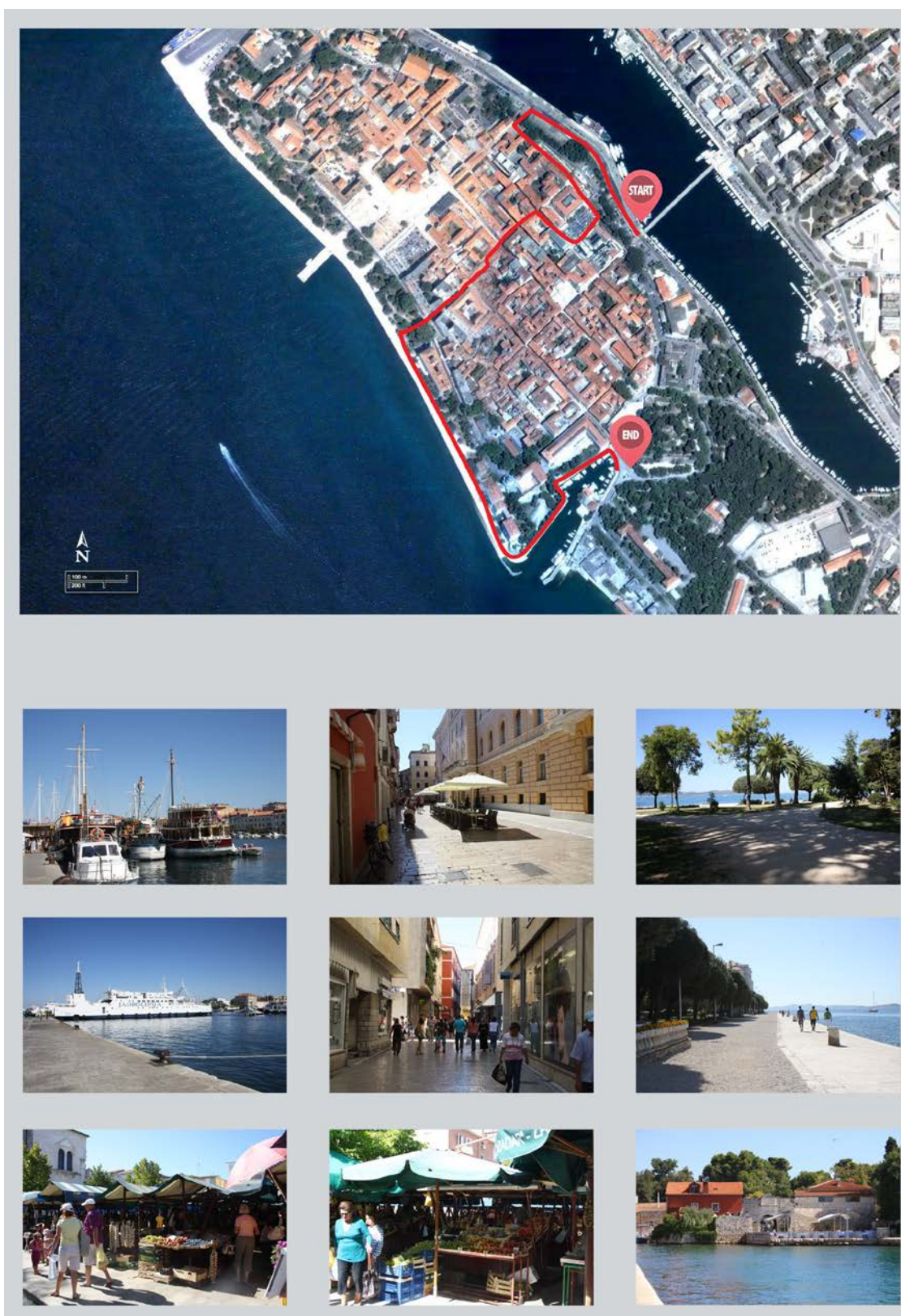


Figure 78: Location 6 – cartographic display and selected photos (the photographs were not taken on the day of the sensory walk)

Slika 78: Lokacija 6 – kartografski prikaz in izbrane fotografije (fotografije niso posnete na dan čutnega sprehoda)

Experiences from the old city centre (Zadar Peninsula)

The number of experiences recorded within this sensory walk amounted to 185, most of which were visual. The number of auditory and olfactory was equal, while the number of tactile and compound ones was the lowest.

Visual experiences

Visual perception included various motifs. There were altogether 82 experiences, 18 of which were recorded by more than one participant (totalling to 55), and 27 were mentioned once. Sixty-one of these were evaluated as typical and they can be grouped into several types of characteristics:

- **ships** (various types of ships – *ferryboats at open sea, ships at sea, small rowboats in the harbour, yachts in the harbour, fishing boats (trawlers) in the harbour*)
- **city architecture** (*city walls, stone-paved streets, Mediterranean-style buildings, an old little church, court building (Palace of Justice), a restaurant at the Foša wharf – an edifice with a stone-paved terrace*)
- **people** have a significant role here as well, and were perceived as *tourists' groups, swimmers at the waterfront, people sitting and looking at the sea, strollers with children and a fisher fishing*, to which it was noted down:
“Typical during evening hours by the waterfront.” (Although the walk took place in the morning!)
- **Mediterranean vegetation** described in terms such as *the verdure, holm-oak alleys and the forest on city walls* (Fig. 79), *the verdure, holm-oak alleys and flowers at the waterfront, palm trees, agave on the city walls, flowers on balconies, flowers*,
- **vistas of the sea** (*the sea, clear sea, sea at the waterfront that is clear, grey mullets in the sea*),
- **some vistas** such as *the vista of the waterfront, vista from the waterfront and a view of islands*,
- **scenes of a Dalmatian city**, where a *café by the sea, café terraces in narrow streets, the market with scenes of stalls, food and colourful fruit and vegetables, a ferryboat dock with the scene of automobiles embarking and disembarking, shop windows in the city*.

Interestingly, four out of seven participants perceived muddy, dirty or oily sea in the harbour. Three participants evaluated it as not particularly typical (2) or moderately typical (3) and one participant as very typical (4). This can be considered, in the sense of typicality evaluation, as one of those ambiguous characteristics as well. It can be assumed that, while some participants saw dirty sea as not so typical of Dalmatia, one participant perceived the typical dirtiness of the sea in harbours in general (since the sea water moves less and there are a lot of boats and ships on a relatively small area, the sea is always dirtier in harbours than out of them). The assumption can be supported by a participant's comment, who evaluated the oily, dirty sea in the harbour as moderately typical (3):

“This is typical of town and city harbours, but not of the sea in general.”

Just like on the previous location, certain experiences were differently evaluated. So were *swimmers at the waterfront, the verdure at the waterfront, holm oaks, flowers on the city walls* and *balconies with flowers* evaluated as moderately typical by some participants and by others as recognizable motifs.



Figure 79: Holm-oak alley on city walls
Slika 79: Drevored črničevja na obzidju

Some incidentally noticed details, such as *graffiti on walls, a banana tree, ground lights, a building damaged in war* were evaluated as not particularly typical (2) of Dalmatia. The statue of Spiridion Brusina⁹⁰ at the waterfront is a motif characteristic exclusively of Zadar (Fig. 80), so that it was accordingly evaluated as untypical (1) and moderately typical (3).



Figure 80: Statue of S. Brusina
Slika 80: Skulptura S. Brusine

⁹⁰ A Croatian zoologist (1845 – 1908) born in Zadar

A comment made by one participant illustrates visual and auditory characteristics of the location it is situated on:

“Spiridon Brusina – always at the same place, looking at and listening to the sea.”

Auditory experiences

A total of 39 auditory experiences were perceived, seven of which were mentioned once and 10 were recorded by more than one participant (totalling to 32). Even 35 experiences were evaluated as very (4) and pronouncedly (5) typical. They can be categorized into several groups of similar sounds and many of them occurred repeatedly (in various forms and by different participants):

- **chirping of cicadas**,
- **the sea** (*the sea crashing against the waterfront, splashing of the sea against boat flanks* (Fig. 81), *gurgling of the sea at the waterfront, splashing of the sea against the rocks, the murmur of the sea combined with a soft music coming from a hotel terrace, crashing of the sea against tied boats*),
- **ships**, regarding which were recorded the sound of *ships in general, the sound of a speedboat, the sound of a ship engine, of a ferryboat engine, the sound of a yacht in the distance* at sea were recorded,
- **sounds of people**, perceived as *a murmur, laughter, conversation of people on a ship, conversation of swimmers* (elderly ladies) at the waterfront,
- **sounds generated by people's activities**, such as *the sound of nylon bags at the market, clanging of dishes coming from a restaurant, the sound of riding a bicycle over shingles*, and the repeatedly mentioned *sound of automobiles disembarking from a ferryboat* in the Zadar harbour, and
- **birds chirping**, that was evaluated twice as pronouncedly typical.



Figure 81: Boats tied in the Foša wharf
Slika 81: Ladje, privezane v luki Foša

Only four sounds were seen as less typical of Dalmatia (in columns 1 and 3), among which it is interesting to mention the sound of summer footwear sliding over the ground (sandals).

During the sensory walk over the old centre of Zadar, on the list of very or pronouncedly typical sounds, many identical sounds or sounds of the same type as in the previous location (Biograd) were repeated: cicadas, the sea, birds, people, people's activities.

Olfactory experiences

Thirty-five olfactory experiences were recorded in the city centre, most of which (23) were classified as very and pronouncedly distinguishing smells of Dalmatia. Only three smells were mentioned once, and 10 by at least two participants (totalling to 32). The walk commenced in the city ferryboat and fishing harbour, continued over the market and fish market through city streets, so that the highest number of smells were perceived and recorded in the first segment. Most frequently mentioned smells are those of:

- **docking area**, around which the participants perceived *smells of wooden fishing boats, a mixed smell of fish, the sea and fuel oil, the smell of fuel oil*,
- **fish markets** (*unpleasant smell of fish, smell of fish market in general*)
- **markets** (Fig. 82), represented generally through *smells at the market or the smell of fresh fruit and vegetables, the smell of peaches and watermelons*, and
- **the sea**.



Figure 82: Fresh fruit and vegetables at the market
Slika 82: Sveže sadje in zelenjava na tržnici

Although mentioned only once, *the smell of coffee from a café and the smell of food from a restaurant* were evaluated as pronouncedly typical. Smells of other food sensed throughout the city were mostly evaluated as untypical (*the smell of kebab*) or moderately typical, such as *the smell of roasted meat* (this probably also refers to an untypical smell which one participant associated with kebab), *the smell of cheese at the market, the smell of bread*,

smells from a bakery and *smells from a fast-food diner and a bakery*, to which the following was commented:

“Mostly in summer months, not always”

As an olfactory characteristic of the region, *the scent of marigolds (Tagetes sp.)*, planted in flowerbeds at the waterfront (Fig. 83) was perceived twice and evaluated differently by two participants. This summer flower of a specific intense scent is frequently found in flowerbeds in Dalmatia.

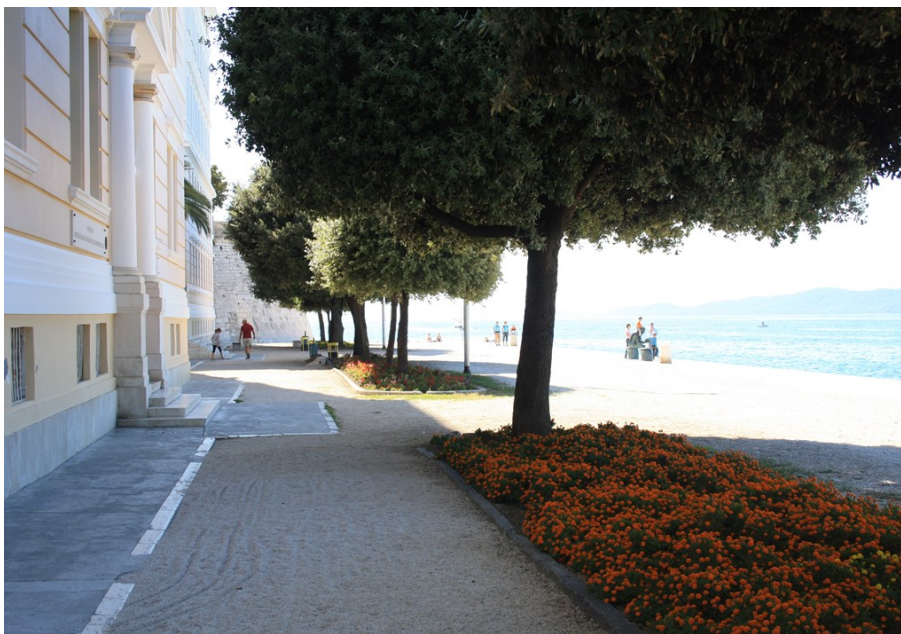


Figure 83: Marigold beds in front of University of Zadar, Faculty of Philosophy
Slika 83: Grečice s žametnicami pred stavbo Filozofske fakultete

The aforementioned *smells around the docking area*, mostly evaluated as typical, were however evaluated by two participants as rather untypical (1 and 2) and unpleasant. They might have intended to emphasise that the stench sensed in harbours is not a typical smell of the sea in Dalmatia. Similarly, the unpleasant smell of *sewer* and *waste* was evaluated by only one participant as pronouncedly typical. Namely, due to high summer temperatures and increased number of people, both tourists and local people, waste containers are often filled faster than usual, which sometimes causes very unpleasant smells.

Tactile experiences

Only 12 tactile experiences were recorded on this location. When compared to olfactory and auditory experiences, and especially visual ones, their number is considerably lower. Only three sensations can be distinguished here, all of which are related to the air – *the heat* or *the strong sun*, and *the breeze* and *the shade*, which are generally perceived as refreshment. All the three were mentioned by at least two participants. Eleven experiences were evaluated as typical of the region. Only one participant evaluated the breeze through the city streets as moderately typical (3).

Other kinds of tactile experiences, such as ground textures, were not recorded independently but are partly included in the category of compound experiences.

Compound experiences

Participants recorded 18 multi-sensory experiences on the Zadar peninsula – six of these occurred once and three more than once (with the total sum of 12). All but one were evaluated as typical (4 and 5). Two experiences were the most prominent and illustrate the specific atmosphere of certain city parts: *morning calm sea* and *stillness* on one hand and *crowd* and *murmur of people's voices* on the other. Since the walk was conducted in the morning, one can sense the city waking up, especially in places such as the city waterfront and in certain city streets. In contrast to that, the market and the fish market, the docking area and sightseeing spots were already filled with people and their activities at this time of the day.

Clean city streets, which potentially include a visual, olfactory and tactile experience, were evaluated as a very typical characteristic of Dalmatian towns and cities. Figs fallen down on the ground in the Foša wharf, sticking to the footwear, are both a visual and a tactile experience, here evaluated as pronouncedly typical. Just like a fig tree, this a common experience in Dalmatia, especially in areas where fig trees grow by footpaths.

5.2.2.7 Location 7: Vodice

Vodice, just like Biograd, is a smaller Dalmatian town with around 9000 inhabitants (Popis stanovništva..., 2013), situated in the north-western part of Šibenik-Knin County. In the last 20 years it has developed into one of the leading tourist resorts in the region, focused during the season on relaxation and entertainment. A large number of visitors and everyday tourist activities create a vibrant summer atmosphere, characteristic of many, especially coastal, Dalmatian towns and cities, so that Vodice were a good choice for a sensory walk.

Five persons aged 28 to 30 participated in the sensory walk, three male and two female. Three of them had a university degree and two completed secondary education.

Site conditions data at the time of the walk

Date and time of the walk commencement: 5th September 2010, 17:00h
Meteorological data at 17:00h (CMHI, m. s. Šibenik):

Temperature (°C)	26,5
Relative humidity (%)	43
Atmospheric pressure (hPa)	1005,8
Wind velocity (m/s)	2 SSW
Weather conditions	sunny, mostly cloudy 8/10

Route description

The sensory walk in Vodice started in the south-eastern part of the town – at the beach in front of the hotel ‘Olympia’. This is an area with hotels, apartments and campsites by the sea, and a number of supporting sports, entertainment and hospitality facilities. At the time of the sensory walk there were many people on the beach, as well as at the terrace of a nearby café (Fig. 84). Participants took the concrete-paved promenade-beach towards the town centre (Fig. 85). On the way they passed by the large town marina, then across the lively market and through a street along which there were many café terraces. It was lively also in the town centre; the atmosphere was created by stone houses with wooden window shutters, a promenade by the waterfront, along which there were shop windows and stands with domestic products and souvenirs, cafés and restaurants. The marina, full of boats, the sea and islands, which are very close to the mainland, were visible from the waterfront. The walk was continued through narrow stone-paved streets of the town centre, with set restaurant tables here and there. The end point of the sensory walk was the square in front of the main town church – a stone edifice with a conspicuous church tower.



Figure 84: Participants started noting down experiences in front of a café terrace at the beach

Slika 84: Beleženje doživetij se je začelo pred teraso kavarne na plaži



Figure 85: Location 7 – cartographic display and selected photos (the photographs were taken on the day of the sensory walk)
Slika 85: Lokacija 2 – kartografski prikaz in izbrane fotografije (fotografije so posnete na dan čutnega sprehoda)

Experiences from Vodice

Five participants recorded 172 experiences in Vodice, more than a half of which are visual (95). Compared to other locations, the number of auditory experiences was lower.

Visual experiences

As in other locations, visual experiences were most numerous in Vodice as well. Out of total 95 visual experiences, 37 were mentioned once and 20 at least twice (with the total sum of 58). Fifty-six experiences were evaluated as very (4) and pronouncedly (5) typical Dalmatian characteristics. They can be classified into categories similar to those in previous sensory walks:

- **people** (*an old man sitting on a bench, an old woman with a headscarf in front of a house, an old man in an undershirt, swimmers at the beach, swimmers in the sea, tourists sunbathing, tanned girls, tourists returning from the beach, a passer-by eating ice-cream*),
- **ships** (*boats at sea, ships rolling, ships in the harbour, marina full of boats and ships* (Fig. 86), *a speedboat in the distance, masts, fishing nets on boats, crates with fishing nets, ships and boats in dry dock, a ship crane*)
- **architecture**, in the context of which elements such as *stone pavement, narrow 'kalas' (Dalmatian expression for narrow stone-paved streets) with stone houses, narrow streets, green window shutters or grille, a stone church, the stone-paved waterfront*),
- **scenes of a Dalmatian town/city**, which include *well-tended gardens, stone benches, shingles in flower beds (cultivated flower beds), a stone monument, narrow streets with stands, stands selling postcards, stands selling souvenirs, café terraces, a stand selling dried figs, a stand selling Travarica (a herb brandy) and other domestic products, a stand selling coral jewellery (indigenous jewellery made of corals from the island of Zlarin), ice cream shops' windows*,
- **Mediterranean vegetation** (*palm trees, palm trees along the promenade, tamarisks, pine trees, olive trees, flowers along the promenade*).

The evaluation of *palm trees* varied here as well as on some previous locations. Whereas some considered them a common and distinguishing element of Dalmatian landscape, the others saw it as a not so typical tree in these environmental conditions. Similarly, *cultivated flower beds* are a common element of the urban landscape of towns, but seen from the aspect of summer drought, lush flower beds can be considered an exception (a rarity and thus not very typical).

In terms of typicality, opinions on certain elements of the urban environment and facilities such as *stands, an ice-cream parlour, advertising billboards and restaurant terraces in narrow streets* of the town (Fig. 87) differed. For restaurants' terraces in narrow streets one participant commented that he "[saw] them as untypical". This could be grounded in the fact that the number of restaurant terraces in narrow streets of old Dalmatian quarters (*varoš* in Dalmatian) has increased over the last decade or two.



Figure 86: ACI Marina Vodic
Slika 86: ACI Marina Vodic

The evaluations of the *concrete-paved shore*, which is both a beach and a promenade (Fig. 88), were opposed (2 and 5), so that it can again be assumed that participants looked at it from a different perspectives. One perspective suggests the contrast to various natural beaches and the other a man-made waterfront as a common element of a Dalmatian settlement (village or a town) by the sea. *Concrete-overbuilding on the coast* refers probably to the usual meaning of the term – excessive construction of vacation houses and other buildings in the coastal zone, and was evaluated as not particularly typical (2).

Opinions on the typicality of individual elements of contemporary architecture differed. Namely, architecture of the last few decades has been marked by diverse styles regarding design and the choice of material, which has in effect often meant impairing the aesthetics of an area. This architectural ‘disorder’, partially resulting from an intense, often uncontrolled and undirected construction of vacation houses (the so-called ‘apartmanisation’) over the last decades, can be observed in many Dalmatian cities, towns and villages.

Ill-fitting (ugly) hotel façades, unsightly façades, pink façade, ill-fittingly renovated old houses, kitschy fences, an old building at the entrance to the town, signs Zimmer frei and the like represented for some participants an already common and therefore typical scene, while other considered them untypical and unacceptable and in stark contrast with the traditional stone architecture.



Figure 87: Restaurants in narrow little streets
Slika 87: Restavracije v ozkih ulicah



Figure 88: Concrete-paved beach-promenade by the sea; two participants noting down their experiences

Slika 88: Betonirano kopališče-sprehajalna pot ob morju; dva udeleženca beležita doživetja

Auditory experiences

Not many auditory experiences were recorded. However, out of the total 28 experiences, only a few were evaluated as less distinguishing and significant for Dalmatia, while all the other (24) were seen as very and pronouncedly typical auditory experiences. Four auditory experiences were mentioned more than once (totalling to 15) and 13 were recorded only once. Sounds evaluated as typically Dalmatian correspond with ones on some of the previous locations and include:

- **the sea** (*the murmur and splashing of waves, waves splashing against the waterfront, the sea gently splashing against boats and ships in the harbour*),
- **ships** (*the sound of a ship engine, ship engine*),
- **people**, in which context again *the murmur of swimmers, the laughter and screaming of children, pensioners chattering* (Dalmatian: *ćakulanje*), *the vernacular* as well as *foreign languages* were perceived, and
- **Dalmatian music**, considered typical by several participants (*a Dalmatian song coming from a café, an old song about the sea*).

Further, typical auditory characteristics include for instance *a crow cawing* and *bees buzzing near the water*. *Screeching of seagulls, the sound of wind* and *clanging of dishes from a restaurant* were each mentioned once, but were identified and evaluated as typical of the region on at least one of the previous locations as well.

Olfactory experiences

A total of 20 smells was recorded, 8 of which occurred once and five twice or more often (totalling to 12). Fifteen of them were evaluated as typical of the region (4 and 5). The sensory walk in Vodice was, in olfactory sense, marked by various smells of food, most of which were evaluated as typical of a Dalmatia. These include for instance: *smell of grilled meat and fish, smells from a fish restaurant* (Fig. 89, Fig. 90), *smell of ice cream* around numerous ice-cream shops, and even *the smell of pancakes*, which some of the participants in the Biograd-walk evaluated as typical (4 or 5) as well.



Figure 89: Restaurant terraces directly at the waterfront; dried figs and tomatoes offered at a restaurant entrance

Slika 89: Terasa restavracije so neposredno na rivieri: ponudba suhih smokev in paradižnika na vhodu

Smells of some foodstuffs and dishes were evaluated as less typical (1 to 3). So was for instance the *smell of kebab*, just like in the old city centre of Zadar, seen as a not particularly typical olfactory feature. There came to differences in the perception of the

smell of pizza, assumedly due to the already mentioned reasons (the context) – it is not an indigenous Dalmatian dish, but it has become a common element in Dalmatian cuisine, so that the perception thereof may vary in terms of typicality.

Other very and pronouncedly typical smells include *the smell of Santolina* (lat. *Santolina sp.*), richly planted in one of the town's green areas, which reminded a participant to a "smell of oregano", and the smell of *ships (oil, plastics), sunscreen and perfumes of passers-by*, just like on some other locations.



Figure 90: A tavern in a narrow street
Slika 90: Konoba v ozki ulici

Tactile experiences

Tactile sensations of temperature, humidity and air streaming were those that prevailed in this sensory walk as well. Among these interesting are *humidity resulting from sirocco* and *sultriness, warmth or heat, shade and breeze or wind*, in the context of which a participant commented: "there's always some wind", thus suggesting that the presence of wind by the sea is typical. Six distinct experiences were each mentioned more than once (totalling to 13) and considered pronouncedly typical. However, two of the participants recorded *smooth, timeworn stone-paved streets* in the old heart of the town, and evaluated them as a pronouncedly typical tactile characteristic of Dalmatia. *Old stone pavement*, made of rounded stone blocks, was twice recorded as a pronouncedly typical (Fig. 91). Described as "bumpy", it is primarily a tactile experience, but it also includes aspects of the sense of balance (equilibrioception), so that it can be seen as a compound experience as well.



Figure 91: Smooth and uneven old stone pavement
Slika 91: Gladki in neravni starinski kamniti tlakovci

Compound experiences

There were 10 distinct compound experiences, all of which were recorded only once and include a potential and probable combination of several sensations. Seven was evaluated as typical (4 and 5) and three as moderately typical (3).

Tamarisks in mistral and *a jet ski riding along the shore* imply both visual and auditory perception.

Tourist crowd, a pleasant walk, drinking coffee at leisure and *the narrowness of streets (kale in Dalmatian)*, which illustrate elements of the town's ambience experienced through visual, auditory, olfactory and tactile sensations, were also considered distinguishing characteristics (Fig. 92).

The experience of *wind standstill* is interesting, for it may imply the perception of the absence of an auditory and tactile stimulus that a wind causes, as well as visual perception in the form of vegetation and some other structures, such as flags, sunshades, beach umbrellas and alike, standing still.



Figure 92: Café terraces and stands in narrow streets are a part of the town's atmosphere

Slika 92: Terasse kavarnic in stojnice v ozkih ulicah so del atmosfere mesta

Gustatory experiences

There were a few stands with domestic products such as dried figs, oil and herb brandy along the chosen route. One of the participants recorded *the taste of herb brandy (Travarica)* and evaluated it as pronouncedly typical, however not based on direct tasting thereof but on their previous experience of the brandy's taste.

5.2.3 Summary of the results of sensory walk

Visual experiences were, as expected, most numerous, somewhat rarer were auditory, and olfactory, tactile and compound experiences were even more rare (Fig. 93). Due to the nature of the method and available resources, gustatory experiences were not researched here, although five were recorded.

Most experiences were evaluated as pronouncedly typical of the region (Fig. 94), with very (4) and pronouncedly (5) typical experiences prevailing in all modalities (Fig. 95). Since the assessment was carried out in Dalmatia, this is understandable, and may also be an indication that the chosen locations represent the researched region well. Such a large share of typical characteristics might have resulted from the fact that, directly at site, space is not a sum of characteristics but a result of their interaction at a given moment (they emphasise, conceal and overlap one another), whereat the overall ambience influences the perception and evaluation of an individual characteristic.

The relation of typical (4 and 5) to other (1 to 3) experiences is almost equal in three most frequently recorded categories (visual, auditory and olfactory). It is therefore safe to say that these experiences, regardless of their number, equally participated in the perception of the identity. Moreover, the share of typical characteristics is somewhat higher in non-visual

categories, which may indicate that visual perception, although being the most numerous one, is not proportionally dominant in the shaping of landscape identity.

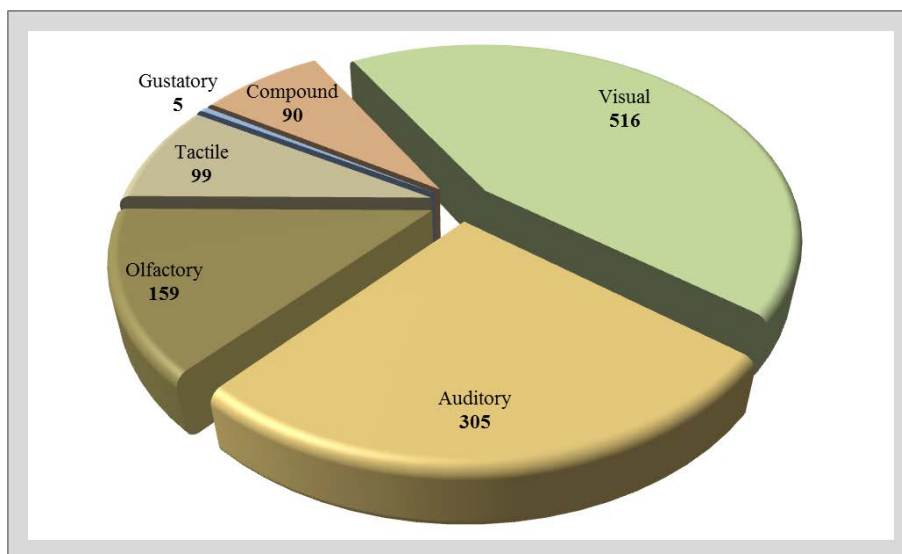


Figure 93: Share of individual perceptual modalities in the entire research
 Slika 93: Delež vsake zaznavne modalitete v celotnem raziskovanju

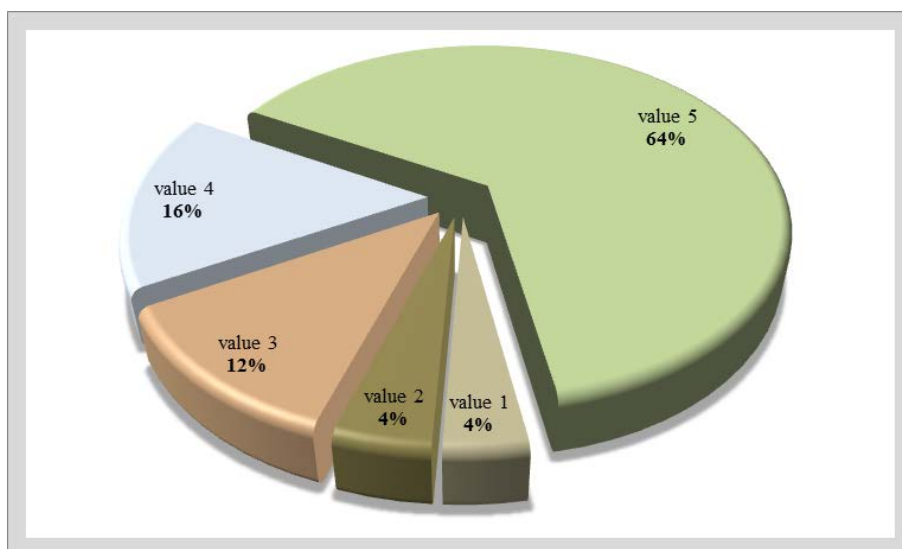


Figure 94: Shares of individual values in total experiences
 Slika 94: Delež posamezne ocene v celotnih doživetjih

It is, however, important to note that not all of the characteristics having the value 4 and 5 are necessarily characteristics of the landscape identity of Dalmatia. Some of them have proven to be distinguishing characteristics of Dalmatia through other two methods as well. However, besides characteristics which Dalmatia is usually associated with, participants evaluated some less distinguishing spatial characteristics as typical as well, since they are a part of their everyday living space and experience. So were for instance the starry sky and the sound of traffic evaluated as both typical and untypical of the region, and both is correct. Such characteristics are typical because of their omnipresence and they may be potential elements of the identity (Tab. 4).

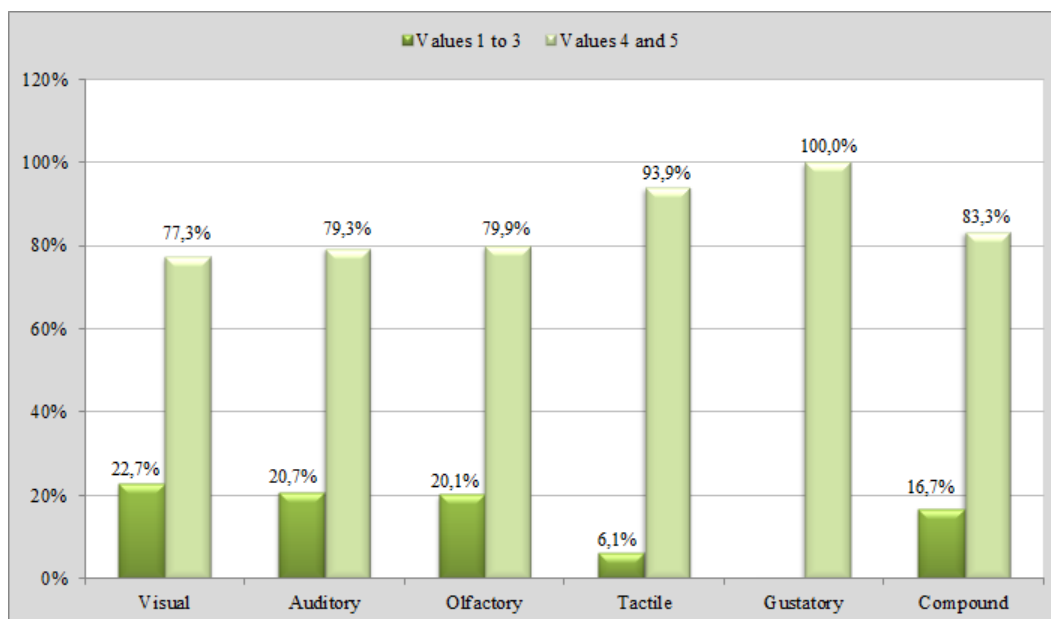


Figure 95: Shares of characteristics perceived as typical (4 and 5) and non- or less typical (1 to 3) of Dalmatia

Slika 95: Razmerje značilnosti, ki so zaznane kot prepoznavne (4 in 5) in manj ali sploh ne prepoznavne (1 do 3) za Dalmacijo

Thus, interpretation has shown that the concept of typicality is ambiguous. Various participants, and sometimes even same participants but in different situations, interpreted and applied the concept differently. The concept of typicality is context-dependant, for something is always seen as typical *in relation to* something else (same or different time, place, etc.). Further, typicality may arise from quantity (number, frequency of occurrence) or exceptionality (rarity, uniqueness) (Kučan, 1996: 26), which has also been manifested in this analysis.

Table 4: Less distinguishing characteristics of Dalmatia evaluated as typical (4 and 5)
 Preglednica 4: Manj prepoznavna dalmatinska značilnosti vrednotena kot tipična (4 in 5)

Visual
<ul style="list-style-type: none"> – Beach facilities (cafés, changing booths, volleyball courts, etc.), and equipment (beach umbrellas, pedaloes, deck chairs, etc.) – clear sky – during the day, at dusk, at night (moonlight, stars) – Lights flickering in the night – the reflection of lighting in the sea, lighthouse lights, mast lights, etc. – Urban ambiances – restaurant and café terraces, food stands, stands selling souvenirs, domestic products etc., windows of ice-cream parlours and pastry shops – Parasailing – Signs such as <i>rent-a-boat</i> and <i>Zimmer frei</i>
Auditory
<ul style="list-style-type: none"> – Vernacular (local dialect) – Foreign languages – Sound of summer footwear sliding over the ground (flip-flops, sandals) – Dishes clanging in houses and restaurants – Sound of wind

- continued -

- continuation of Table 4 -

Olfactory

- Smell of sunscreen
- Smell of summer perfumes
- Smell of the sea in harbours (a mix of fuel oil, motor oil and the sea)
- Stench of damp
- Smell of ice cream around ice-cream parlours

Tactile

- A soft bed of pine needles
 - Stone (warm and cold)
 - Smooth, timeworn and uneven stone pavement
 - Mosquito bites
-

In addition to compound experiences, some landscape elements are also sources of sensory experiences in more than one modality, so that multiple characteristics of the identity arise from them (Tab. 5).

Table 5: Characteristics that can be a source of two or more modally different experiences and identity properties

Preglednica 5: Značilnosti, ki so vir več modalno različnih doživetij in značilnosti identitete

Landscape feature	visual	auditory	olfactory	tactile	gustatory
The sea					
The sun					
Ships and boats					
Mediterranean vegetation					
Seagulls					
Stone					
Church towers					
People					
Insects (mosquitos, bees, wasps)					
Markets and fish markets					

5.2.4 Discussion of the sensory walk

The results of the sensory walks have shown that there was a considerable agreement in the evaluation of typicality of a large number of recorded landscape characteristics among participants in all seven sensory walks. Further, many of the characteristics were perceived on several or even all locations, while others were specific of a particular location and time of visit.

5.2.4.1 Comparison with similar studies

Since sensory walks were never before used for the researches into a landscape identity, there are no similar previous studies with which the results of these sensory walks could be compared. Sensory walks conducted thus far in the scientific context have been mostly directed to the identification of sensory properties of space, but not to their evaluation as characteristics of a place identity. However, such information may also be useful in terms of putting the results obtained here into a broader perspective.

An example thereof is a study conducted by Henshaw et al. (2010) on the role of smells in designing sustainable urban areas, the results of which are built upon smellwalks in Doncaster, a town in northern England. Fifty-two participants took part in the research over a larger period of time (the winter and spring-summer of 2009). Smells perceived in the course of these walks were classified into categories, some of which correspond to smells recorded within this research. These include:

- smells of food (fruit and vegetable at markets, the smell of a fish market, smells around restaurants and fast food restaurant, the smell of coffee from a café, etc.),
- smells of nature, which in their study encompassed smells of vegetation, fresh air and water surfaces,
- smells of people (perfumes, body smells, etc.),
- exhaust gases of the traffic, and
- waste – stench of waste bins, containers, and in their study additionally occurred the smell of urine, faeces, waste products, etc.

Similarly, during walks conducted by Degen and Rose (2012: 3278), smells of food – “chips, hot dogs and onions” – were regarded by one participant as an element of the identity of Bedford.

A characteristic smell of low tide – of wet stones, seaweed etc, which were recorded by several participants in the research, have also been described by Vannini et al. (2010: 343) in an article based on introspective and evocative writing: “On a windy day the oyster-ish aroma of the low tide can be smelled all the way from the edges of the cedar-, fir-, and hemlock-rich forests”

Smells of Mediterranean plants, both individual species and a characteristic mix of their scents, were perceived as an olfactory characteristic in the course of the sensory walks, but their diversity depended on a particular ambience. In providing examples of smells characteristically found on islands, Dann and Jacobsen (2002: 219), citing Hartley (2001), mentioned “the Croatian territory of Hvar where one may take ‘an olfactory tour through the famous lavender fields, which permanently perfume the air and cover the hillsides with a soft haze’”. Smells of aromatic herbs (rosemary, myrtle, strawberry tree, heather) were also described by T.G. Jackson in his 1887 travelogue *Dalmatia, the Quarnero and Istria*, and these smells are “still to be found in any walk in the Dalmatian hills just beyond the built-up settlements.” (Wild Bićanić, 2006: 128).

Another interesting research is that on typical characteristics of soundscapes in the countryside region Tongshiao Town, Miaoli County on Taiwan, conducted by Lee and Lu (2010). Although they did not utilise the sensory walk method, they gathered visual and auditory data on site with recording pens and digital cameras. In so doing, some specific sounds of the region were identified, which the researchers divided into three groups as three aspects of the region's soundscapes. Within each, there are some sounds similar to those perceived in the course of the sensory walks within this research:

- 1 Soundscape of social actors encompasses sounds of people – in this case tourists, their children playing, peddlers as well as birds and insects.

- 2 Soundscape of space includes sounds of natural and artificial structures in space. Sounds of the sea (the ocean), the wind, mountain streams and tree crowns were identified in the region.
- 3 Soundscape of activities includes sounds of people's and other activities, sounds of social interaction. Recorded sounds include sounds of traffic, tourists walking, walking on cobbled roads, sounds of spinning windmills, mobile phone loudspeakers, mowers, etc.

A similar categorization of recorded sounds – into natural, mechanical and sounds of people – was given by Yu and Kang (2010) in their study on factors influencing the sound preference in urban open spaces, as well as by Watts and Pheasant (2013) in their study on factors influencing the tranquillity of the countryside in England, in the course of which participants evaluated vistas, sounds and the sense of tranquillity on site. Sounds recorded within the seven sensory walks conducted for the purpose of this doctoral thesis can be allocated to these three broad categories as well. Results of such studies can be used as additional guidelines in the classification of environmental sounds.

The analysis into the seven sensory walks shows that several participants mentioned tranquillity, often combined with silence (probably in terms of absence of loud and intrusive sounds and presence of quiet and natural ones). In the aforementioned study, Watts and Pheasant (2013: 1101) proved that the sense of tranquillity is interconnected with sounds: "Factors that promoted tranquillity were the presence of vegetation, low levels of man-made sounds and dominance of natural sounds."

Another typical sound recorded during the sensory walks in Dalmatia was the sound of foreign languages. Similarly, for participants in walks by Degen and Rose (2012) numerous foreign languages characterised a part of Bedford.

5.2.4.2 The role of previous experience in the evaluation of typicality

Evaluation of typicality of spatial characteristics is relative, so that the context in which a characteristic is observed – space and time – plays an important role in it. In other words, previous experiences and recollections of a particular or some other place shape one's attitude towards the typicality of a place's characteristic. The influence of previous experiences upon expectations, experiencing and evaluation of a place was emphasised in several studies in which sensory walk has been utilised, such as for instance smellwalks by Henshaw et al. (2009), soundwalks by Davies et al. (2013), and multi-sensory walks by Degen and Rose (2012). Degen and Rose elaborate thoroughly that recollection and previous experience mediate a current experience. Interviews with participants of sensory walks (or 'walk-alongs', as they call them) suggest three roles of previous experience in the experiencing of a place:

- 1 Comparison of a place with regard to time (i.e. how it was earlier)
- 2 Comparison of a place with other places (i.e. how it is elsewhere)
- 3 Dulling the intensity of sensory qualities (i.e. a sort of adaptation to a familiar place)

In the results of this research particularly the first two have been manifested, explicitly or implicitly. During the analysis of data it was observed that the evaluation of one and the same characteristic considerably varied as per participant sometimes. It may be assumed from some of the comments they made that the differences have arisen due to different perspectives taken on the concept of typicality (i.e. typical in relation to what?). Palm trees are a good example thereof. Seen from the perspective of visual presence, they have become a common sight along Dalmatian coast, so that some participants considered them typical. However, in the context of the species' belonging to this part of the Mediterranean, they are not typical. Duško Kečkemet, a Croatian art historian of Dalmatian origin, has written:

Our Dalmatia is on the Mediterranean, however not on its southern but northern, Adriatic shores. The climate and horticulture of our area are completely different from the southern ones. In it, other trees are grown, pine trees, cypresses, olive trees, but not palm trees. . . .

No matter how much our southern plant might be appreciated, cherished or sang about, the palm tree was very exotic and rare plant until very recently, never planted in public areas, but here and there in private "*dardins*" (Dalmatian for gardens). . . .

Waterfronts and piers of our coastal cities and towns were regularly planted with mulberry trees until the twenties of the last century. Mulberries grew quickly, provided a pleasant shade in summer with their lush crowns, and in winter, bare and cropped, sunlight and warmth (Kečkemet, 2013).

On the Split waterfront, Kečkemet (2013) explains, mulberry trees were cut down and palm trees planted between 1920 and 1927, and it was only after World War II that waterfronts of other cities, town and villages along the Dalmatian coast faced the same fate.

Consequently, it is possible that palm trees were considered untypical of Dalmatia, in comparison to another time (before the beginning of the 20th century) or another space (southern Mediterranean). At the same time, some of the participants accepted palm trees as an already distinguishing element of Dalmatian landscape, which is also correct. Even Kečkemet (2013) further claims: "Old Split waterfront is characterised by its palm trees, so that it is already hard to imagine it without them, especially nowadays, after a whole century," Music and architecture respectively were likewise evaluated. To certain participants, Dalmatian music (traditional or popular) was an auditory (music) characteristic of Dalmatia, while others saw even modern foreign music as an auditory characteristic of the lively summer ambience in Dalmatia. Traditional stone architecture was generally evaluated as typical, but even newer, contemporary architecture (characterised mostly by a mix of styles and details) was seen by several participants as a typical, though often in a negative sense, phenomenon, which occurred as a result of excessive and uncontrolled constructing. In Vodice, a participant made a negative comment on the new trend of placing restaurant tables out onto narrow town streets: "A negative stimulus! I see it as untypical." The aforementioned examples suggest that recollection or prior knowledge of the region influenced the evaluation of typicality during the course of sensory walks.

In addition to the comparison in the context of time, it has been observed that the context of space affected the evaluation of some other characteristics of Dalmatia. Typicality was observed here, it seems, in relation to other parts of Croatia, but not in relation to other Mediterranean regions and countries. So was for instance the sound of ships and boats, which cannot be heard in most of the other Croatian regions, mostly evaluated as typical (very and pronouncedly). However, the sound of ships and boats is undoubtedly distinguishing in coastal regions of other countries such as Italy, Greece or Spain as well, and is therefore not limited in this sense to Dalmatia. On the other hand, the sounds of people walking over shingles and that of automobile traffic, which are not distinctively Dalmatian but can be found in other Croatian regions as well, were mostly evaluated as moderately or less typical. It can be assumed that participants did not compare the landscape of Dalmatia with other coastal Mediterranean areas but with other Croatian regions.

5.2.4.3 Advantages, shortcomings and possible improvements to the method

It may be said that the sensory walk method devised in this manner has proven to be an appropriate tool for a research into characteristics of landscape identity. An evaluation based on Likert scale with 5 degrees has allowed an insight into the perception of typicality of individual experiences for Dalmatia and thus into existing and potential characteristics of the region's identity. The method's appropriateness is further confirmed through the fact that the gained results largely correspond with those of the questionnaire.

The advantage of sensory walk over the other two methods has been manifested in the possibility of identifying and evaluating those landscape characteristics of identity which are available from an immediate contact with landscape and which would otherwise be more difficult to discern through a questionnaire, content analysis or other methods that require retrospection and evoking past experiences.

However, some aspects have not been taken into consideration during the research process due to limitations in resources or possibilities, and some additional aspects have been observed that should be taken into account in future research. The aspects are presented in the following nine items.

- 1 The here presented sensory walks were conducted only in summer. The observed region is situated in the temperate zone, in which four seasons alternate, so that the landscape is different in each season. Consequently, in such areas the method should be utilized seasonally, through all four seasons equally. Henshaw et al. (2009) have investigated urban smellscape in the winter (January-March) and spring (April-July) period. Kang and Zhang (2010), in the second phase of their study into factors that characterise soundscapes of open urban spaces, questioned participants on two chosen locations in the periods autumn-winter and spring-summer. Through such an approach, specific spatial characteristics and their variations in a certain period might be identified, which could accordingly be utilized in the promotion of the region or even in the elimination of undesirable landscape characteristics. For the same reason it is preferable to carry out the method at different times of day, just like in this thesis' research as well as in that by

Henshaw et al., and under various weather conditions, as far as the safety and comfort of participants allows it.

- 2 Although demographic data regarding age, gender and education have been recorded within the research, they are given only on an informative basis. Some studies suggest that there are differences in the perception, evaluation and preferences as to spatial characteristics, and that these differences depend on demographic as well as socio-cultural factors (Kang and Zhang, 2010; Swanwick, 2009; Yu and Kang, 2010) or, as Henshaw et al. (2010) observed in the investigation into urban smellscape, even physical conditions of an individual (e.g. hunger, sickness, pregnancy, etc.).
- 3 A place one lives and originates from might be a factor causing differences in the perception of characteristics of landscape identity. Over time and through everyday interaction with a place, a certain relationship between people and the place is created, so that participants in a research who have been living in a chosen research area or lived there for a certain period of time might have a different perception of what makes up the identity of that area and what does not. In contrast to visitors, they have previous experience and are emotionally attached to the place. Partiality caused by such familiarity has been noticed by Herzog et al. (2000) during their research into preferences for natural landscapes of Australia, which, as they point out, corresponds with results of other researches into landscape preferences. They have observed “the greater liking for Australian landscapes by Australians as compared to Americans. A variation on this theme was the greater overall preference by Australian aboriginal students compared to other Australian students.” (Herzog et al., 2000: 342). They explain the latter with a probably closer connection of Aborigines with the Australian landscape. Swanwick (2009) also emphasises a significant influence of familiarity, a place one grows up and lives in, on attitudes towards landscape.

Yet another aspect of familiarity has been identified by Degen and Rose (2012) in their study based on the walk-along method. Their results have shown that people who regularly dwell in a certain place develop a sort of sensory adaptation to its characteristics – ‘dulling’, as they called it. Being adapted to a place, involved into everyday and repetitive activities in it, causes a reduced attention to sensory characteristics, which is associated with the phenomenon of perceptual taking-for-grantedness that Seamon (2012a) suggests. Such a sensory adaptation has been described by Pavličić (2012) in a text on olfactory differences between Croatian south and north, both spatial and experiential ones:

Smells are not an equally significant factor in the life of people in the north and in the south. To sum things up, northerners think and talk about smells more than southerners. This is however a direct consequence of the difference in intensity and continuity that was mentioned earlier. Namely, since they are surrounded by strong smells everywhere and always, southerners do not pay attention to them. Northerners on the other hand come across smells occasionally and dramatically, so that they feel the need to mull over them

Thus, familiarity is a paradoxical phenomenon in the experiencing of space, for it, at the same time, implies a good understanding of its characteristics and their variations but sometimes a lack of attention towards them as well. The lack of attention has not been observed in the seven sensory walks within this research, probably due to the fact that the participants' task was different here. Namely, they were asked to direct their attention to perceiving landscape through all senses. In Degen and Rose's (2012: 3275) study, the researchers accompanied participants in their daily activities and chores in chosen towns and the participants were asked to "comment on anything they found noteworthy in their use of the town."

Due to the above, the participation of following groups in a sensory walk would prove beneficial:

- locals who live in the research area,
 - people who do not live there but were born and might have lived there for a certain period of time (e.g. during the childhood, youth, etc.)
 - occasional visitors, and
 - those visiting it for the first time.
- 4 The conception of landscape identity might vary between laymen and experts such as acoustic, olfactory, tactile and gustatory experts, in terms of their trained ability to perceive certain types of stimuli – sounds, smells, textures or tastes. So could for instance experts in acoustics perceive a larger number of sounds. Yong Jeon et al. (2011) have investigated the perception of urban soundscapes through surveying the users of the place and also through a soundwalk with a group of acoustic experts. Results have shown that, for the acousticians, the sound pressure level affected the overall impression of soundscapes, while the correlation of these parameters was not statistically significant in the case of the place's users. A possible reason behind this, they say, is that acousticians possess higher noise sensitivity and that they, being experts in the field, are able to compare differences in the sound pressure level among locations along the route.

People with sensory and physical impairments also sometimes develop a higher sensitivity in a certain (other) sensory area, which enhances their understanding of the environment and way-finding in it, studies show (Gardiner and Perkins, 2005).

Further, in the evaluation of typicality of landscape characteristics, experts (as opposed to laymen) may be represented by persons engaged in space planning, design and management or tourism marketing and branding. Their specific educational background and work experience might additionally affect the perspective with regard to the typicality of spatial characteristics. The results of the smellwalks conducted by Henshaw et al. (2009), in which experts in various fields participated, have shown that professional orientation is reflected in experiences and their interpretation.

- 5 During the interpretation of gathered data the researcher has been confronted with the problem of understanding some of the recorded experiences as well as typicality values ascribed to them. Additional comments that participants made (which were optional) have sometimes proven to be crucial for the complete understanding of experiences.

Therefore, the idea of conducting interviews during or after a sensory walk (Degen and Rose, 2012; Henshaw et al., 2009), of a subsequent discussion within the group, the focus groups (Davies et al., 2013) or of writing a retrospective text (Rubidge and Stones, 2009) arises as a sensible and valuable continuation to sensory walk that should be incorporated into future researches. For instance, Henshaw et al. reported that half-structured interviews, conducted alongside sensory walks, have allowed a co-production of knowledge about urban smellscape between the participants and the researcher. In this case, such conversations would allow pondering about the experienced, arguing participants' experiences and given values, resolving potential participants' dilemmas during evaluation and accordingly, (depending on participants' attitude towards it) perhaps a revision of typicality values.

- 6 Five perceptual modalities, as well compound experiences as the sixth category, have been researched within this study. Such an approach was taken for two reasons, first of which is the possibility of gaining an insight into a share of an individual modality in the perception of space. Secondly, it was assumed that observing with all senses resembles observing in everyday situations, unlike with sensory walks in which the emphasis lies on observing with one sense only. Rubidge and Stones (2009) concluded that the focus of attention affects perception largely. They suggested that focusing the attention to one modality might result in a more detailed perception within it, while focusing the attention to more senses simultaneously might decrease the number of perceived details within a modality. Although perception through one sense cannot be isolated, in the proper sense of the word, from the overall experience, for perception is, according to Gibson (1966), a dynamic and continuous cooperation process among all sensory systems, 'mono-sensory' walks might be beneficial for more detailed researches into individual sensory dimensions. Results of each of these might be used as a separate layer within overall place identity (visual, auditory, etc.). This approach has been taken by Rubidge and Stones. However, in a research into a region's identity it would require more time, human and financial resources than multi-sensory walks.
- 7 Experiencing is subject to a constant interaction of sensory systems, which can, within this research, primarily be observed in tables given for compound experiences. In some cases it was difficult to classify experiences, for they were not modally defined. For instance 'a seagull' can mean that a participant saw it, heard it or both. Although non-visual experiences were mostly clearly described, it would be useful in any future utilisations of sensory walk to draw participants' attention to the significance of the clear articulation of experiences.
- 8 In the case of relatively large regional areas, systematic and thorough researches into sensory landscape characteristics through sensory walk require the selection of an appropriate number of different locations which represent the region (depending on the size of a region). In addition, the method should be conducted in the form of a longitudinal study – over a longer period of time – in order to ensure a greater likelihood of recording various ephemeral non-visual phenomena which are not always present or noticeable in space during a sensory walk.

- 9 Henshaw et al. (2009) have emphasised a potential influence of the researcher upon results of (smell)walks. Factors of the research planning phase, such as pre-determination of the route and familiarisation of participants with it, have partially shaped both expectations and answers of some participants. In this sense, the method, they believe, has an epistemological shift away from objective observation, but still provides useful insights into non-visual landscape components. However, within the research for this thesis, participants were not made familiar with the route prior to sensory walks or with the purpose of sensory walks, but were only told to record their experiences during the course of the walk and evaluate them on a scale from 1 to 5 in terms of their typicality of the region. It is assumed that this approach would (though not entirely) eliminate a large part of the influence a researcher has upon final results, especially together with selecting a larger number of routes and at different times of visits to locations.

5.3 CONTENT ANALYSIS OF LYRIC POEMS AND PROMOTIONAL MATERIALS

Within the selected contents, the subjects of analysis were sensory experiences of Dalmatian landscape and region. The scope of the analysis however did not include undersea and cave landscapes. Since Dalmatia is rich in these, the undersea and caves are sometimes, especially in tourism materials, described as a destination's attraction. It is precisely these landscapes that are the alluring factor for some visitors and which represent a distinctive aspect, enriching the experience of a place. A visit to the Great Barrier Reef has nowadays been considered incomplete should one not dive into it, Pocock (2012) says. "This is sometimes the first and only time they will dare to immerse themselves in the ocean. They float, taste salt and hear underwater sounds as completely new experiences." (Pocock, 2012: 246).

Nevertheless, only a relatively small number of people come across such kinds of landscape. An average person is not familiar with sensory characteristics of such environments and mostly does not think of a landscape in these terms. Thus, the analysis aims at investigating 'on land' landscape experiences.

Although it is primarily considered as a qualitative research method, the advantage of integrating qualitative with quantitative approach to content analysis is often emphasized (Halmi, 1996; Mišetić, 2004; Tkalac Verčič et al., 2011). In this research, the qualitative aspect of the method focuses on the identification of spatial characteristics that shape the social perception of Dalmatia and act as landscape symbols of the region. The main goal was, however, the quantitative measurement: the ratio between perceptual modalities in experiencing and presenting Dalmatia. Another goal was to examine the proportion between various characteristics (or types of characteristics) structuring the visual, auditory, olfactory, tactile and gustatory perception of Dalmatia.

5.3.1 Selection of materials for the analysis

The analysis comprised two types of written artefacts wherein the Dalmatian landscape is a common theme: 1) lyric poetry and 2) promotional materials. Only textual elements within the mentioned groups were analysed.

Materials included in the analysis refer to areas of various scales. Some brochures, leaflets, poems, websites, etc., represent the whole Dalmatian region, whereas others represent only a county, a narrow part of the coast ('riviera'), a settlement or even smaller areas such as a locality, a bay or a cove, a beach and the like. Therefore, it can be said that materials represent Dalmatia on multiple levels.

5.3.1.1 Lyric poetry

The first analysed group is lyric poetry that is contextually related to Dalmatia. Being relatively short, lyric poem was considered convenient for the analysis; unlike some other literary forms, it enables reviewing a larger number of units in less time.

Poems of different thematic profiles were analysed (e.g. patriotic, love, social, reflective, landscape and other). Lyric poetry, especially one regarding homeland, frequently reflects the author's intense attachment to the country he or she was born in, has lived or still lives in. It is expressed through descriptions of an area and an emotional tonality of the poem. Lyric poems discover a lot about the character of a landscape, a lifestyle, customs of an area and social relations (interactions). In so doing, a poet does not intend to represent it objectively – to the contrary, they express their personal view and feelings on a situation, thus illustrating the character of an area at a particular point in time. Precisely these subjective impressions and experiences are that what is interesting and important for the purpose of this research. By virtue of its subjective quality, lyric poetry has been used as a window into intimate experiences, thoughts, attitudes and values of an individual with regard to the region and landscape of Dalmatia.

In addition to the poems in standard Croatian language, some poems in specific dialects of Dalmatian islands, and coastal and hinterland areas were also analysed. In contrast to tourism materials, poetry has a less wide audience, comprised mostly of native and less of foreign readers. A certain number of analysed poems were set to music, being, thus, the usual part of the Dalmatian pop music repertoire. Poems, especially those that have been set to music, do not only reflect the general social conception of Dalmatia but also shape it, as promotional materials do in the sphere of economy (tourism, hospitality industry, trade, etc.).

5.3.1.2 Promotional materials

Promotional materials analysed within this thesis include documents mostly for tourism purposes and some of commercial nature, advertising certain products or services. With regard to the type of material this group encompasses:

- 1) Materials of predominantly official tourist and commercial promotion, which, according to their source, can be further divided into:
 - a) Printed materials, like brochures, leaflets, tourist guides, travel magazines etc., and,
 - b) Internet content, majority of which consisted of the official websites of tourist boards of towns and cities, and a smaller number of commercial websites,
- 2) Webpages for private accommodation (apartments) rental.

Nowadays, the aforementioned Internet materials have probably become a most widespread and far-reaching form of tourism presentation. The Internet is an important medium in both tourism and other sorts of the promotion of a country or a region, Skoko (2004) notes.

Materials of tourism and commercial promotion

Here mostly official tourism materials of Croatian National Tourist Board and its regional (county) and local subsidiaries have been analysed: print materials (brochures, guides, etc.) and tourist boards' websites and, to a lesser extent, brochures and advertising leaflets of privately owned companies in the hospitality industry (hotels, marinas, camping sites, etc.)

as well as several commercial webpages advertising Dalmatia-related tourist products and services.

In contrast to usually short textual messages on tourism, commercial and political posters, postcards, advertisements, calendars, etc., which for instance Kučan (1996) used in her analysis of the visual landscape identity of Slovenia, texts in most materials selected for the purpose of this research have a different role. Brochures, guides, magazines and websites of tourist boards are all used to suggestively present the country, the region, a town or city or a site, so that texts attached to visual, video, audio and other forms of presentation are generally more extensive and descriptive.

Addressed to potential native (Croatian) and foreign visitors, tourism materials have a wide target group. Their message is not only meant for visitors but often reaches local inhabitants as well, thus shaping their ideas about their own region and themselves.

Messages used in the official tourism promotion, which is most represented here, mainly result from a systematic work of a team of experts in various fields. Their task is to explore, choose and, finally, implement into the final product those characteristics of a region which are most distinguishing and attractive. As Skoko (2004) points out, these experts are entrusted with the responsibility to convey information on the forte, beauty and attractions of a destination as faithfully as possible.

Webpages for private accommodation rental

Advertising apartments on the Internet via personal websites of its owners has nowadays become an increasingly popular form of tourist accommodation offer, especially in the case of private accommodation. It allows direct communication between potential guests and the owner or manager of an accommodation unit. Accordingly, Internet sites that bring together (or provide links to) webpages of private renters have been on the increase.

Personal websites of private renters are, in terms of their content, mostly designed by renters themselves. A renter – an individual, a family, relatives or friends – selects photographs and comes up with texts, the purpose of which is to allure guests. Textual descriptions are relatively short and some of them, in trying to illustrate in a few sentences the atmosphere of a facility's location and emphasise its comparative advantages, even have an almost poetic, fairy-tale-like note (e.g. 'come and relax in the tranquillity of the cove, the morning song of birds and the murmur of waves'). They point quite directly to those landscape characteristics observed and held valuable by 'ordinary' people, who are not experts in the field of tourism promotion, but who are familiar with the area either through everyday life or occasional dwelling in it.

There is yet another quality of textual content found on webpages of private renters that distinguishes it from tourism materials designed by experts – they are not focused that much on advertising a destination (listing a great number of cultural sights worth visiting, events to attend, dishes to be tasted and the like). In illustrating the atmosphere of the immediate location of their accommodation unit, a renter sometimes only shortly mentions a cultural monument, a traditional custom, a gastronomic delicacy of the region –

depending on their own sense of what is important and interesting, and that what might be appealing to guests.

Accommodation units advertised on websites of travel agencies and the like have not been analysed. A short analysis thereof has shown that they put an emphasis on characteristics and equipment of an accommodation unit (i.e. the number of rooms and beds, furniture and appliances are listed, garden equipment, the number of parking spaces, the facility's location and access to it, distance to points of interest, etc.). Therefore, they are relatively irrelevant in terms of an analysis of landscape characteristics, for they do not say anything about its experiential dimension.

5.3.2 Criteria for the analysis performance

A significant step before the implementation of the analysis is the development of the analysis plan or design (Halmi, 1996; Tkalac Verčič et al., 2011). This includes laying down principles within which, Halmi explains, qualitative empirical materials shall be translated into quantitative data and scientific facts. The units of analysis, recording units and enumeration criteria, as well as other principles in accordance with the requirements of the analysis are explained below.

5.3.2.1 Defining the sample and unit of analysis

It is rarely possible to include all the material that a researcher wants to examine in the analysis, so it is necessary to determine a sample to represent it, state Tkalac Verčič et al. (2011). According to Halmi (1996), the comprehensiveness of empirical material is a common problem in sampling various symbolic contents. Due to the nature of the content, the overall number of potential units of analysis (in this case all poems or promotional materials) is unknown. This prevents random sampling and, consequently, representativeness. Nevertheless, when a relatively undefined phenomenon wants to be explored and explained, it is useful, point out Tkalac Verčič et al. (2011), to apply purposive sampling consistent with the research criteria and researcher's estimation. The advantage of this, they argue, is the selection of those units of analysis that are believed to contribute the most to the explanation of the research question. As a form of purposive sampling, the *sample of units according to an appropriate criterion* was compounded for each content group (Tkalac Verčič et al., 2011).

Lyric poetry – sample and unit of analysis

The formation of the sample of lyric poems was guided by the availability criterion. The poetry review focused mainly on the literature available in the City Library and Research Library in Zadar and, to a lesser extent, on those from private collections and the Internet. The analysis included the poems of many well-known Croatian and Dalmatian poets, but also the poems of those less known, local authors. Some collections were of anthological character, combining poems of various authors and from different historical-literary periods. Others were collections of poems of a single author. In this way, poems from different parts of Dalmatia were analysed (although not equally distributed, for it would be rather hard to achieve). The selection was not set into a time-frame, primarily because it

was considered that for such initial research of the subject in question it is not of a great relevance. However, the largest number of poems belongs to the 20th century, although some date from earlier periods, and some were published in the last thirteen years (i.e. 21st century).

The unit of analysis in this group was one poem. Landscape – as the main theme – was not a necessary condition. The selection of units followed the criterion that at least one specific sensory experience of the Dalmatian region or landscape occurs in them. In this sense, it can be defined as a quota sample. According to Tkalc Verčič et al. (2011), it is based on the availability of content and one significant characteristic as a key according to which the units of analysis are selected. A few haiku poetry collections were included, where every poem does not have its own title, thus a group of haiku poems under the same title was considered as the unit of analysis. Among a large number of poems, 510 were selected and analysed.

The sample so drawn allows not only a satisfactory, but a deep and clear insight into experiences elicited by the landscape of Dalmatia and into the general conception about its regional space. In addition, due to a relatively wide time range of selected poems, the analysis may reveal interesting changes in the sensory character of the landscape, such as some nowadays rare or lost sounds, smells, vistas, tastes and similar experiences.

Promotional materials – sample and unit of analysis

In this group the total of 765 units were included. The selection criterion was that the content of the unit presented the Dalmatian area, service or a product. The review of all online content took place between the August 2011 and February 2012.

Materials of tourism and commercial promotion

There is no official archive of printed promotional tourism materials in Croatia, be it on local, county or national level, thus a systematic analysis and a chronological comparison of materials have not been possible. Many materials from past holiday seasons have either been distributed or thrown away, so that the majority of analysed units are of recent date – issued in the first decade of the 2000s, especially in the last years of the decade. Therefore, the research is based on the available print materials, so that the sample should be considered a convenience sample. Advertising tourism materials from all four Dalmatian counties have been collected, partially on-site – at tourist and hospitality facilities, tourist information centres and tourist board offices. At the researcher's request, some tourist board offices have sent their materials by post. In the absence of an accurate and up-to-date official list of active websites of tourist boards in Croatia, the non-random convenience sample comprises websites of tourist board offices of towns, cities and municipalities from all the four counties.

The unit of analysis was one advertising entity, regardless of its size: one brochure, flyer, guide or a website. These materials differ in the amount of text, which was not relevant for this analysis. Important was the presence or the absence and the character of descriptions of sensory experiences of landscape found in them.

Within websites of tourist boards all webpages were reviewed, except those with contact information. Thus, a website with all associated webpages (subpages) represented one unit of analysis. On commercial websites, only the webpage related to a specific product or a service was analysed (other subpages being often unrelated to the subject of the research).

Websites for private accommodation rental

Web portals that gather websites of private accommodation units, that is, that offer direct links them and the possibility of a direct contact with the facility's owner, have proven to be the best source of such content. Depending on selected characteristics of a destination and accommodation, a visitor is, when clicking a particular link, automatically redirected to a webpage of the wished apartment. The sample of apartment rental webpages has been selected from nineteen such sites.

In this group, the unit of analysis was only a webpage (usually Home page) on which a welcome text is given. Its purpose is to describe the atmosphere of the immediate site and the advantages it provides for the vacation. Other subpages on these websites, describing the entire locality or a region, were not analysed, in order to avoid repetition of that which has already been described in the official promotional materials. Subpages with contact information or those with details of the apartment equipment were also excluded from the analysis.

Due to a large number of sites and links to apartments' webpages, the sample could not be clearly defined. The selected sample is therefore not random, but, according to the definition given by Tkalac Verčič et al. (2011), a convenience sample. During the analysis it has been observed that some apartments are advertised on more sites. In such cases, the webpage has been analysed only once (i.e. if shown on other sites, it has been disregarded).

The analysis has included websites advertising apartments from all the four Dalmatian counties. Since the counties differ in scope of their area, number of inhabited islands, their size and some other characteristics (geographical, economic, etc.), the total number of private accommodation facilities in each county varies as well. This is reflected in the number of webpages included in the sample: a total of 237 webpages from Split-Dalmatia County has been analysed, 176 webpages from Zadar County, 101 from Dubrovnik-Neretva County and 81 from Šibenik-Knin County, which occupies the smallest area of the four analysed counties and whose islands are relatively small and not significantly influenced by tourism.

Most of the analysed webpages with the displayed date of creation and their last update belong to the period from the year 2000 onwards and only few date back to the late 1990s. Moreover, most of them were created or last updated in the second half of the 2000s up to the present. Consequently, it can be assumed that many apartments' webpages have been updated on a regular basis, as well as that new ones have been emerging, which is in line with the ever increasing trend of using the Internet in general, as well as for tourism and promotional purposes.

5.3.2.2 Categories of analysis

Categories of the content analysis represent the characteristics and elements, the share of which is measured in the analysed material (Tkalac Verčič et al., 2011). They represent codes, here defined *a priori* (i.e. prior to the implementation of the analysis).

Before the implementation of the analysis procedure, a smaller number of units were reviewed and two levels of categories for the classification of text were defined: (1) main categories and (2) subcategories (Fig. 96). Six main categories designate perceptual modalities: V-visual, A-auditory, O-olfactory, etc. Twenty seven subcategories denote a specific feature or a type of features within a modality (e.g. subcategory V(sea) contains visual experiences of the sea, such as blue, stormy or moonlit sea). A table for data input was created accordingly (Tab. 6). To simplify the table, every category and subcategory was appropriately abbreviated.

1 VISUAL	4 TACTILE
V(l) V(natural and cultural landscape)	T(a) T(air)
V(s) V(sea)	T(s) T(sea)
V(ar) V(architecture)	T(w) T(wind)
V(b) V(boats and ports)	T(cl) T(climate)
V(sd) V(specific details)	T(o) T(other)
2 AUDITORY	5 GUSTATORY
A(s) A(sea)	G(f) G(food)
A(cc) A(cicada and crickets)	G(oo) G(olive oil)
A(sg) A(seagulls)	G(b) G(beverages)
A(m) A(music)	G(l) G(landscape)
A(o) A(other)	
3 OLFACTORY	6 COMPOUND
O(ap) O(aromatic plants)	C(ls) C(lifestyle)
O(c) O(conifers)	C(la) C(landscape atmosphere)
O(s) O(sea)	C(o) C(other)
O(f) O(food)	
O(o) O(other)	

Figure 96: Categories for content classification
 Slika 96: Kategorije za razvrščanje vsebine

Each of the basic sensory categories includes the subcategory *Other* (o), into which experiences and impressions not fitting into the predefined categories are to be allocated.

Table 6: A segment of the table for the performance of the analysis: PM – Perceptual modality; SF – Specific feature (subcategory); Numbers indicated in the first column (1, 2, 3...) – Ordinal number of the analysed unit; Σ – the sum of characteristics within a subcategory and a modality.

Preglednica 6: Segment tabele za izvedbo analize: PM – Perceptual modality; SF – Specific feature (subcategory); Številke v prvem stolpcu (1, 2, 3...) – zaporedna številka enote analize; Σ – suma značilnosti znotraj podskupine in posamezne modalitete.

	Perceptual modality / Specific landscape feature(s)																													
PM	V						A					O					T					G				C				
SF	Vl	Vs	Var	Vb	Vsd		As	Acc	Asg	Am	Ao	Oap	Oc	Os	Of	Oo	Ta	Ts	Tw	Tcl	To		Gf	Goo	Gb	Gl		Cls	Cla	Co
1	3	1	1							1		1					1						2					3		
2	4	1	3							1	1				1		2		2						1			1		
3	6																2				3	3	3						2	3
4	4	1									2											1						2	3	
5	1	1	1							1													1		1					1
Σ																														

Compound perception refers to descriptions of those experiences which comprise two or more modally different sensations (e.g. sight and sound, sound and smell). Three subcategories are distinguished therein:

- 1 **lifestyle** depicts the atmosphere of towns and villages through various events, customs and everyday activities (e.g. *fiesta* implies visual, auditory, olfactory, tactile i gustatory sensations),
- 2 **landscape atmosphere** outlines the ambiance of natural and rural sites, implying sensory-emotional experiences like ‘peacefulness’,
- 3 **other** refers to commonly multi-modally experienced landscape characteristics like *pebbly* (visual, tactile, auditory) or *clean sea* (visual, olfactory, tactile).

The *Compound* group did not include experiences with one (dominant) form of perception, and other perceptual value(s) only implied. So is, for instance, *lush Mediterranean vegetation* primarily a visual although potentially also an olfactory experience; *the shade of a pine forest* is primarily a tactile sensation, but can be experienced visually as well; *a strong bora* is a tactile, but also an auditory experience. The principle applied in such cases is that a described experience has not been allocated to the category of compound experiences, but to the category of the dominant sensation, unless the context itself suggests another sensory component. Accordingly, the expression *bora whistled around the house* should be coded as an auditory experience, for it primarily illustrates the auditory dimension of the wind, though bora is generally coded as a tactile experience, since pronounced coldness is its main characteristic (bora is a symbol of coldness).

A sense of an experience can be best apprehended from the context and, in this sense, the flexibility during analysis is of great importance.

5.3.2.3 Recording units

Within the unit of analysis, a recording unit is a word, phrase or a sentence describing one characteristic experience of Dalmatian landscape (e.g. blue sea, scent of immortelle, heat).

This analysis is specific in the sense that not all of landscape descriptions are explicit, unambiguous and clearly understandable, but characteristics and experiences are

sometimes presented implicitly - through connotative meanings and associations. This is especially the case with descriptions of non-visual landscape experiences. Descriptions come in numerous variations, from direct to hidden messages. For example:

“If you love solitude, walk along the left side of the bay, which is partly covered in pine forest, in which you can hide from the sun.”

The underlined part of the sentence implicitly illustrates the tactile experience of a shade, very intense in Dalmatia during the summer.

Due to the freedom of expression, which is not uncommon in the selected content, the understanding and correct classification of descriptions is often context-dependant. Instead of having predefined recording units (i.e. expressions and sentences determined *a priori*), flexibility was required here for the identification of those landscape characteristics that have not been given explicitly. In this sense, recording units are here partly also researcher-dependant – they depend on the researcher’s ability to identify hidden meanings and on their decision as to whether these are to be included in the table.

5.3.2.4 Enumeration criterion

The enumeration of recording units is based on registering the presence or the absence of abovementioned descriptions, regardless of the number of their potential repetitions in the analysed unit. For example, scents of three different plant species mentioned in one unit of analysis (e.g. a poem) are recorded in the subcategory O(ap) with the number 3, but the scent of one plant mentioned three times is recorded with the number 1. Similarly, if in one unit of analysis a *blue sea* is mentioned several times, it was only recorded as one specific experience (1), but if within a unit the sea is described once as *blue* and later as *silver at the moonlight* it is recorded as two different experiences.

A sum of landscape motifs within a subcategory shows both the diversity within it as well as the relative diversity in relation to other subcategories. The results should demonstrate the diversity of experiences within one perceptual modality and among subcategories within it, as well as the diversity among various modalities, with the ultimate aim of identifying the share of each modality in the presentation and experience of Dalmatia.

Intensity of experience

Human sensory experience of a place is a synergy of all sensations at a certain moment and does not result from a mere sum thereof but from their complex and dynamic interaction. The sum of characteristics in a subcategory may indicate their diversity and frequency through the sample, but it does not illustrate the intensity of experiences. In other words, it shows which properties of landscape are most often used to describe Dalmatia, but not which of them were most intensively experienced.

5.3.2.5 Presence of all modalities as a criterion

One of the criteria for the analysis was that the equal occurrence possibility of characteristics from all five (six) sensory categories in a text. To ensure this, texts describing in detail an edifice or a restaurant's offer were excluded from the analysis. In promotional materials, whose main purpose is to introduce a reader with historical and architectural sites worth a visit, detailed edifices' descriptions have been given sometimes. The focus of such texts lies on the visual dimension of architecture experiences, while other sensory experiences occur relatively rarely. With presentations of restaurants' offers the case is similar – in these, primarily gustatory as well as olfactory characteristics are emphasised and other sensations are not in the focus of interest but are relatively rarely included in them. Undoubtedly, in both of the above, visual and gustatory and olfactory characteristics respectively would be present, while other characteristics would not, so that an analysis thereof (i.e. measuring shares of individual sensations) would be of no purpose. Consequently, such unambiguous descriptions of edifices, restaurants and similar content have been excluded from the analysis.

On the other hand, a textual description of a beach, which is small in scale as well, can have an equal share of visual, auditory, olfactory, tactile and even gustatory aspects. It can include either just one modality or a combination of more modalities, depending on a text's author and their personal impression or idea of what is interesting and typical of a space they describe.

Whether Dalmatia is taken as a whole or just a part of it, the scale is not important as long as a description of a given space meets the criterion of the occurrence possibility of various perceptual modalities. And whether these will occur or not – precisely this is the subject of the research.

5.3.2.6 Conforming the recording units through perceptual modalities

This analysis is based on a comparison through six selected types of perception (or more precisely-typical sensations). However, ways of perceiving through a sense are distinct and significantly differ from sense to sense, they are sense-specific. Each sense functions in a specific way and gathers specific information on the environment. It is therefore necessary to lay down criteria by which compared sensory information will be adjusted.

The distinction is the greatest between visual perception on one hand and non-visual forms of perception on the other. So as to allow a comparison through categories and subcategories, one olfactory or auditory experience shall correspond to one visual experience. For instance, a smell of one plant sort represents a specific olfactory experience of Dalmatia. However, in tourist brochures and guides individual palaces, churches, council houses and the like are described as a *differentia specifica* of a certain destination. Evaluating each individual edifice as a visual experience unit would result in an unrealistic proportion of visual to other experiences. To avoid this, an edifice *type* (a church, a house, a square and a street, fortresses and city and town walls) has been taken for a unit of typical visual experience. The same principle has been applied for other visible landscape elements, where applicable.

Architecture can be seen as a detail within a landscape, but a single edifice can also be observed as a separate unit with details. Here, general characteristics of architecture as a distinctive element of Dalmatian landscape are of interest. For the purpose of the analysis, descriptions of architecture have been considered in the sense of characteristics typical of Dalmatian landscape, including general concepts such as *traditional architecture*, *picturesque fishing villages*, *architecture of the rural hinterland* as well as typical architectural and urban elements – *stone houses*, *narrow streets and squares*, *red roofs*, *Renaissance country houses*, *fortifications* and other edifices that characterise the architecture of Dalmatian towns, cities and villages.

5.3.2.7 Analysis procedure and data processing

Data entering was conducted manually, the main reason being the nature of the content. Sensory impressions and experiences of landscape are not always explicitly expressed, but can be implied. Therefore, understanding and correct classification of the text depend often on the context.

Data processing was performed using SPSS®. Since this is the first comprehensive study of sensory landscape properties in Croatia (and probably beyond), only the basic statistical calculations were implemented. The aim was to present to what extent non-visual landscape features constitute the collective perception of the region and to detect the most prominent ones.

5.3.3 Results of the content analysis

The analysis has shown that Dalmatian landscape is, in the reviewed material, experienced and presented through characteristics from all five perceptual modalities. The majority of experiences arise from visual perception. Respecting the fact that an average person receives most environmental information via sight, it is understandable. However, other sensory properties constitute the perception of Dalmatia to a reasonable degree. In both content groups – poetry and promotional materials – visual characteristics comprise about 30% of the overall experience. The share of other modalities varies and, noticeably, with regard to the content's purpose (Fig. 97).

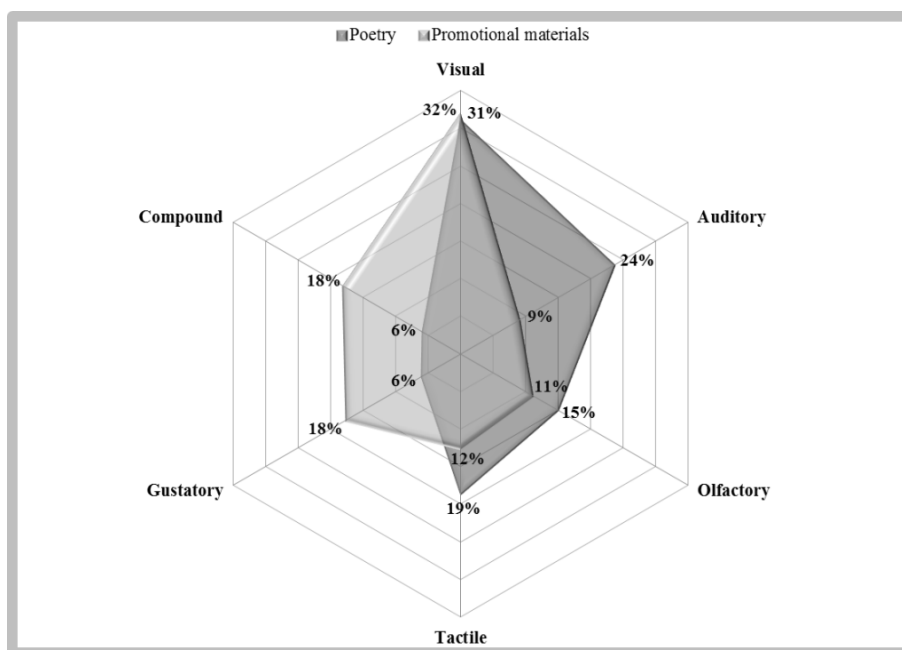


Figure 97: Shares of perceptual modalities in descriptions of Dalmatian landscape (in two samples)

Slika 97: Delež raziskovanih zaznavnih skupin pri opisovanju dalmatinske krajine (po vzorcih)

The nine most numerous types of characteristics (i.e. subcategories), having a share of equal to or greater than 4% in the corresponding sample, can be isolated in each content group. For each group, it is a different set of subcategories.

In lyric poetry, ephemeral experiences like tactile sensations of the wind, scents of herbs and sounds of the sea compose the experiential structure more than in promotional materials (Fig. 98).

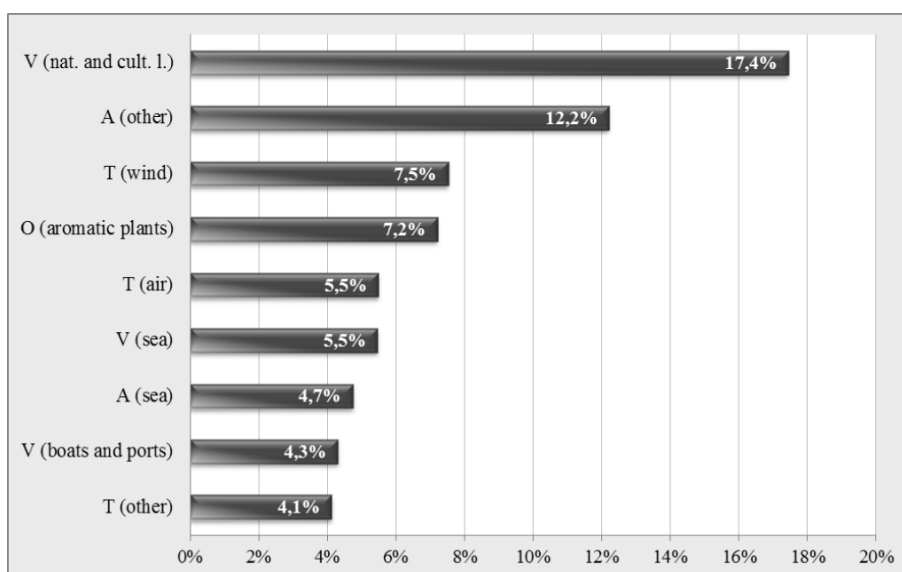


Figure 98: Most numerous subcategories (types of characteristics) in lyric poetry

Slika 98: Najštevilčnejši tipi značilnosti dalmatinske krajine v poeziji

Here, the expectedly largest subcategory of visual characteristics is followed by four different non-visual subcategories. Lyric poetry is characterised by its profound sense for landscape, arising mostly from the poets' strong attachment to the landscape they describe. Such intimate understanding of landscape character translates into textual descriptions of the sights, sounds, scents and all other features and their nuances well familiar to the author.

In promotional materials, on the other hand, the landscape features on which tourism promotion is usually based are predominant. Besides the visual characteristics of Dalmatia, the emphasis is largely on gastronomic specialties – *G(food)*, *G(beverages)*; environmental qualities such as clean sea, fresh air and pebble beaches – *C(other)*; sojourns in traditional urban and rural surroundings and visiting cultural sites – *V(architecture)*; and everyday activities, various events and customs – *C(lifestyle)* (Fig. 99).

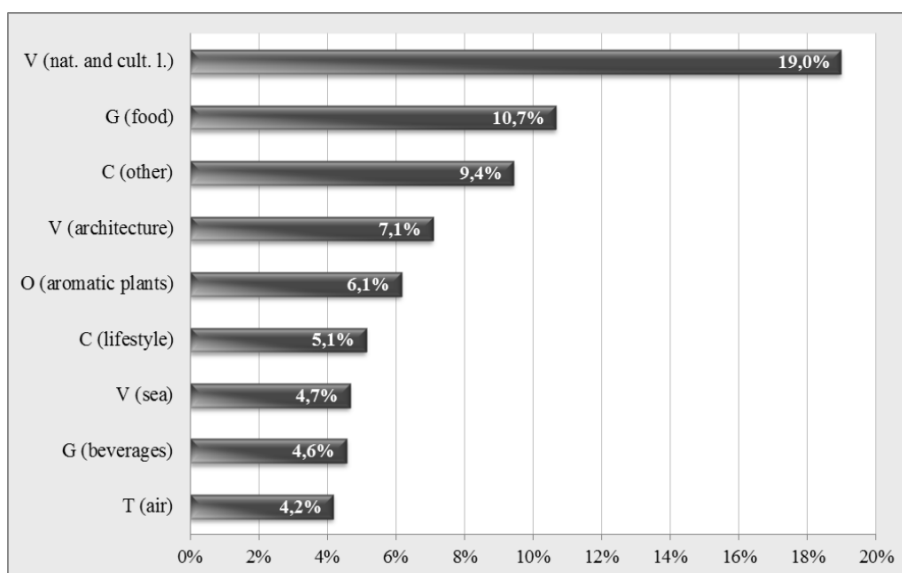


Figure 99: Most numerous subcategories (types of characteristics) in promotional materials

Slika 99: Najštevilčnejši tipi značilnosti dalmatinske krajine v promocijskih materialih

Another indicator of how much a subcategory contributes to the regional distinctiveness is the number of units of analysis in which at least one of its representatives occurred. This displays its distribution within the sample and a certain continuity of the characteristics it represents. For example, in 308 out of 510 analysed poems at least one landscape characteristic was registered in subcategory *V(natural and cultural landscape)*. In the remaining 202 poems there were no characteristics registered in this subcategory.

Comparison of Figures 99 and 101 manifests that, besides a minor difference in their sequence, the same subcategories prevail in both illustrations (Fig. 100). This further confirms their significance in the perception of Dalmatia. Promotional materials show a somewhat greater sequence change (although the differences are numerically minor), but, here too, mostly the same subcategories occur (Fig. 101).

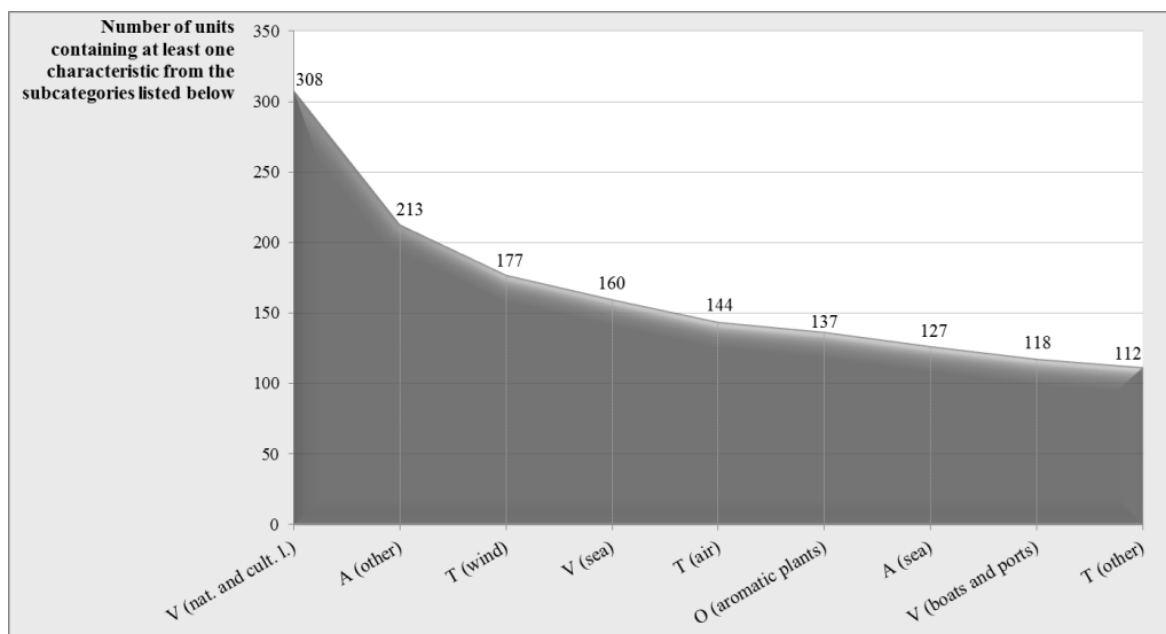


Figure 100: Sample „Poetry“: Subcategories (characteristics) mentioned in over 20% of poems
 Slika 100: Vzorec „Poezija“: Podskupine, katerih značilnosti se omenjajo v več kot 20 % pesmi

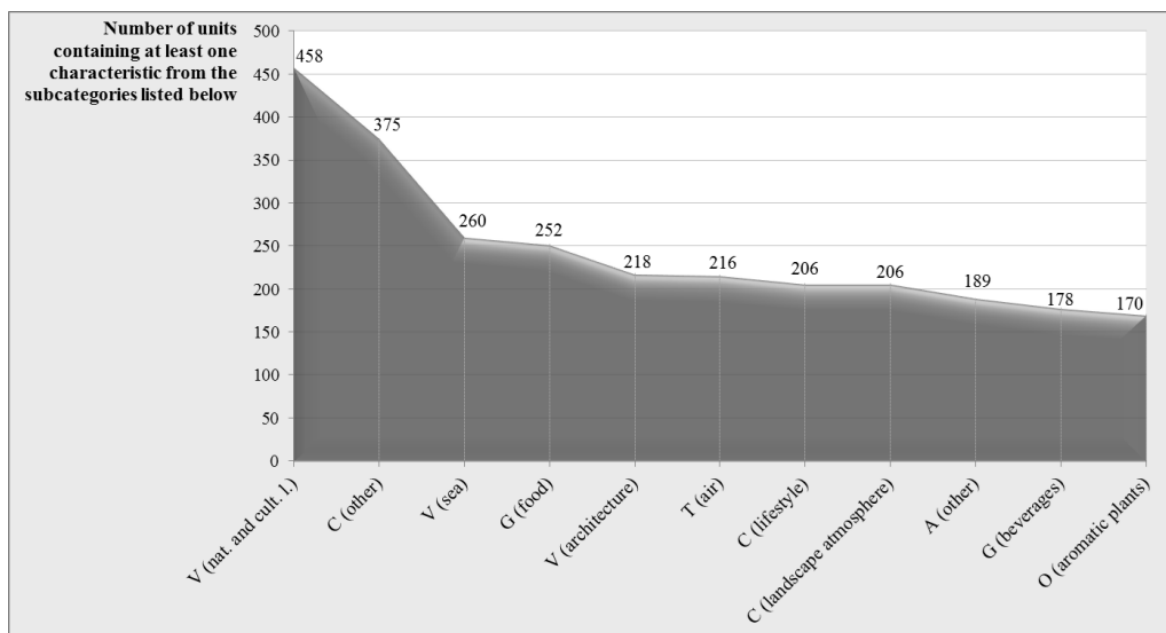


Figure 101: Sample „Promotional materials“: Subcategories (characteristics) mentioned in over 20% of all units

Slika 101: Vzorec „Promocijski materiali“: Podskupine, katerih značilnosti se omenjajo v več kot 20 % materiala

In short, in both content groups, the most numerous subcategories are, in a slightly different order, also the ones with the greatest distribution. Hence, both from the standpoint of quantity and distribution, the perception and presentation of Dalmatia are based on an approximately equal set of characteristics in corresponding samples.

The landscape of Dalmatia is perceived through all the proposed perceptual modalities and within each there are characteristics that act as symbols of the region. Some of them are more pronounced in poetry and others in promotional materials. Thus, particular symbols should be identified through a comparative analysis rather than by merging the samples. The results presented below show which properties structure the experiential map of a particular sensory component of Dalmatian landscape. Qualitative analysis has uncovered some interesting, most usual or rare and extinct experiences typical of Dalmatia.

5.3.3.1 Visual identity of Dalmatia

In the visual experience of Dalmatia, the characteristics of subcategory *V(natural and cultural landscape)* (Fig. 102), as expected, have the greatest share. This subcategory is particularly diverse and includes a wide range of landscape features and qualities – from a single plant (e.g. blossoming broom) to general landscape characteristics like *beautiful bays and islets, deep river gorges* or *rough karst*. The characteristics registered here could be further divided into several subcategories.

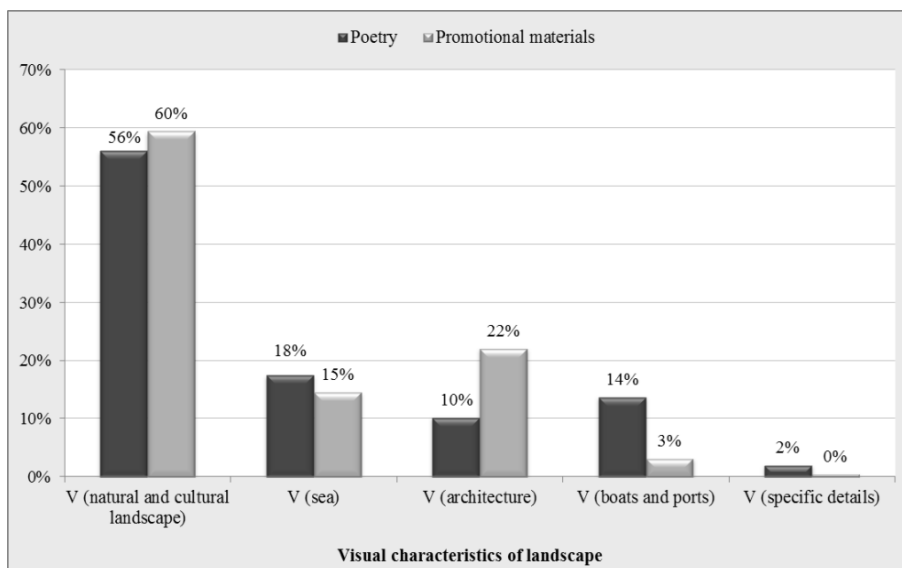


Figure 102: Visual characteristics (subcategories) ratio in the overall visual experience of Dalmatia

Slika 102: Delež posameznih vizualnih značilnosti (podskupina) v skupnem vizualnem zaznavanju Dalmacije

Being very frequent, the elements of cultural landscape (vineyards, olive orchards, dry stone walls, etc.) could form an individual subcategory. This is also true for general landscape characteristics. Mediterranean vegetation, with descriptions of characteristic plants and general lushness, is another large group of motifs. Such additional division would probably result in more moderate differences between subcategories.

Images of the sea, with at least 15% in both samples, can be considered a significant visual characteristic of Dalmatia; especially considering the relatively small variability within the subcategory *V(sea)* (i.e. it consists of only a few typical maritime scenes). Promotional materials indicate that traditional architecture (stone houses, streets and squares, churches

and fortifications) is another symbol of the region. The analysis of poetry has revealed that images of boats, harbours and ports (another subcategory with low variability of motifs) are also characteristic elements in the perception of Dalmatia.

The subcategory *Other* (e.g. white sheets, white laundry on the clothesline, *klapa* in the national (folk) costumes, silver fish in the net, etc.) is insignificantly represented in both samples.

5.3.3.2 Auditory identity of Dalmatia

Auditory perception of the Dalmatian landscape has proven to be very complex. This clearly illustrates the subcategory *A(other)*, which includes the majority of all registered descriptions of auditory experience (Fig. 103). Besides first four subcategories, auditory composition of the region is undoubtedly formed by many other sounds.

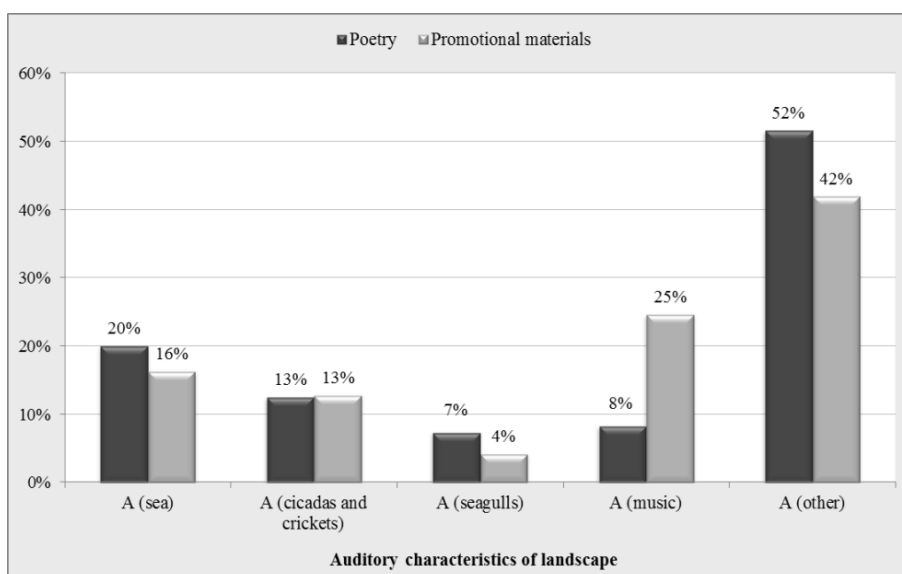


Figure 103: Auditory characteristics (subcategories) ratio in the overall auditory experience of Dalmatia

Slika 103: Delež posameznih zvočnih značilnosti (podskupina) v skupnem avditornem zaznavanju Dalmacije

Qualitative review suggested that several individual subcategories could be derived from *A(other)*. Wind related sounds are relatively frequent, as well as sounds of boats and ships (engines, whistles, masts, ropes). Sounds of birds, insects and other animals could also be classified into a separate subcategory. Another specific group are human sounds like murmur (e.g. at markets, fish markets, squares, streets, and beaches), small talk, local dialects and foreign languages.

In the map of auditory perception, sounds of the sea represent an important feature of auditory landscape, with shares of 20% and 16%. Chirping of cicadas (during the day) and crickets (at night) participates with 13%. Considering that this subcategory consists only of two specific sounds and that they occur exclusively in the summer, these are also a significant feature of auditory perception and regional distinctiveness.

What is surprising is that seagull cry is rarely mentioned in both samples. Dalmatia being a coastal region, they were expected to be more common. In some future analysis they could be grouped with sounds of other birds (swifts, swallows, blackbirds), which are frequently found in the subcategory *A(other)*.

Furthermore, promotional materials indicate that Dalmatian music – with traditional *a capella* (*klapa*) songs, pop songs and sounds of mandolin and guitar – is an integral component of auditory experience. Although in poetry music participates with only 8% in the overall auditory perception, it contains the same abovementioned characteristics, which confirms them as regional symbols.

5.3.3.3 Olfactory identity of Dalmatia

Olfactory experience of Dalmatia is primarily based on the scents of aromatic herbs; mostly rosemary, immortelle, lavender, sage, heather, myrtle, and other (Fig. 104). They are a distinctive olfactory symbol of the region.

Other olfactory characteristics (subcategories) have a smaller but relatively evenly represented share in the olfactory category itself and in the overall samples. None of these subcategories can be discerned as a prominent symbol of olfactory identity, which was particularly unexpected regarding the scents of conifers (pine trees and cypress) and sea.

However, uniformity among subcategories indicates olfactory diversity of the Dalmatian landscape. This is additionally confirmed through numerous odours recorded in the subcategory *O(other)* – the smell of earth, rain, wind, spring, ships, oil in harbours, etc.

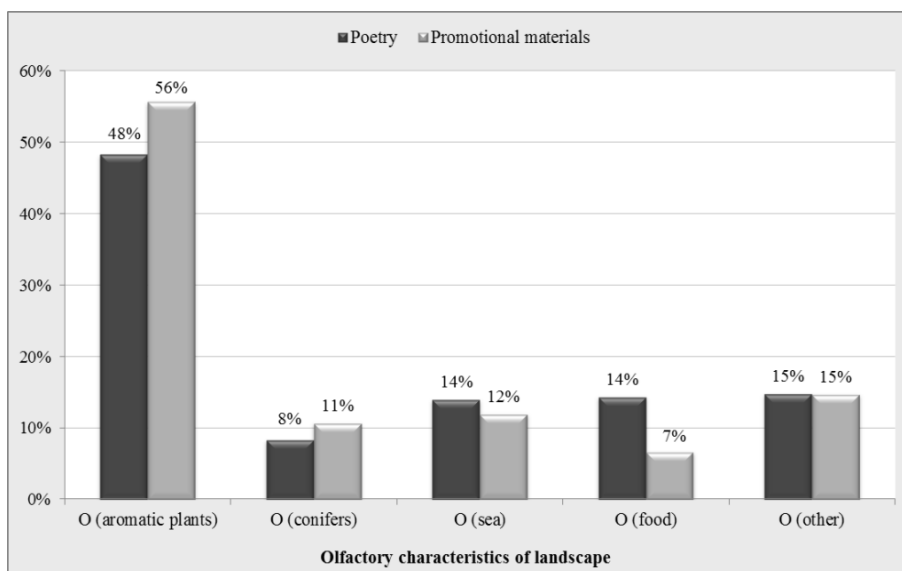


Figure 104: Olfactory characteristics (subcategories) ratio in the overall olfactory experience of Dalmatia

Slika 104: Delež posameznih značilnosti vonja (podskupina) v skupnem olfaktornem zaznavanju Dalmacije

5.3.3.4 Tactile identity of Dalmatia

Tactile perception of Dalmatia is dominated by three types of experiences: air properties, prevailing winds and the feeling of texture and temperature of surfaces and objects – *T(other)* (Fig. 105). Due to a mild climate, considerable time is spent outdoors, wherefore the air qualities and their changes are commonly perceived. In both samples, Dalmatia is recognized for its warmth, sultriness, and fresh air at night.

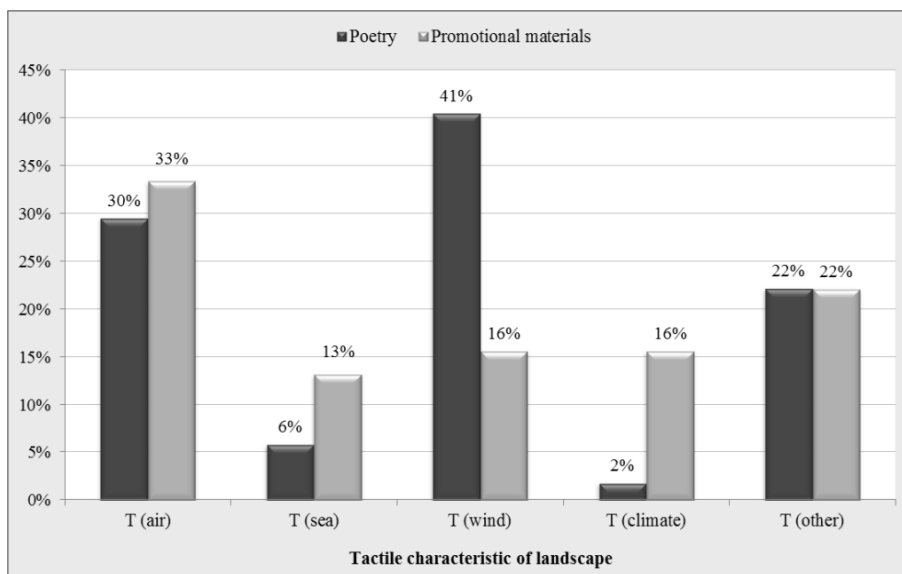


Figure 105: Tactile characteristics (subcategories) ratio in the overall tactile experience of Dalmatia

Slika 105: Delež posameznih taktilnih značilnosti (podskupina) v skupnem taktilnem zaznavanju Dalmacije

The most prominent tactile experiences found in poetry are those generated by the prevailing winds (bora, sirocco and maestral). They greatly affect everyday life of the local people, in a functional, perceptual and emotional sense, and as such, symbolize the region. Remarkably less are they mentioned in promotional materials, where tactile presentation of Dalmatia relies more evenly on descriptions of the warm sea (13%), the wind (mostly maestral, 16%) and mild climate in general (16%).

Subcategory *T (other)* includes some very interesting experiences of the environment, one of the most common being the experience of shade in the summer. The feeling of surface texture and warmth has a noticeable share as well (e.g. *warm stone, sharp rocks, smooth flagstones* used for paving streets, *hot or wet sand, smooth pebbles*, touch of *dry grass, thorn-bushes* or *pine needles, insects' stings*). These tactile sensations could form a separate subcategory in future analyses.

As a source of tactile experience, the sea (the warmth, splashing, etc.) does not have a great value as a recognisable feature. It is more frequently mentioned in promotional materials than in poetry, particularly in the descriptions of shallow bays where the sea warms up quickly.

The subcategory *climate* comprises general climatic characteristics of the region: the warm south, the warm Mediterranean, mild winters, summer droughts, etc. Dalmatia is, thus, primarily perceived as a warm and sometimes arid area. Since the descriptions of climate, as well as those of shade, mostly relate to the perception of air temperature, in future analyses it would be sensible to include these into the subcategory T (*air*).

5.3.3.5 Gustatory identity of Dalmatia

Gastronomic offer is an important aspect of promotion of the region. There are two very typical gustatory characteristics of Dalmatia. The first one is local foodstuffs and traditional dishes (e.g. fish, seafood, fresh vegetables, lamb, grilled dishes, desserts, and products like cheese, smoked ham and honey). They are twice as represented in promotional materials than in poetry (Fig. 106). Olive oil does not have a role of a gustatory symbol by itself, but it contributes considerably to the local gastronomy. Namely, considering that is the single feature in the subcategory, 10% of all gustatory characteristics in the sample is an indicative share. The other distinctive gustatory characteristic of Dalmatia is beverages; these mostly refer to wine from indigenous varieties, *prosecco*, and herb and fruit flavoured brandies. Therefore, Dalmatian cuisine is strongly associated with the landscape and the lifestyle within which it has evolved.

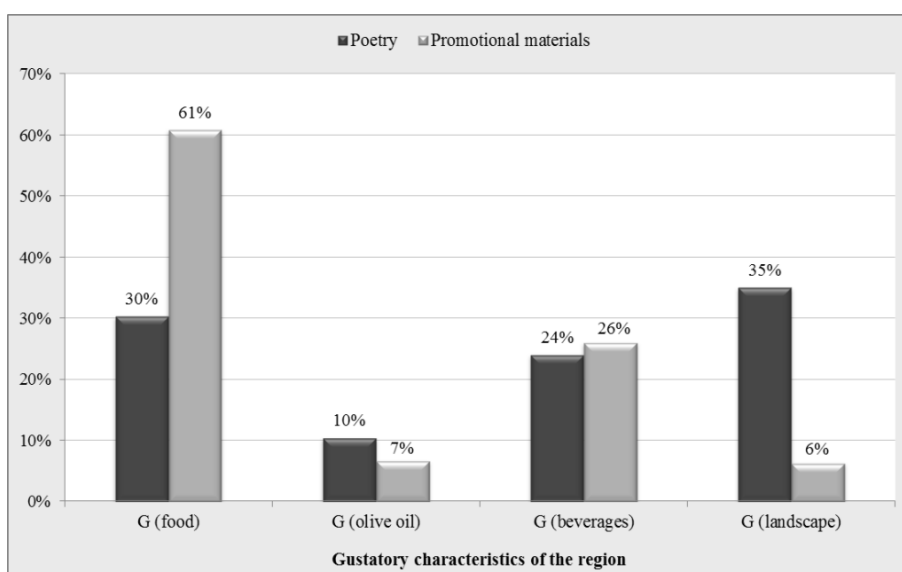


Figure 106: Gustatory characteristics (subcategories) ratio in the overall gustatory experience of Dalmatia

Slika 106: Delež posameznih okušalnih značilnosti (podskupina) v gustatornem zaznavanju Dalmacije

Although in poetry the gustatory perception is represented with only 6% in the overall experience, it is interesting that it mostly relies on the immediate tastes of the landscape. The understanding of subtle landscape nuances, inherent to lyric poems, reveals that the most impressive among the tastes of landscape are *saltiness* and the *tastes of herbs and fruits* accessible directly in the surroundings (e.g. sweet fruits of fig, mulberry and grape, sweet or sour pomegranate, carob, astringency of myrtle and heather). Dalmatian landscape is, therefore, perceived also via sense of taste. A good example of integrating gustatory

characteristics in tourism promotion is the popular video of the Croatian National Tourist Board entitled '*When heart says summer, it says Croatia*': "...it says green, sweet, salty..." (HRCroatia, 2009).

5.3.3.6 Characteristic compound experiences of Dalmatia

This category includes multisensory experiences – those that are perceptually not clearly defined but imply a combination of various stimuli. Compound perception captures the typical atmosphere of the region – aspects upon which the spirit of place is built (Fig. 107).

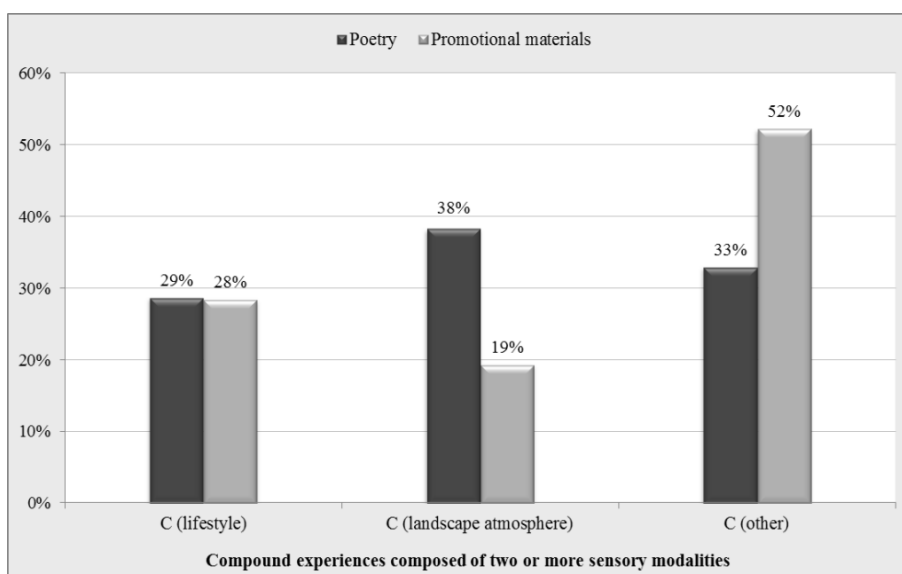


Figure 107: Compound characteristics (subcategories) ratio in the overall compound experience of Dalmatia

Slika 107: Razmerje specifičnih sestavljenih doživetij krajine v skupnem sestavljenem zaznavanju Dalmacije

The analysis has shown that Dalmatian *genius loci* is perceived through two typical aspects. Firstly lifestyle, characterised by a relaxed and slower pace of life, outdoor gatherings, a vivacity of towns, daily activities and rituals, customs, summer events, etc. Mediterranean lifestyle, with warm climate and beautiful weather allowing frequent outdoor stays during all seasons, is typical of Dalmatia. However, several poetry examples show the contrast of the vibrant summer atmosphere to a winter desolation and loneliness. Though the effect of an increasingly hectic lifestyle can also be felt in Dalmatian towns, the mentioned Mediterranean pace still persists noticeably.

The other aspect refers to the atmosphere of rural and natural areas, the experience of which involves aesthetic and emotional dimensions: tranquillity, calm sea, gentleness, pleasant idleness (siesta or Dalmatian *fjaka*), calm before the storm, atmosphere of the island, the feeling of southern weather in one's bones, etc. with 38%, these are the most numerous compound subcategory in poetry, reflecting its sensibility regarding the landscape.

Subcategory *C(other)* includes landscape properties in which various modalities are combined into a single experience. In promotional materials it is the largest subcategory of compound experiences. Attributes *pebbly* or *sandy beach*, for instance, comprise visual and tactile sensations; *lavender fields* imply visual and olfactory sensations. Other frequently mentioned are *clean sea* (visual, olfactory), *fresh air* (olfactory, tactile), *bumblebees around lavender* (visual, auditory, olfactory), *low tide* (visual, auditory, olfactory), *cold freshwater springs* (gustatory, tactile), etc. Multisensory experiences (compound) constitute nearly a fifth of the descriptions in promotional materials, whereas 52% refers to subcategory *C(other)*. This further underpins the assumption about the significance of non-visual experiences in the perception of Dalmatia.

Characteristics of this category demonstrate that human experience of place is not a mere aggregate of sensations of various modalities. Rather, the notion of place results from a dynamic interaction of unique sensations and feelings emerging from direct communication with the environment.

5.3.4 Summary of results of the content analysis and some examples from both analysed content groups

According to the analysed content, perception and depiction of the Dalmatian landscape relies on modally different characteristics. Within each modality there are characteristics (or types thereof) which appear frequently and therefore carry a strong symbolism of the region.

Since poetry and promotional materials are two different forms of written communication, it was reasonable to expect that the results would also somewhat differ. However, non-visual landscape features constitute a considerable part in both. The revealed distinctions have arisen from the differences in type and purpose of the content. Dual analysis has proven to be extremely useful, for each uncovers different characteristics of the sensory landscape identity of Dalmatia. Figures 108 and 109 illustrate Dalmatian landscape identity through the typical exemplars of the most prominent subcategories in corresponding samples (font size and shade indicate the characteristic's intensity in the identity structure).

In lyric poetry, landscape is regarded from the perspective of everyday coexistence and constant immediate interaction with it. It is described in the light of all seasons. It is understood, reflected upon and felt rather profoundly. All this reflects in a remarkable share of auditory, olfactory and tactile characteristics, while relatively few gustatory characteristics are represented.

A poem by the Croatian poet Jure Kaštelan, given in the article *Brač – otok kontinent* (*Brač – an island and a continent*) (Bakija et al., 1998: 31), is an example of regional poetry which evokes landscape through senses.⁹¹

⁹¹ In the given examples in this and the block quotes in the following chapter, some characteristic features of Dalmatian landscape are intentionally highlighted in grey by the author of this thesis to render them more conspicuous within the text (i.e. these were not highlighted in the original).

Brač. Its name smells with myrtle and rosemary.
And in the mornings and in the early evening the sun shines through crowns of pine
and olive trees.
And the sea holds its undying conversation with the rocky shores and white strands.



Figure 108: Symbols of sensory landscape identity of Dalmatia (poetry)
Slika 108: Simboli čutne krajinske identitete Dalmacije (poezija)

Poems put to music participate perhaps even more actively in shaping the identity of Dalmatia, for they reach both local and foreign people through the radio, festivities and concerts. *The Brač ballad*, written by the musician Neno Belan (Belan and Fiumens, 2007) is a typical example of the longing of Dalmatian emigrants and seamen for their homeland and of nostalgic memories of their homeland's vistas, as well as sounds, smells, tactile sensations, etc.:

There is nothing more beautiful to me
Than the blue Adriatic Sea
The bright sun in the skies
The old olive tree and the pine

There is nothing more beautiful to me
Than the dear island of Brač
Than its white stones
Figs, sage and brambles

Refrain:

I am far away now
I've left my home
I'll return to my Brač
To live and die there

There is nothing more beautiful to me
Than those pearly coves
When I hear cicadas chirp
On the wings of mistral

There is nothing more beautiful to me
Than the dawn breaking over Brač
When high above the sea
A lonely seagull calls

Refrain

There is nothing more beautiful to me
Than a quiet sound of a *klapa*
In a late night hour
Singing a song of love

Refrain

Promotional materials, on the other hand, aim at emphasizing precisely those landscape characteristics that would contribute to the prosperity of tourism and the associated activities. Thereby, Dalmatia is mostly presented through the prism of summer. As expected, a communication through visual content prevails. As Senjković (2006: 205) concluded during her analysis of websites and webpages, besides useful information on museums, restaurants, transportation schedules, accommodation, weather conditions and key events, most frequently found are sightseeing instructions and photo galleries depicting the landscape and the traditional way of life.



Figure 109: Symbols of sensory landscape identity of Dalmatia (promotional materials)
Slika 109: Simboli čutne krajinske identitete Dalmacije (promocijski materiali)

In addition to visual, gustatory characteristics are largely mentioned here (foodstuffs, traditional dishes, desserts, beverages, etc.). Auditory, olfactory and tactile characteristics are less frequent than in poetry. However, these ephemeral sensations are integrated into multisensory experiences contained in the category *Compound*, which, in this sample, has a significant share of 18%. Some of the most numerous are *C (lifestyle)* – fiestas, crowds at the beaches and markets, the atmosphere of Dalmatian towns, relaxed pace of life; *C (landscape atmosphere)* – calm sea, siesta, pleasant coves, tranquillity, wilderness; and *C (other)* – shingle beaches, clean sea, fresh air, fields of lavender, etc. This also confirms a repeatedly emphasized interaction and synergy of senses frequently mentioned in the literature (Gibson, 1986; Rodaway, 1994).

Though the visual and gustatory are most commonly found in promotional materials, sounds, smells and tactile sensations are sometimes used very suggestively, as shown in the examples below. The awareness of their influence in the creation of impressions and expectations exists, however it is still insufficiently articulated on the operational level.

The webpage of the island Murter (Udruga Argonauta, 2013a; 2013b) offers, besides photographs, also textual illustrations of potential experiences in one of the island's villages – Betina and in the National park Kornati:

The cultural and historical heritage of Betina

“You will meet old shipbuilding masters, smell the timber, feel the presence of the wonderful people who guarded this grand tradition of ancient shipbuilding” – Kaleb Vjekoslav, writer

When walking through Betina you will notice traces of an old pavement of painted pebbles. This practice of paving the streets goes back to the 18th and 19th century, and is typical of many Dalmatian villages.

“Shingles or pebbles are small stones, coming in thousands of various rounded forms shaped through the play of waves, flood and ebb, only to be hand-picked, still warm from the sun and smelling of seaweed, on shingle beaches and taken by hardworking hands to be built into pavements of countless narrow streets and houses.”

Ivo Šprljan

Kornati as a tourist attraction

SWIMMING IN THE SEA

Take a swim in the crystal and warm Kornati sea. This is an experience about which we don't need to talk very much.

SPENDING THE NIGHT IN KORNATI

Surprisingly rich starry sky above Kornati, undisturbed by artificial lights, silence and peace of natural sea ambience, smell of sea, clean air, light breeze, etc. make spending a night in the Kornati quite special – different. Anyone who tries to do it will know what we are talking about.

The website Info Adriatic (Sprait d.o.o., 2013) introduces destinations in the Šibenik-Knin county, such as the town of Primošten and the island of Prvić, using typically Dalmatian attributes that provide pleasure for all senses:

Primošten

Because the distinctive Mediterranean ambiance with the medieval architecture of closely built stone houses and numerous narrow streets (Dalmatian 'kala'), the beautifully smelling, crystal clear sea, chirping of cicadas, the shade of pines and sunny beaches are natural potentials which Primošten people have long cherished.

Prvić

Lately Prvić has become a serious tourist destination. . . . Sunny beaches, fragrant shade of the Mediterranean pine forests and old stone houses close to the seafront attract numerous visitors. Especially fans of peaceful and discreet summer atmosphere, those who find what they want – rest – in the beautiful sight of the surrounding archipelago from the Prvić's hills, clean sea and picturesque bays and coves.

The website of the Pakoštane municipality (Tourist Board Pakoštane, 2013) invites visitors to discover two nearby nature parks through their gustatory qualities, which present an experiential and distinguishing characteristic thereof. A nearby village Drage and the island Vrgada are presented through vistas, sounds and smells of the nostalgic atmosphere of times passed, in line with the main motto of Croatian National tourist Board – *The Mediterranean as it once was*:

Pakoštane

Pakoštane is a locality on an isthmus between Lake Vrana and the sea, between two bodies of water. It is between fresh water and salt water.

Drage

If for a moment we disregard the construction on the indented coastline, the usual model of contemporary tourism, and let our gaze fall on the pebbly bottom of the crystal clear sea, on the moorings to which old boats are tied; then if we close our eyes and listen to the bleating of the sheep or to the barking of the village dog, and through our noses inhale the scents of the blossoming Spanish broom and aromatic plants growing all over the place, of the figs growing alongside small stone houses... everything would look as peaceful as in biblical times.

Vrgada

Nature blessed Vrgada with the beauty of a lively coastline, fertile fields and a fragrant pine forest; it also adorned it with thirteen small islands that are like a strewn necklace. Those who want to see "The Mediterranean as it once was" should come here – to Vrgada where history turns its pages in slow motion. Here you are still awakened by the silence in the night, during the day one forgets the meaning of hurrying and that somewhere on the mainland cars are still rushing by, while on the beach, in the deep shade of pine trees, hundreds of crickets set the unique atmosphere of summer madness.

In both the 2011 brochure of Hotel Korinjak on the island of Iž (Vlahov d.o.o., 2011) and the brochure of the island of Zlarin (Turistička zajednica Zlarin, 2012) (Fig. 110), sensory experiences which promote distancing from the fast-paced life and relaxing through the contact with a unique combination of typical elements of natural and cultural Dalmatian landscape are skilfully integrated.

The island of Iž is a north Dalmatian pearl at the threshold of the Kornati archipelago, 14 miles away from Zadar, an area of 18 km² of a landscape that is rich in forest and various smells. The fact that there are more than 17 000 carefully cultivated olive trees on the island speaks for itself. There are numerous paths and promenades all over the island, connecting villages along its shore, leading to hidden beaches and coves, going up through natural habitats of medicinal plants (mint, St. John's wort, common rue, immortelle...). Passing through discrete scents of lavender, mallow or garden thyme (wild thyme), touch a rosemary bush to release its scent and abandon yourself to the path, letting it lead you to an olive orchard or a hamlet (Vlahov d.o.o., 2011: 3).

Although not far from the village centre, there are no throngs here, not even in the peak tourist season, when the hotel's guests listen with delight to – the silence. However, an occasional pitter-patter of a fishing boat's engine, laughter of children coming from a nearby beach or a cry of a seagull can be heard . . . but other than that, all is just – silent (Vlahov d.o.o., 2011: 7).

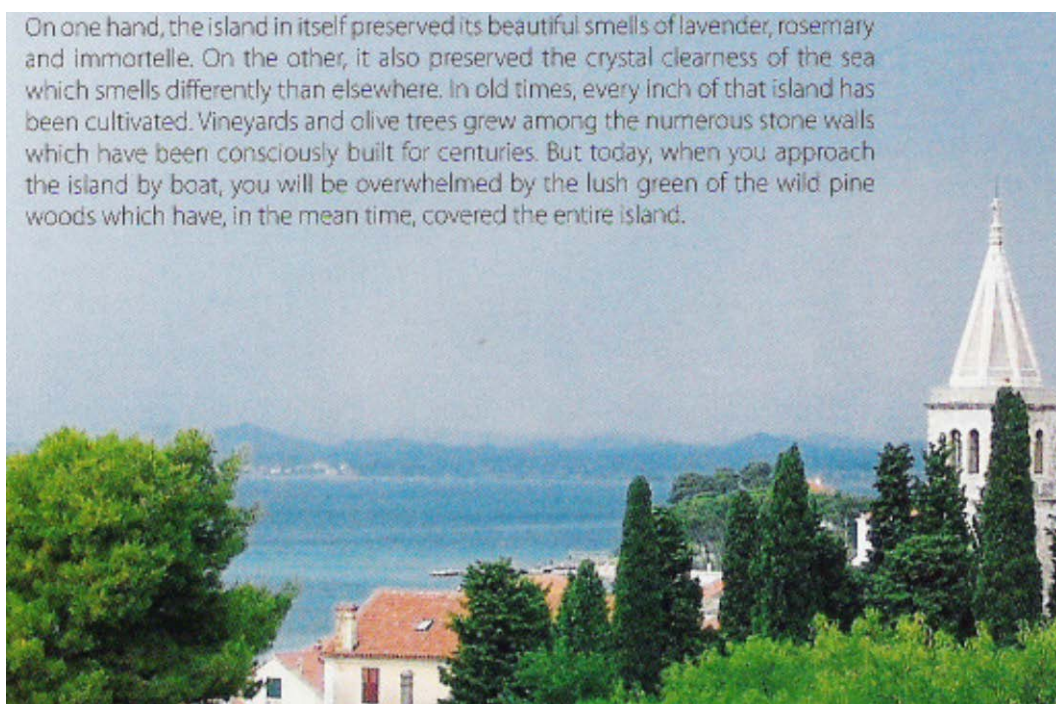


Figure 110: A clipping from the brochure *The Island of red corals – ZLARIN* (Turistička zajednica Zlarin, 2012)

Slika 110: Odlomek iz brošure *The Island of red corals – ZLARIN* (Tourist Board Zlarin 2012)

The analysis has shown that the sensory landscape identity of Dalmatia is primarily based on characteristics of the region's coastal area, whose tourist appeal lies in particular in its

proximity to the sea. Specificities of the Dalmatian hinterland, which is less tourism-oriented than the coast (Senjković, 2006), are, consequently, less represented in the promotion of the region and notion of regional identity. However, the hinterland stretches along a rather vast area and is very diverse. Although close to the shore and islands, it is very different from them in both geographical and cultural and social sense. Precisely in this combination of the proximity and distinctness lies the potential for a further development of tourism and detection of new elements of the regional identity. For instance, areas around Dalmatian karst rivers and streams are, due to their contrast to the generally dry karst which has sparse vegetation, considered important habitats and landscapes. Canyons and waterfalls of the rivers Zrmanja, Krka and Cetina are within reach of the shore but offer completely different sensory experiences, which have slowly been establishing their position in the promotion of tourism.

The website Info Adriatic (Sprait d.o.o., 2013) describes the ambience of Skradinski buk waterfalls in the National Park Krka:

This abundance in water results in rich vegetation so that along its course some 200 species of the Mediterranean and Sub-Mediterranean plants can be found. The air along the River is extremely pure and is scented with exotic mixture of water and plants' scent. In the sunny days above the Skradinski buk a rainbow shows the spectacular colours in the spectrum so, instead of running underneath it, you can take a bath under the rainbow if you are romantic enough!

The Tourist Board of Trilj (City of Trilj Tourist Board, 2008) makes use of sensory characteristics of the Cetina river landscape to emphasize the distinctiveness of the locality and to allure visitors:

Welcome to Trilj

In green oasis which is called Dalmatinska zagora (Dalmatian hinterland), sometimes it seems that time has stopped; river Cetina is still winding peacefully and giving life, while fertile fields bring fruit to the table rich in fragrances of traditional cuisine.

Grab and its mills

Something special is in the air while you are descending to the spring through the small town of Grab who is sharing its name with the stream that gave everything to it.

Above a deep blue eye from which ice water like crystal silently springs, hangs a huge steep cliff covered in unreachable narcissus flower. Only couple of meters downstream is a surprising thundering noise of a foamy waterfall, song of crickets, hum of water, and twitter of the birds that paint with sound this unspoiled realm.

Trilj's center

To completely experience Trilj's province, first glance imposes on you to spare some time to absorb the beauties that hide along the riverbanks in the very center of town. Captive and calm quietness of the river will be interrupted for a moment with

playful ducks passing by, while the hum of the trees from nearby parks is following every step you take.

On a hill in the distance one can see an old church, while on the other side a bell is heard from a holy stone church of St. Michael, patron saint of the town with his adorning statue that people erected to honor his victories.

Although it would be more sensible to observe the two analysed content groups separately, a joint observation reveals that, besides the expected greater presence of the visual, other modalities are rather equally represented in the experiential structure of Dalmatia.

5.3.4.1 Sensory characteristics of Dalmatia in literature – some examples

No scientific studies on non-visual characteristics of Dalmatia have been undertaken prior to this research. Still, it is interesting to compare the results of this research with conceptions set forth in certain monographs and journals. So does for instance Fiamengo (2011) illustratively described typical characteristics of the region: bora, cicadas, fjaka (siesta), seagulls, typical Dalmatian taverns and donkeys. Among the winds, which belong – as the results of the analysis carried out here have shown – to the most prominent and numerous tactile experiences of Dalmatia, bora is perhaps the most significant one. Its coldness, unpredictability, force and influence over the life of local inhabitants Fiamengo (2011: 730-731) depicts as follows:

It freezes everything around itself and literally freezes the blood in your veins, blows through your bones and, like Andersen's Snow Queen, thrusts a splinter of ice into your heart.

When it's extreme, it is like a nightmare, blocking sea and road traffic, and the very look at it, especially in the Podvelebit Canal, fills you with dismay. . . . with its salty dew, a brackish coating on plants, it destroys vegetation. . . .

When we were kids, nothing could make us stay at home, in the warm, but bora did – we sought shelter from it, for it gets through your skin, into your nails, breath, into your mood.

Bora is actually not only a wind, but a condition as well, the elemental coldness and an archetype of the thorough and eternal cold. . . .

Even more paradoxically, bora actually brings dry, clear and above all healthy weather. In many aspects it helped people get to know each other better in the warmth of their homes, in taverns, by fireplaces, to tell stories sitting by the hearth, . . .

Fiamengo (2011: 732–733) follows on to describe the chirping of cicadas:

Do you know which sound is most rhapsodic in Dalmatian landscape? When the sun burns and the heat is broiling, when everything is ready to find a deep shade and take a siesta, an afternoon nap, *pižolot* – what is that sound, voice, tone, which

does not annoy us but makes us blissful? What is that sound which is the most sonorous in this landscape, extremely dominant, what is the most beautiful, persistent, voluble sound surrounding us, especially by the sea, where everything else is lustily singing? You don't know?

Already ready to give up, you lay down into the deep shade of a branchy pine, with the smell of the sea in your nostrils. Suddenly, without warning, unprovoked, there it is again, echoing, chiming! Who? What? A cicada!

. . . [A] proud cicada, whose place a cricket takes at night, but which does not stop singing its deafening trochee and iamb on a knot of a black spruce during particularly hot and bright summer nights. . . . When almost whole Biševo was burned down a few summers ago, you could bear the sight of that islet in front of the Komiža bay in the state it was, black from the coal and without any vegetation, but it was scarily deaf without its regiment of cicadas who burned down.

In a cicada, all our luxuriant summers, our poems and all highlights of the sunny life, all its warmth and easygoingness, its and our eternal Arcadia are condensed.

Šimunović's (1975: III–VI) descriptions of experiences and characteristics of life on the island of Brač reflect some symbols of Dalmatia which have been found in the content analysis as well, such as the landscape of karst and stone, the chirping of cicadas, the scent of aromatic plants, the coldness of bora, tastes of wine and oil, etc.:

The island is my rock. In its limestone cracks olive trees squirm and cypresses lull. On its terraced plateaus fewer and fewer vineyards grow nowadays. . . .

My island is full of stone mounds (Dalmatian *gomila*), built over centuries by hard-working hands, picking out stones from the meagre cleared land to take over narrow strips of soil from the karst and implant into them vine stocks of tart Plavac and sweet Vugava.

On its glades, turfs of garden sage, immortelle and heather, clumps of lavender and rosemary bloom and burn your nostrils. Ripe pomegranates, strawberry trees, barberries and marshmallows, juicy berries of firethorn, bramble and mahaleb cherry all grow in hundreds of radiant colours. And for the deafening singing of cicadas, . . . it is called an island of cicadas.

The autumn gives us wine and oil, which have absorbed in it the sweet nectar of the sun and the vigour of the clime.

In winter months, when the bora blows to the very core of your bones, Brač people cut holm oaks, hornbeams and mock privets.

The spring dresses the island into a most festive costume. . . . Rosemary, garden sage, laurel, Dalmatian chrysanthemum, lavender and mint pervade everything

around them. Cherry and sour cherry adorn well-dug vineyards with their blossoming tree crowns.

The spring shows all its beauty in the coves of Brač, those on its west, uninhabited coast, with steep wooded slopes of wild maritime pine, small shingles, scattered like pearls, in its stems. In the morning, the dream and melancholy escape the lulling coves, the dawn and the trembling breeze of pine needles awakens them and fishermen haul nets on their headlands, disturbing their tranquillity. Fishermen's enclosures are lavish with silvery jumps of scared sardines, lightly swelling the morning sea, blue as melted vitriol in small eye-shaped vineyard beds. They are sullen at noon, dazed by the sun, smell of pine trees, heather, thistles . . . and the deafening chirping of cicadas on bushes of prickly juniper, common juniper and chaste tree. And they are in love in the early evening, when mistral subsides and the sea becomes calm again, ceasing to caress the shingle pearls in pine stems.

In an article in the magazine *Hrvatski zemljopis (Croatian geography)* Bakija et al. (1998: 26, 28) also make reference to this typically Dalmatian island:

Green of pine forests, vineyards, olive orchards and holm oaks, and blindingly white from the marble that cannot be found anywhere else, anchored for eternity amidst the crystal clear sea, the island of Brač has always amazed with its unique beauty and rich heritage.

Among shrubs, pomegranate (*Punica granatum*) can frequently be found on the island, Spanish broom or weaver's broom (*Spartium junceum*), which has beautiful yellow flowers and a characteristic distinguishing fragrance spreading throughout whole island in late spring, rosemary (*Rosmarinus officinalis*), an aromatic shrub plant, . . . garden sage (*Salvia officinalis*), a medicinal and aromatic plant whose honey is one of the most wanted natural products of the island of Brač, . . . caper (*Capparis repensis*), a condiment particularly used in various gastronomic specialties of the island of Brač, etc.

They go on to mention agricultural plants most frequently found on the island and products made of these – grape vine and wine, olive trees and olive oil, almonds, figs, lemons and mandarins. A short travelogue given in the article shows distinguishing characteristics of Brač and Dalmatian landscape:

At 500 m above sea level, resisting the heat of the summer, bora and winter dampness, Gornji Humac still sustains. . . . We brought memories and the Humac cheese, and enjoyed eating it slowly in the company of the Bol Plavac⁹². . . . It's already autumn, but hibiscus still has its aroma and blooms. . . . Who does not recognise the beach Zlatni rat from tourist brochures? However, even a single walk along it, treading barefoot over its sand, is more valuable than a thousand brochures. We wouldn't miss it, would we? With trouser legs rolled up, barefoot,

⁹² Plavac is an indigenous red wine from Bol and few other locations in south Dalmatia.

we are measuring the length and delicacy of the sand, sink into it and are filled with joy, happy like children (Bakija et al., 1998: 35).

The tactile identity of Dalmatia, which, as the analysis has shown, is largely established upon dominant coastal winds, can be observed in a travelogue by the geographer A. A. Paton, *Highlands and Islands of the Adriatic*, issued in 1862 (Wild Bićanić, 2006). The symbolism of winds does not only lie in their tactile component, but in their influence on the overall mood of people:

Of the winds he describes the *mistral* (maestral), which moderates the excessive heat of summer, the *scirocco* (in Dalmatia called the *jugo*, jug meaning south), which brings warm air from the south. The *jugo* is considered in Dalmatia to make people nervy and bad tempered On the contrary, the *bura* or north wind, which Paton describes as “marked by clear sunshine and accompanied by chilly bracing air from the peaks of Vellebitch”, is considered in Dalmatia to make people energetic and good tempered (Wild Bićanić, 2006: 88).

5.3.5 Discussion of the content analysis of poetry and promotional materials

The analysis has corroborated some already recognised elements of Dalmatian landscape identity. In terms of the visual, these are certainly the elements of non-built cultural landscape (vineyards, olive orchards, dry walls, etc.), such as Hrdalo et al. (2008) and Butula et al. (2009) mentioned in their studies. As an auditory symbol, *klapa* singing can be distinguished. According to Povrzanović (1991) it is a unique element of Dalmatian cultural identity (cf. Milin-Ćurin, 1995). Moreover, it is at the same time an auditory feature of landscape identity, not only due to its semiological association to the actual regional territory, but because it is often sung and heard outdoors, complementing, thus, Dalmatian atmosphere. This can easily be discerned in the descriptions given by Wild Bićanić (2006), who also mentioned that the British novelist Ann Bridge described a *klapa*’s singing in her 1935 novel *Illyrian Spring*:

This is another experience that is common in Dalmatia, to hear music, usually singing, especially in the evening, coming from the shore, from restaurants, from street corners. It is usually sung by a group of men of various ages. They mostly sing Dalmatian traditional songs and some *Klapa* attain a sophisticated musical level (Wild Bićanić, 2006: 152).

One of the rare content analyses into spatial conception based on senses has been carried out by Pan and Ryan (2009). Their analysis included 199 travelogues and articles by travel journalists visiting New Zealand in the period 2000 – 2004, relating to New Zealand as a whole and three individual destinations: Auckland, Wellington and Canterbury. Visual experiences have not been recorded due to their omnipresence in travelogues. The analysis has shown that all five senses are used in only 3% of the travelogues, and in 71% of them only one or two senses. The share of senses in the analysed content is very similar to that in promotional materials analysed within this thesis: visual, gustatory, tactile, auditory and most uncommon – olfactory. They have also found that there are differences in sensory presentations of the four selected destinations – whereas descriptions of New Zealand as a

whole and of Canterbury area are described through sounds, smells and tactile sensations, in those related to urban centres of Auckland and Wellington a predominant utilisation of gustatory experiences (food and beverages) over other three senses can be discerned.

Gastronomy can be a very prominent element of the place identity and is almost omnipresent in tourism promotion. The attribute 'Mediterranean' is ascribed to cuisines of coastal regions all across the Mediterranean, though there are certain differences among them. Taking the Slovenian region of Primorje as an example, Rogelja (2006) argues that, within the framework of tourism, presentations of 'healthy Mediterranean food' are established around four concepts: 'natural', 'authentic', 'healthy' and 'multicultural'. Analysing tourist brochures and postcards (both pictures and the text) available in tourist offices on the Slovenian coast in the period between 1998 and 2000, she has found that olives, figs, prosciutto, seafood, wine, together with several other products, form the backbone of the region's cuisine.

Although the cuisine of Dalmatia differs from that of the Slovenian Primorje and there are some differences within the region itself as well (Skoko, 2004: 198; Žaper, 2004: 234), the aforementioned ingredients, together with several other, prevail in the content analysis conducted here as well. The similarity of ingredients confirms the close connection between the cuisine and the local landscape, while the local society and culture act as agents that generate differences in geographically similar regions.

Besides gustatory, a cuisine generates the olfactory identity as well. Moreover, the art of preparing and consuming food activates five senses – sight, hearing, smell, touch and taste. Smell and taste, the so-called chemical senses (Gibson, 1966; Polič, 2007), are very closely connected. So can smells for instance be used to describe a gustatory experience: "[o]ne thinks, for instance, of Bruges with its smell of chocolate, and the Brussels' aroma of *moules* and *frieten*." (Dann and Jacobsen, 2003: 18). In the tourism promotional materials smells of food are represented with the share of only 7% in overall olfactory experiences, but in poetry with so much as 14%.

In 65 selected units of classical and contemporary literature, Dann and Jacobsen (2003) have analysed the olfactory representation of places in positive, neutral or negative terms. They have divided the described locations in relation to time and space: pre-modern, modern and post-modern and countryside and urban areas respectively. Despite a number of examples displaying olfactory specificities of individual locations, the analysis did not focus on the identification of smells. Their analysis has shown that countryside smellscapes are portrayed more positively than those of urban areas, just like natural, cultivated and countryside landscape is preferred in the visual sense over urban, technical and industrial ones (Cifrić and Trako, 2008: 381). Dann and Jacobsen believe that, in order for a tourism destination to be successful, its typical olfactory characteristics must be emphasised, but also tourists coming from places that have less distinctive smells or those smelling worse addressed. On the other hand, the authors argue that the growing popularity of favela tours in Rio de Janeiro, "where visitors can savour the genuine 'smell of poverty' associated with slum life" (Dann and Jacobsen, 2003: 18), shows that sometimes even smells perceived as negative can, through their distinctiveness and symbolism, contribute to the development of tourism.

However, it is in the nature of tourism promotion to emphasise that what is attractive and interesting in a positive way. Pan and Ryan's (2009: 631–632) analysis of travelogues relating to urban destinations of Auckland and Wellington has shown that smells of food and beverages prevail over smells of 'nature' as well as that negative smells of exhaust gases and the night smell of wood-burning stoves are ignored. Such trend has also been observed in the analysis of selected tourism materials for this thesis, and even of selected poetry, with only a few exceptions. A positive sensory character of a place can be achieved by creating, stimulating and intensifying pleasant, but also by reducing the quantity and intensity of unpleasant experiences.

5.3.5.1 Advantages, shortcomings and possible improvements to the method

In the search for sensory spatial characteristics in textual materials, a content analysis cannot rely upon simple, general codes such as 'a vista', 'a sound', 'a smell' or 'an odour', 'a touch' or 'a feel' and 'a taste'. Sensuous experiences, as explained above, are described in various ways, explicitly or implicitly, and using such code system would mean a drastic simplification and, consequently, less precise results. "Metaphor plays a key role in descriptions of sensuous experience, . . .", Rodaway claims (1994: 36), and goes on to add that metaphors are commonly found and reflect a complex interplay of senses.

However, it is important to define a clear set of codes and to adhere to them consistently throughout the whole procedure. It should be taken into consideration that many experiences are multi-modal, thus including more than one sense. With such experiences, if possible, the most prominent sense should be evaluated (e.g. the howling of bora is an auditory experience, although bora is generally known for its coldness (coldness); a grey donkey represents a typical image of Dalmatia, though it can call up associations related to its bray as well). The accuracy of results is closely related to the quality of the analysis criteria.

The main shortcoming and a possible improvement to this analysis lie in the coding procedure, which has been done here by the researcher herself, due to limited resources. Usually, in order for the results to be more reliable, at least two coders are required, who will independently encode the material, preceded by the reliability check and the reconciliation between the coders based on encoding a smaller sample of units of analysis (Halmi, 1996; Pan and Ryan, 2009).

The advantage of the method is twofold. In this case it is reflected in the selection of two very different types of content – poetry and promotional materials, the results of which complement one another, thus enriching the knowledge on the identity of Dalmatia. In general, the advantage of content analysis over the other two methods rests upon the fact that it allows insight into a 'spontaneously' expressed social attitudes regarding landscape perception and values, without having actively questioned research participants or encouraging them to ponder about the research subject.

6 DISCUSSION

This section offers an all-encompassing review of the three-part research process and a critical overview of results in context of the research questions and previous knowledge regarding the research topic. Unlike the discussions following the methodological chapters, this section puts emphasis on the comparison of results gained by the three methods and understandings originating therefrom as a whole.

The first thing to be pointed out is the fact that the results based on each of the three methods have shown that the perception of Dalmatia is based on all examined perceptual modalities. By the participants of the survey questionnaire and sensory walk, as well as within the analysed contents, Dalmatia has been recognized by its visible landscape features, but also by its sounds, scents, tactile senses, tastes and specific ambience properties. This strongly corroborates the assumption that the landscape identity of the region does not originate only from its visual properties, but also from its auditory, olfactory, gustatory and multisensory properties (herein referred to as compound).

Another valuable insight resulting from the comparison of the results is that, according to all methods, the importance of non-visual characteristics in the formation of the notion of the region is not negligible. The shares of modalities somewhat differ, depending on the method. All three methods have shown that the experience and conceptualization of the Dalmatian landscape mostly rely on visible features. Such a result is in accordance with the fact that most information from the surroundings is perceived through the sense of sight, as well as with the previously mentioned pronounced domination of sight over other senses, especially in the Western culture. The domination of sight is, however, only partially caused by the first, biological fact, and is partly the result of socially acquired and accustomed focusing of perception onto one's visible surroundings, while other stimuli are more rarely in focus. Some research has shown that the sensory value systems differ in some cultures (Geurts, 2002; Storks, 2012). It can, therefore, be assumed that further research of sensory properties, together with education and practicing focusing perception to modally different stimuli, would foster better understanding and knowledge, and perhaps different assessment, of the human environment qualities.

According to the results of the sensory walk and poetry analysis, after visual features, auditory features are most frequently found in the perception and notion of the Dalmatian landscape. The participants of the survey questionnaire, on the other hand, very consistently preferred olfactory over acoustic experiences, while in the analysis of promotional materials, the most represented characteristics of the region, following visual, were gustatory characteristics, which reflects the importance of gastronomy in the tourist offer. Each of the three research approaches (or, in the case of content analysis, both of its segments) resulted in different structure of the multisensory perception of the region (i.e. same modalities but in different ratios) (Tab. 7). Even though visual features were most represented in all of them, as expected, the different ratios of non-visual features in each method point to the fact that there is no definite 'sequence' of sensory modalities in experiencing the Dalmatian landscape and the perception of its identity. This indicates that the character of the region is well expressed within each perceptual dimension – auditory, olfactory, tactile, gustatory and compound.

Table 7: Representation of modalities in the results of a certain method/method segment
 Preglednica 7: Zastopanost modalitet v rezultatih ustrezne metode/segmenta metode

Survey questionnaire*	Sensory walk**	Analysis of poetry	Analysis of promotional material
visual	visual	visual	visual
tactile	auditory	auditory	gustatory/compound
gustatory/compound	olfactory	tactile	tactile
olfactory	tactile	olfactory	olfactory
auditory	compound	gustatory/compound	auditory

* In the survey questionnaire the modality ratios vary depending on the question, thus, this preview is approximate.

V anketnem vprašalniku razmerja modalitet variirajo glede na vprašanje, zato je za prikaz okvirni.

** The gustatory experience aspect was not the subject of research in the sensory walk (even though several were noted).

V čutnem sprehodu gustatorna doživetja niso bila raziskovani aspekt (čeprav jih je kar nekaj zabeleženih).

Regarding the above, the three-part research, in a certain sense, pointed out that the experience of space was not a set of unrelated perceived stimuli. All the sensory information is interwoven into a complex mosaic, constantly shifting in time and space, and thus always compounded into unique experiences. This was first noticeable in the results of the questionnaire, where certain answers appeared which imply two or more modally different stimuli (e.g. lavender – potentially including visual and olfactory experience; sea – visual, auditory, olfactory, tactile, etc.). Therefore the answers, primarily those to open-ended questions, were represented as groups of characteristic landscape features, without being grouped in accordance with modalities. In the context of sensory walk and content analysis, where experiences were grouped in accordance with the corresponding modality, multimodal experiences were dubbed ‘compound’.

In the course of the research it was noticed that many landscape elements and phenomena, despite the fact that sometimes one sense was dominant, are perceived via more than one sense. For example, wind elicits auditory, tactile, visual, and, sometimes, olfactory sensations, and, apart from cases when one feature is explicitly emphasised (e.g. *whisper* of the wind), some experiences are very hard to be precisely modally determined. This interwovenness is one of the difficulties in the study of sensory experiences of the environment.

The complexity of environmental experience is not only contained in their multimodality. A constituent part of the experience, notion and identity of a place is also its psychological or emotional dimension – ‘psychoscape’, as it was named in prof. Krygier’s course (2008). It is the research subject of psychogeography, defined by Guy Ernest Debord as “the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behaviour of individuals.” (Krygier, 2009c). The ambience of certain location and the general feeling a person has when they are in that location are tightly connected with sensory stimuli from the surroundings. Some studies have shown that the feeling of tranquillity is closely connected with the perception of visual and auditory properties of the environment (Cain et al., 2013; Pheasant et al., 2010;

Watts and Pheasant, 2013), for example, “low levels of built development, traffic, noise and artificial lighting” (Swanwick and Land Use Consultants, 2002: 57).

As well as perception of sensory stimuli, the experience of the general ambience depends on more than the characteristics of the space. It is certainly conditioned by individual aspects such as current mood, health condition and the like. For example, Henshaw (2010) noticed that urban smellscape experiences in the course of the sensory walk depended, to a certain extent, on the physical condition (e.g. the influence of the feeling of hunger on the positive evaluation of the smell of food and the influence of pregnancy or illness on olfactory sensitivity and preferences). In the context of increasing interest in the role of sensory experience of the environment, further research is necessary regarding the influence of visual and auditory as well as other, primarily olfactory and tactile, stimuli on the atmosphere of the space and human emotions.

It is worth noticing that within all sensory modalities, identity is carried by features that are generally experienced as aesthetically positive (i.e. nice and pleasant experiences). Dalmatia was mostly described through such landscape characteristics in both the analysed content (especially promotional materials, which aim to represent only the best characteristics of a certain location) as well as by respondents in the survey questionnaire. However, the sensory walk also identified some negative characteristics: the unpleasant smell of exhaust gasses, the smell of waste containers, the stench of sewage system and the smell in harbours. They were noticed in the urban areas of Dalmatia and a part of the respondents thought they were usual and recognizable. A respondent from Latvia, who had visited Dalmatia once, gave the following reply to question P12 (what their experience of Dalmatia would be if they could not feel non-visual sensations): “Depends on whether these experiences are pleasant or not. Funny, but the most memorable thing to me was the awful stench of garbage and roadkill on my daily route.” Even though unpleasant smells and other unpleasant sensory experiences are exceptionally rare throughout the research, these examples show that they can be very impressionable and reduce the pleasantness of a place in which other aspects are aesthetically positive. It is important to take into account this knowledge when planning, designing and maintaining the landscape in order to avoid unpleasant experiences (e.g. removing illegal waste dumps, installing wastewater treatment systems, careful planning of container location, introducing more frequent waste removal in the summer, etc.).

6.1 A SPECIAL OVERVIEW OF THE SENSORY WALK

Sensory walk is a qualitative research method that has been applied here in a form adapted to the research of multiple dimensions of the sensory landscape identity of Dalmatia. To our knowledge, this is the first scientific application of the method to the six sensory categories and the first applied to regional scale. It has been acknowledged from the very beginning that sensory walk enables the recording of only a part of the perceived environmental stimuli (Rubidge and Stones, 2009). It is still not possible to document the totality of experiences and feelings elicited by space during the walk, either by noting them down or by recording them using the available technology. Additionally, a part of environmental stimuli is probably perceived non-consciously (undirected), as was explained earlier in the thesis.

As a method for the examination of sensory landscape identity, the sensory walk can here be compared with other two methods and validated for this purpose. The results largely correspond with the results of the survey questionnaire and contents analysis. However, two things should be pointed out:

- 1 Recorded experiences depend on the current conditions in the field, meaning that some typical characteristics do not have to be present and perceived at the precise moment of the walk, and
- 2 The evaluation of the level to which a certain experience is typical partly depends on the context in which it is observed; therefore, some of the perceived elements and phenomena, which are not that authentic, can be evaluated as typical (e.g. objects and equipment on the beach).

Set up like this, this method can be applied not only to scientific purposes, but also to educational and economic purposes (e.g. tourism). It can be used to explore the identity of an area for the needs of the development of tourist offer and promotion, for the development and improvement of products and services and the development of strategies for preservation and protection of landscape values. However, in contrast to urban entities, the systematic research of larger areas, such as regions or countries, would require more time, as well as human and financial resources. The factors that should be taken into account are the following: an appropriate sample of different locations representing the research area; walking in different seasons, times of the day, and weather conditions; including respondents of various profiles (age, sex, education level, profession, locals, visitors, etc.); exploration of an individual modality for better focusing of attention; and subsequent interviews or focus groups. Taking into account these factors, it is believed that research conducted on the basis of a sensory walk would give a very precise notion of the sensory landscape identity of an area.

Taking into consideration the relatively small sample of respondents, which is typical for sensory walk as a qualitative method, the results cannot serve as a source for drawing general conclusions. This method is, however, a good tool for the acquisition of preliminary, basic knowledge about a place, which can serve as a guideline for subsequent, methodologically more complex, research, as well as for completing the knowledge on the perception of landscape, gained through other methods.

6.2 A SPECIAL OVERVIEW OF THE CONTENTS ANALYSIS

The results of the content analysis have shown that the shares of considered modalities in the presentation of Dalmatia depend on the type of reviewed contents or, more precisely, its purpose. Therefore, when applying this method, it is advisable to use at least two different types of contents. However, there is a connection between poetry and promotional materials. It exist in the compliance of the tourist promotion elements with the characteristics which are (according to poetry) long and deeply rooted in the consciousness and feelings regarding Dalmatia. A dual analysis confirmed almost all the significant characteristics of the regional landscape previously determined in the survey questionnaire and the sensory walk. The differences that arose probably originated from the differences in methodologies.

Apart from the promotional materials and lyric poetry chosen here, landscape symbols of the region can be examined in other contents such as novels, travel magazines and other types of magazines, newspaper articles, TV and radio commercials, blogs, forums and other forms of electronic communication, and even ergonyms (names of companies, organisations, associations, etc.). Ergonyms often contain geographic names and reflect the typical characteristics and values of the area, while the message they carry must be recognisable and elicit certain associations and emotions in users (Šakaja, 2003: 27).

When choosing their destinations, tourists rely, among other things, on the experiences of the people who visited such destinations earlier. Nelson (2011) offers evidence on the influence of written and visual materials of travellers who visited the place previously on the tourist presentation and notion of the identity of the Caribbean. Tourists' reports and comments represent an original source of information for potential travellers, but also for those who explore the character of place. The development of the Internet and interactive on-line communication resulted in the possibility of tourists to pass personal experiences to the wider public in a simple manner and to evaluate destinations and read about the experiences of others, and, consequently, in the growing interest of scientists in such contents. "These posts are called 'user-generated content' (UGC), referring to data in the form of text, photos, tags, audio, or video created by an individual and hosted online, where it is accessible to others." (Johnson et al., 2012: 293). The analysis of such contents was also suggested by Pan and Ryan (2009). Real experiences, positive and negative, form an image of place, both with tourists and with locals. In researches into the character of place they should be consulted, for they can discover new dimensions of the identity and act as a counterweight to tourist materials that aim at pointing out the 'positive experiences', or even to sentimentally-oriented lyric poetry.

6.3 THE CONCEPT OF SENSORY IDENTITY

Kučan (1996: 132) proved that the social conception of visual identity of a place is not connected with the specific area limited by boundaries, but rather with individual spatial elements and characteristics (characteristic areas, landscape motives and particular features) and their combinations. According to Swanwick and Land Use Consultants (2002: 3), the notion of landscape originates from visual and non-visual sensory experiences, and the specific combination of such components defines the character of the landscape and creates the sense of place. This research offers convincing evidence for that, which means that the character and identity of landscape should not be considered separately from its non-visual characteristics.

The abovementioned accounts for the dilemma regarding how places with similar characteristics have different identities. The identity originates specifically from the combination of spatial characteristics (Balej et al., 2010: 107; Hough, 1990: 31, 36–39; Lukermann 1964:170, cit. by Relph, 1976: 3). Just as many people share the same physical (e.g. hair or eye colour, height, voice colour or timbre) and character features, but are still unique, places conform to the same principle. Many landscape features typically connected with Dalmatia are also present in Italy, Greece or Turkey (e.g. the sea, pine trees, crickets), but each of those countries or regions has a unique identity, as was described by Radica (1971: 75). The importance of the presence of all components of landscape mosaic in the

creation of an overall impression is perhaps understood almost intuitively, as can be concluded from the words of a Slovenian fisherman:

If small-scale fishing disappears, there will be nothing left for the tourist to gaze upon. They want to see fishing boats, they want to smell nets, and to eat the fish that I catch. (Rogelja, 2006: 102)

Bullen et al. (1999: 22) concluded from the results of their research that “respondents see a landscape in its entirety, composed from the complex interaction and interplay of individual landscape elements and features that together create a particular landscape.” When studying the landscape, one should consider its various aspects individually, but also holistically, as a unique whole made out of all aspects and their relations (Anzani, 2010: 68).

6.4 LIMITATIONS AND POSSIBLE IMPROVEMENTS IN THE RESEARCH PROCESS

Despite the considerable effort invested in the planning and implementation of objective research, there were certain limitations and difficulties, most of which are elaborated in discussions following each of the methodological chapters. Such limitations originated mostly from the lack of financial and human resources, due to which this rather extensive research was conducted independently, within the possibilities of the author and her mentors.

At this point it is also worth noting that when using a multimethod approach to this type of a subject it is advisable to consider the chronological sequence of selected methods, especially if the researcher is not personally well-acquainted with the research area. Even though each method represents an independent research, it is useful, if possible, to apply them in such a manner that the findings from the previous method facilitate the planning and organization of the following ones. In this case, content analysis offers a relatively detailed insight into landscape characteristics and can be helpful in the formation of survey questions, especially of closed-ended questions that require multiple answers.

7 CONCLUSIONS

The research presented herein is a step towards a better understanding of the concept of place identity in general. Regarding the key question from the beginning – are there characteristics of non-visual landscape identity of Dalmatia – a positive reply has been obtained. It has been determined that the notion of the region is formed by visual, auditory, olfactory, tactile and gustatory characteristics of the landscape and its specific atmospheres. The human experience of space is always a combination of modally different sensory stimuli, and connection and identification with space consequently originate from all of them.

A significant finding of this multi-method research is the congruence of recognizable and typical features determined by all three methods. Further, within each modality the regional landscape identity is generated by both natural and man-made elements and phenomena.

7.1 AN OVERVIEW OF THE HYPOTHESES

The results confirmed all four hypotheses. Therefore, the following conclusions can be drawn:

- 1 Apart from visual characteristics of the landscape, the landscape identity of Dalmatia comprises auditory, olfactory, tactile and gustatory characteristics of the landscape, as well as specific ambiances.
- 2 The Dalmatian landscape is perceived as diverse in the sensory sense, that is, each sensory modality offers several recognisable characteristics.
- 3 Non-visual characteristics contribute to the overall experience of the region and have an impact on the sense of place.
- 4 The notion of the Dalmatian landscape is based on visual and non-visual characteristics of the region, both for the locals and for visitors. Moreover, these notions are based on very similar landscape properties.

7.2 THE MOST PROMINENT CHARACTERISTICS OF DALMATIAN IDENTITY

The prominent features of the visual identity are the sea (sometimes abstracted as blueness and blue colour), natural beaches, and exceptionally indented coast. The interesting fact is that Dalmatia is perceived through two contrastive features: rocky terrain and karst, implying scarce vegetation and its mostly undergrowth forms on the one hand, and lush evergreen vegetation on the other hand. The identity of the cultural landscape is represented by olive groves, drywalls, stone-huts, boats and ports, while 'built' landscape is recognizable for its traditional architecture featuring stone houses, paved streets, churches, forts, wooden shutters, and other elements.

The most impressive features of auditory identity are the sounds of the sea, the sound of the cicadas, seagulls and klapa *a cappella* song. The ringing of the church bells, even though quantitatively less represented, has always been recognized qualitatively as a sound typical for Dalmatia (in sensory walks and content analysis). Bell towers and stone churches are therefore a source of both visual and auditory identity. The ringing of the church bells is also the basic feature of auditory identity of the Monte Stella area in the Italian region of Campania, “where the sound system built by the bells embodies the community and the landscape in which it recognises itself, pointing out the fundamental role of sound perception in building of land identity” (Anzani, 2010: 71). Along with the church bells, there are klapa *a cappella* singing, sounds of people (e.g. the language, dialect, loud speech) and their activities, and sounds of ships as the characteristics of the cultural soundscape – features of cultural, man-made acoustic landscape. These are mixed in space with natural sounds, which proves the inseparable nature of natural and cultural landscape components and the contribution of man’s presence to the richness of the soundscape.

The olfactory identity is based on the smell of the sea, scents of aromatic herbs (pine trees and cypresses, lavender, rosemary, immortelle, etc.) and of food, while the tactile identity relies mostly on the sensations of air (warm climate, the sun, heat, cold *bora* wind and sultriness) and less on the tactile features of objects and surfaces (stone, grass, sea, pavement). In the gustatory sense, it can be said that saltiness is the most expressed direct gustatory feature of the Dalmatian landscape, while in terms of gastronomy, the gustatory identity is comprised of the taste of seafood, fruits and vegetables, typical dishes (brodetto, boiled fish and vegetables, grilled dishes, etc.), spices, prosciutto, cheese, desserts, wine and flavoured liqueurs. Dalmatian gastronomy based on local foodstuffs is a significant element of regional identity with number of inter-regional variations (Žaper, 2004). Gastronomy also generates olfactory identity. According to the sensory walk, the smells of food are integral and recognizable features of Dalmatian open spaces.

The typical atmosphere is also an important aspect of place identity. In that sense, Dalmatia is mostly associated with two contrasting characteristics of the atmosphere. The first of those regards the lively summer atmosphere and includes a multitude of people, both locals and tourists, a number of events, crowded beaches, fiestas, lazy mood typical of hot summer days, relaxed pace of life, carefreeness, rest, walks, sipping coffee, spending time with others and spending time in the open in general. Typical for wintertime are few people, isolation and desertedness, empty streets and squares, the presence of few local people, winter activities such as olive picking and spending time in taverns, peacefulness, and feelings such as nostalgia and melancholy. There are nuances within this dichotomy. The atmosphere of peacefulness and calmness of both towns and the natural landscape typical for the winter, can also be found in the summer, mostly in hidden coves, on smaller and more remote islands, in smaller towns and locations where tourism is less developed. In the sleepiness of the winter Dalmatian ambience, vibrancy is noticed on sunny days when there is also commotion in the city streets, squares, markets, at waterfronts, and when people relax and spend time on café terraces.

These most prominent features of the landscape that research has revealed correspond to the notion of Dalmatia and its landscape which is already existent in everyday social

discourse (conversational) and material communication (media), thus they confirmed the initial expectations. Moreover, although hypothesis assumed at least several characteristics within a modality, each proved to be much more diverse. Some examples in the soundscape are sounds of birds, whisper of the wind and sounds of people and their activities, and the variety of plants' scents in the smellscape. Each modality contributes to the experience of Dalmatia in a unique way, but these aspects of perception are harmonious, for many landscape features stimulate more than one sense providing modally different typical experiences.

7.3 METHOD-RELATED CONCLUSIONS

Content analysis has proved to be a successful method for acquiring an insight into the social conception of non-visual place identity. Even though the tourist promotion of Dalmatia reaches for different sensory features of the region – visual, auditory, olfactory, tactile, gustatory, and combined – the offer is still mostly based on the beauties of the landscape (sea, pine trees, beaches), culinary particularities and significant events. Sounds, smells, and tactile sensations have not been used to such an extent, even though the review of poetry shows the existence of great potential in those landscape components. In full swing of contemporary globalisation, the fostering of imagination through sensory experiences can present a way to reach potential visitors and a good way towards building and fortifying regional identity.

The uniqueness of the sensory walk method lies in the possibility to discover those recognisable landscape features that are available through directly experiencing the landscape, while they are difficult to reach by utilising methods requiring retrospection, such as survey and content analysis (e.g. beach facilities, the reflection of lights in the sea at night, sounds of people, of their footwear sliding, sounds of masts and activities in ports, the smell of oil and lubricant in harbours, the smell of sunscreen and summer perfumes, etc.). The results of the sensory walk have been tested here by the results of the other two methods, proving it suitable for the investigation of the sensory landscape identity. However, even though the sensory walk can be used independently, due to the dependence on the site conditions at a selected time and relatively small number of participants, to gain a more complete insight into the identity it is advisable to combine it with other methodological approaches.

7.4 GENERAL CONCLUSIONS

The conclusions drawn from the research results can be summarised as follows:

- 1 The individual and social conception of the Dalmatian region is multisensory and built upon typical sights, sounds, smells, tactile sensations, tastes and ambience features. Moreover, it is not only established upon modally distinct characteristics, but on constantly fluctuating combinations thereof.
- 2 Although no similar studies have been conducted that would allow a comparison, the fact that various distinguishing characteristics of the region were identified within each modality suggests that the landscape of Dalmatia is diverse in sensory terms –

both horizontally (within each modality) and vertically (through all the modalities together).

- 3 Non-visual landscape characteristics shape the identity of Dalmatia both for local people, whose everyday life takes place in it, and visitors. The set of characteristics that the notion of Dalmatia is based upon varies insignificantly between its inhabitants and its more or less frequent visitors. This corroborates the assumption that, despite the attention being directed mostly to the visible environment, the authenticity of a place, its *genius loci*, is discerned through a mosaic of sensory information from the environment, even in places we visit for the first time.
- 4 Multi-method approach is very useful in the research of sensory landscape identity, for it gives more complete knowledge of the issue by providing an insight from several perspectives.
- 5 The sea can be considered the strongest distinguishing feature of Dalmatia, because it creates recognisable experiences in all sensory modalities (vistas, sounds, and smell of the sea, saltiness, warmth). A number of other landscape features also generate identity in more than one modality (e.g. vegetation – visual, olfactory and gustatory; sun – visual and tactile; church towers (bells), boats, seagulls – visual and auditory; local food – gustatory and olfactory, etc.). Thus sensorially different information create harmonious landscape impressions and identity.
- 6 Typical distinguishing characteristics of landscape (vistas, sounds, smells, touches and tastes) do not necessarily have to be continuously present in the environment to be components of its identity. Their continuity can be expressed through occasional occurrences, usually at more or less rhythmical intervals, either cyclically or seasonally. The dominant wind of an area is a good example thereof – it can occur only in one season (e.g. winter) and at unpredictable intervals, but it still shapes the landscape character. Although ephemerality can be observed in visual landscape as well (e.g. vegetation becoming verdant in spring, leaves changing colours in autumn, snow cover, etc.), it is even more apparent in the non-visual landscape. Despite their relatively inconstant character and regular changes or appearance and disappearance, they can also be part of a landscape identity.
- 7 In the sensory landscape identity of Dalmatia no definite sequence (order) of the modalities can be proposed. Besides the most represented visual component, the order (ratio) of other modalities changes depending on the method applied.

A comprehensive research of modally different experiences proved to be a very demanding task. Each sensory system works in its own typical way and, even though the experience is the totality of environmental information in a given moment, focusing on one modality can be a more productive approach for analysis purposes.

In general, the research points to the fact that people recognize space by its characteristic vistas, sounds, smells, tactile senses, tastes and ambiances. The idea of a multisensory identity is not applicable only to the region but to other spaces as well, both closed and

open, ranging from rooms, buildings, streets, and cities to a region or even a country. The confirmation of these assumptions through the three-part research can be considered one of the most important contributions of this thesis.

7.5 CONTRIBUTION TO SCIENCE AND THE DIRECTION OF FUTURE RESEARCH

The topic at hand regards the phenomenology of landscape and, in a narrow sense, pertains to the field of landscape architecture, but is, however, the subject of numerous other branches of social sciences and the humanities (psychology, philosophy, aesthetics, sociology, anthropology, human geography, architecture, landscape ecology, etc.). The recent 'sensory revolution' or 'sensory turn', as dubbed by Howes (2012, 2013a, 2013b), brought the issues of the senses and sensory experiences to the centre of interdisciplinary interest. However, the scope of such knowledge is still narrow, so each new piece of knowledge is exceptionally valuable, both for the answers obtained and for the questions it rises. This paper expands on such knowledge.

This is the first research of multiple sensory properties of landscape in the context of place identity. Its contribution is already in turning the attention to the non-visual spatial features as active factors in shaping the human everyday experience. Moreover, it offers a base for redefining the concept of place and landscape identity as a multisensory phenomenon, since it implies a relation with the space which originates from a complete embodiment – sensory, cognitive and emotional. The understanding that sensory characteristics of the environment influence our feelings, attitudes and behaviour should foster further research and the application of such knowledge in practice.

There are still a number of gaps in the knowledge of the sensory features of landscape. Firstly, much less is known about the non-visual than about the visual characteristics. Secondly, place identity is, practically, unexplored in terms of any non-visual modality. The lack of such knowledge makes room for many interesting researches.

One of the issues arising from the multisensory approach to the environment is the issue of aesthetics, that is, the experience of beauty, ugliness, and everything in between. The term 'aesthetics' is derived from the Greek word denoting sensory perception (Berleant, 2012: 54; Bowring, 2007: 82; Aesthetics, 2009), but the meaning given to the notion in the 18th century by Alexander Baumgarten (i.e. science of the nature of beauty, where beauty resided in the mind of the observer) has remained until today (Reiss, 1994). Since then, the emphasis seems to have moved from the observation with all senses to the beauty of the visible, and today, in everyday speech, the notion mostly relates to visual appearance. Still, some scientists remind that the aesthetic experience is imminent to all forms of perception (Berleant, 2012; Erwine, 2012; Kennedy et al., 1988; Tafalla, 2012); therefore, the insufficiently explored aesthetics of the non-visual requires further scientific deliberation.

Unlike 'scenic aesthetics', mostly linked with visual preferences, for the proponents of 'ecological aesthetics' the appreciation of landscape is based on the multisensory and active interaction with the environment and understanding of the way the environment

works (Jorgensen, 2011). Appleton (1975) pointed out that a shift is necessary from the question ‘What do we find to be beautiful in the landscape?’ to the question ‘What is the source of our pleasure in experiencing the landscape?’ In that sense, aesthetics implies modally different experiences or a combination thereof. For example, Ong (2012) explains the concept of thermal aesthetics and thermal energy as an important aspect of the ambience (cf. Erwine, 2012: 579–580), while one of the Sayings of the Blind by William Stafford (1998, cit. by Bunkše, 2007: 229): “Mountains don’t exist, but their slopes do,” points to the fact that a kinaesthetic experience also has an aesthetic dimension.

Knowledge about auditory, olfactory, tactile, gustatory, as well as psychological and emotional landscape properties should be included into studies on landscape qualities, values and preferences, landscape identity, conservation and design. Knowing that the man shapes his environment and the environment shapes the man, the multisensoriality of the surrounding world is a factor which should be taken into account by all disciplines which regard their relationship.

7.6 POSSIBLE APPLICATIONS OF NEW KNOWLEDGE IN PRACTICE

Here, four areas are pointed out in which the knowledge of sensory properties of the environment can be very useful, and which are somewhat inter-related:

- 1 Landscape planning and management
- 2 Landscape design
- 3 Shaping of place identity and image of a destination
- 4 Therapeutic effect of landscape

7.6.1 Landscape planning and management

The non-visual landscape features, together with visual features, determine the character of the landscape and are responsible for landscape diversity. Since sensory characteristics originate from topography, the presence of living beings (i.e. people, animals, plants and other organisms) and different structures in the landscape, they can be conserved by protecting the landscape elements that generate them. For example, the protection of plant or animal species can help conserve olfactory or auditory features of a place. It is therefore important that they be included in the design of landscape models and decision-making processes in landscape planning and management.

The scientific discourse is already considering the needs and possibilities of incorporating the non-visual and ephemeral landscape characteristics into GIS and similar models (e.g. Ayad, 2005: 323; Brown and Brabyn, 2012: 86; Ervin, 2001: 60) and conservation directives (Davies, 2013). For instance, Kornfeld et al. (2011) have offered an interesting manner of mapping acoustic landscape parameters. However, there are still no clear and unified solutions or guidelines on how to integrate non-visual properties into landscape

models and directives. Further research is necessary, primarily into how human perceptive systems function, researches that aim at identifying diverse landscape properties, as well as the development of methodologies for gathering and presentation of non-visual data. In that sense, it can be useful to use the currently available and increasingly advanced technologies such as GPS and mobile devices (Audio and Acoustic Engineering Research Centre, University of Salford, Manchester, 2013; Henshaw, 2012a; Mydlarz et al., 2011; Rubidge and Stones, 2009).

Non-visual characteristics represent elements of natural or cultural heritage of a certain area and society, and it is therefore necessary to find a way to integrate them into landscape planning procedures through measures intended for the protection and conservation of non-visual characteristics of space, as well as measures for the protection from their negative influence, such as protection from noise along freeways, optimisation of the soundscape in urban environments (Gidlöf-Gunnarsson and Öhrström, 2010; Skånberg and Öhrström, 2002), air quality improvement, etc.

7.6.2 Landscape design

The idea of sensory design, the application of auditory, olfactory, tactile, and even gustatory characteristics in the creation of both open and closed ambiances is not new, but is insufficiently thought of in practice. The sensory qualities are mostly the unplanned result of the spatial arrangement of elements, used materials and the use of space. The significance of non-visual parameters, however, is contained in the fact that they have an impact on human emotions, moods, attitudes, behaviour, and mental and physical condition. Some studies also point to their connection to the well-being and productivity in the workplace (Hyatt, 2005; Keeling et al., 2012).

The knowledge on the multisensory nature of the direct contact with the environment and its effect on humans should contribute to the creation of more positive, more encouraging and healthier ambiances. At the same time, as was elaborated in the introduction, there are no sharp boundaries between closed and open space, especially in the non-visual domain – together they make up a spatial and sensory continuum. The possibilities of designing interiors with character by composing and regulating sensory properties are increasingly being considered (Erwine, 2012; Hyatt, 2005; Keeling et al., 2012; Pallasmaa, 2005) – a noteworthy example in practice is the Aroma logo® approach to design (Santoro, 2008) using herbal essential oils for the creation of a unique olfactory identity of hotels. At London's Heathrow Airport a scent of pine needles is used for relaxation and reducing the stress of travel (Olfactory Research Fund, 2014). The modelling of the sensory properties of the surroundings has already been recognised as a marketing strategy mechanism (Jihyun, 2010). The following segment from *Bridget Jones's Diary* nicely depicts their implications regarding everyday human experiences and behaviour:

Just went to supermarket and found self unaccountably thinking of Christmas trees, firesides, carols, mince pies, etc. Then I realized why. The air vents by the entrance which usually pump out baking bread smells were pumping out baking mince pies smells instead. (Fielding, 2001: 285)

In landscape design, the manipulation of sensory properties is subject to somewhat different laws. Namely, within the unpredictable and constantly changing natural conditions it is more difficult to achieve the desired level of sensory properties and the control over their parameters. Therefore, it is necessary to develop appropriate mechanisms and principles of sensory design in the open space by joining efforts in science and practice. In the context of the recently begun 'sensory era', the multiple roles of experiential aspects in landscape design, maintenance, management, and, finally, use have been increasingly recognised (Davies, 2013; Fowler, 2013; Hedfors and Berg, 2003; Henshaw and Bruce, 2012; Yamada, 2006; Zardini, 2012). Apart from that, the idea of landscape design for all senses has already spread beyond the framework of science and found its place in the creation of sensual gardens and urban parks (Boas, 2006; Lerner, 2008; McClellan, 2008; Meeus, 2000: 185). The use of vegetation, green walls and roofs is useful in noise regulation and the creation of a more pleasant soundscape in urban environments (Veisten et al., 2012). The stimulatory diversity of landscape is recommendable when designing children's playgrounds because a natural environment is more interesting, improves the children's motor skills and health in general, and offers numerous learning opportunities (Fjørtoft and Sageie, 2000).

Perhaps the most famous example of a sensory approach to landscape design in Dalmatia is the Sea Organ in Zadar by the architect Nikola Bašić. Their sound is based on the traditional Dalmatian four-part *a capella* (klapa) song (Domitrović and Jambrosić, 2010), thus incorporating the feature of the region's auditory identity into urban landscape design. In this way, the Sea Organ serves not only as a place which is pleasant to stay at, but a place for spatial presentation and preservation of this cultural heritage element. This function can also pertain to the planting of certain plants. Židovec et al. (2005: 46,47), for example, point out the colour and shape of leaves and flowers of sage, as well as the typical scent and the ability to attract butterflies and other bugs, as its decorative advantages in the design of Mediterranean landscapes. On the island of Pag a salt beach made of coarse sea salt was recently opened, providing a unique tactile sensation while walking, and with a rich wellness offer based on the sea, the sun, sea salt and olive oil (Grubač, 2012).

In short, it can be said that the sensory approach to landscape design is still in its infancy and opens the opportunity for a wide range of research and the development of design strategies. By using plants, animals, water, wind and other elements that generate wanted or reduce (and conceal) unwanted sensory properties in space, pleasant ambiances can be created and the landscape diversity and identity of the community can be preserved simultaneously.

7.6.3 Shaping of place identity and image of a destination

By knowing the characteristics of sensory landscape identity we understand the values of our society – our culture. This is important for the preservation of all that by which a place, a community, a region is recognisable, unique and interesting. Cocco (2010: 42) explains that tourist destinations on the west and east Adriatic coast have been facing the need of renewing the recognisability and authenticity of places since the 1990s, as well as with the need of changing the rooted image based on the sea, sun and sand (the 3S). The

identification of typical auditory, olfactory and gustatory landscape features can contribute to better regional character articulation both in tourism and in the production and promotion of original products and services. There is reciprocity between tourism and place identity – tourism largely relies on the typical characteristics of a place, and through tourism and promotion the characteristics of place identity are further crystallised and affirmed.

Tourism is a powerful medium for the promotion of place and community identity. Travelling and getting to know new destinations include physical, mental, as well as psychological and emotional communication with the environment, where all the senses take part actively. Dann and Jacobsen (2002, 2003) pointed out the mandatory role of scents when visiting destinations. As this research has shown, among other things, people recognise and remember places through their vistas, sounds, scents, tactile experiences, tastes and ambiances. It is therefore very important to integrate all sensory aspects into tourist promotion and offer and thus attract visitors and offer intense, tangible and intimate experiences and memories.

Precisely on this platform did Zadar architect N. Bašić create the exhibit aimed at representing Croatia at the 2011 World Leisure Expo in China. The backbone of the idea is the authentic experience based on Dalmatian vistas, sounds and scents. The exhibit included a 'sensory ambience room' with a 10cm thick layer of cut-up aromatic plants scattered across the floor (sage, lavender, rosemary, immortelle, laurel, myrtle, etc.), which release their scents as the visitors walk on them, the sound of crickets representing the auditory backdrop, and scenes of Dalmatian ambiances on screens (e.g. squares, waterfronts, fish markets, nature, etc.). It also included a second 'joyful events room', intended for interactive experiences such as making music using the sea (playing the sea) (Opačić, 2011).

Souvenirs are another integral part of the tourist experience. As it is pointed out by Morgan and Pritchard (2005), souvenirs are material artefacts with a power of reviving memories and evoking images, sounds, scents, tactile senses and tastes by transferring them from another place and time into the present. This, they say, applies equally for both pleasant and unpleasant experiences. Skoko (2004) noted several Dalmatian products as recognisable Croatian symbols and souvenirs: the traditional boat *falkuša* from Komiža (the island of Vis), olives, lavender, cheese from Pag, lace from Pag, and certain types of wine. Honey in traditional terracotta containers is an innovative souvenir from the island of Šolta, known throughout history as the only place producing honey with a name (Olintio – rosemary honey) (Šarac, 2012). On a relatively small area Dalmatia abounds in medicinal and aromatic herbs. Depending on the species, active scented substances can be consumed fresh or they can be used in food and cosmetic industry (Roša, 2010).

The above examples show that souvenirs, products and services reflect recognisable characteristics of the landscape and culture of the area, simultaneously strengthening their place in the image and identity of the place. The products stimulating different senses and emotions can represent a semantic link between industrial design and place identity. In the context of the increasing globalisation, the key element in the formation of place identity and the destination's image is to abandon the one-dimensional (visual) approach and to

take into account the landscape as a multisensory medium, as well as the man as a multisensory being.

7.6.4 Therapeutic effect of landscape

It has been accepted and proven that landscape as a whole, as well as its individual features, have therapeutic effects on the health and wellbeing of humans (Abraham et al., 2010; Grahn and Stigsdotter, 2010; Milligan et al., 2004; Petros and Georgi, 2011; Polič, 2007). Visual factors are only one aspect of their effect wherein sounds, scents, tactile senses and even tastes are equally important. Out of all non-visual environmental properties, the effects of sounds have so far been most extensively researched in the domain of health. The effect of the soundscape on human health and stress levels has been recognised, especially in urban environments, and has lately become a very current environmental topic (Andringa and Lanser, 2013; Gidlöf-Gunnarsson and Öhrström, 2010; Skånberg and Öhrström, 2002). According to Henshaw (2010), smellscape can also be connected to both positive and negative effects on the health.

This research has led to the finding that the Dalmatian region abounds in various auditory, olfactory, tactile and gustatory characteristics, which are experienced as very pleasant (e.g. P6 and P7 of the survey questionnaire). If one should add the typical 'relaxed and slow' lifestyle, it can be said that the Dalmatian landscape offers a vast therapeutic potential. The climatic advantages of the east Adriatic coast have been known for several centuries, and Opatija, a town located in the bay of Kvarner in northern Adriatic, was formerly one of the most prominent climatotherapy destinations in the Austro-Hungarian Empire (Baskar, 2010). Nowadays, the most famous and most developed place for climatotherapy on the Croatian side of the Adriatic must be Mali Lošinj (Kvarner region).

The beneficial effect of the climate comprises the activation of the entire organism as a consequence of immersion into the environment and the stimulation of all senses, as pointed out by Zakanj (2012). Pleasant experiences, she adds, activate the secretion of substances in the brain that are responsible for the improvement of the defence properties of the immune system in children, and she believes climatotherapy to be very useful for the improvement of their physical and emotional health. Naturally, positive climatic and environmental effects are equally useful for the health of adults – both for healthy people (prevention) and those with medical issues (treatment) (Ivanišević, 2002; Pepeljnjak and Šegvić Klarić, 2009).

Many Dalmatian plant species infuse the air with essential oils, and their aerosols, due to their antimicrobial and antifungal properties, act as natural disinfectants, improving thus air quality and providing medicinal and beneficial effects for people (Pepeljnjak and Šegvić Klarić, 2009). Many of these aromatic plants are also a source of olfactory identity of the region: Dalmatian black pine (*Pinus nigra ssp. dalmatica*), laurel (*Laurus nobilis*), rosemary (*Rosmarinus officinalis*), sage (*Salvia officinalis*), immortelle (*Helichrysum italicum*), thyme (*Thymus serpyllum*), winter savory (*Satureja montana*) and lavender (*Lavandula angustifolia*) and many other plants. The comparative advantage of Croatian coastal areas in general, and Dalmatia in particular, is the quality of air which is, according to research, the result of a beneficial ratio of essential oils and marine aerosol (Pepeljnjak

and Šegvić Klarić, 2009) and lesser saturation of the air with microbes, microorganisms and mould spores when compared with continental air (Pepeljnjak, 2009). Besides the aromatherapeutical, the authors also add the positive aromachological effects of such air – its benefits for the limbic system in terms of stimulation of pleasant feelings, emotions and psychological conditions. Together with the high insolation on the Adriatic coast, this area, they emphasize, has rich geographical and climatic conditions that require a serious consideration of utilising these resources for the design and development of health programmes as a Croatian brand.

Despite the above, there are currently only a few health tourism centres in Dalmatia – at Nin, Biograd, Makarska and Vela Luka (Ivanišević, 2002). The Korinjak hotel on the island of Iž is a fine example of how favourable landscape features can be implemented into the tourist offer. Lider press (2012) states that health tourism, with a market increase from 20 to 25 percent per year, is an expanding economic activity, but the natural and human potentials of Croatia are insufficiently used, even though evaluated with high grades (Croatia records approximately 200,000 overnight stays, while Slovenia records approximately three million). In the last ten years or so, however, active interest has been noticed in Croatia for this economic activity in the form of scientific research and articles, conferences, round tables (Lider press, 2013) and the opening of the first Postgraduate Specialist Study Programme in Health Tourism (Lider press, 2012).

Today, there are many known forms of using the therapeutic properties of the climate and the environment on different conditions, illnesses, and disorders: climatotherapy, thalassotherapy, speleotherapy, heliotherapy, hydrotherapy, and balneotherapy are only some of them (Ivanišević, 2008). Acknowledging the natural potentials of Dalmatia, it is recommendable to conduct further research in that area and support the opening and development of health tourism centres in this region.

8 SUMMARY (POVZETEK)

8.1 SUMMARY

Theoretical framework

In scientific and professional discourse, landscape identity is mostly identified with visual recognisability and distinctiveness of landscape. In this doctoral thesis, that perspective is reconsidered through a counter thesis of sensory landscape identity, which is based on the assumption that landscape has a non-visual identity as well, contained in sounds, smells, tactile sensations and tastes of the environment. The topic fits into the developing trend of sensory studies in social sciences and humanities, which Howes (2006b) calls sensory turn or revolution. In that context, within sciences exploring into the relationship within the man and the environment, the second half of the 20th century gave rise to terms denoting some of its sensory dimension: first soundscape (Schafer, 1994), then smellscape (Porteous, 1985b) and even touchscape and tastescape.

In this thesis, the definition of landscape is established upon two assumptions – first that, for the man, landscape is a multisensory experience and not solely the visible environment, and second, that landscape comprises natural as well as cultural (man-made) components, both in visual and in other modalities. The ringing of church bells (Anzani, 2010) and traditional music are examples of cultural acoustic landscape characteristics. Thus, non-visual landscape includes natural and cultural (man-made) components as well (i.e. sounds, smells, tactile sensations and tastes of anthropogenic origin).

Landscape identity can be defined as a society's conceptual construct; the awareness and the notion of landscape, built upon its particular elements and characteristics. Thus, the research enters the field of landscape phenomenology, where the observed subject is rather the individual and collective conception of landscape than objective landscape characteristics. The emphasis on all senses requires the understanding of human perception. Perception is a complex activity that comprises sensing (registering of stimuli) and cognition (understanding, recognizing and contextualisation of information carried by a stimulus) of the surrounding world and oneself in it. Further, everyday perception is influenced by biological, sociological and individual factors, and – what is significant for this research – it does not necessarily need to be conscious, but can take place without the focus of attention or even non-consciously.

Gibson's (1986) concept of ecological perception has been accepted in this thesis, according to which a person is not a passive recipient but an active researcher of environmental information. Introducing the term of sensory systems, Gibson (1966) explains that the man does not perceive the environment solely with sense organs (i.e. eyes, ears etc.), but that perception takes place through the movement of body parts (i.e. of head in all directions) and the movement of the whole body in space. Complete emplacement – physical, mental and emotional, in which the man is a part of the environment, is one of the starting points in the multisensory approach to landscape identity.

Research area, aims and hypotheses

The research into sensory landscape identity has been conducted in the area of Dalmatia – a Mediterranean region in southern Croatian littoral. Within the thesis, the area of Dalmatia includes four ‘Dalmatian’ counties: Zadar, Šibenik-Knin, Split-Dalmatia and Dubrovnik-Neretva, with the exception of the north-eastern part of the Zadar County, which geographically and culturally belongs to the region of Lika. The interaction of the climate, landscape and culture has resulted in the creation of a distinctive regional identity both for local inhabitants as well as for other inhabitants of Croatia, who often spend their vacations in Dalmatia. Everyday conversations of local people, the media and advertisements as well as Dalmatian music are abundant in regional landscape motifs and characteristics, thus creating an impression of sensory diversity of this region and the connectedness of its inhabitants with their environment through all senses.

The above understandings and observations form the basis upon which the following hypotheses have been put forward:

- landscape identity of Dalmatia comprises, alongside visual, also auditory, olfactory, tactile and gustatory characteristics of the area,
- landscape of Dalmatia is perceived as diverse in terms of sensory characteristics, within each sensory modality there are several distinguishing characteristics,
- non-visual qualities contribute to the general experience of space and influence the sense of place,
- characteristics upon which local inhabitants build their conception of Dalmatian landscape coincide with those of visitors.

The main research objective was to establish whether the notion of Dalmatia rests upon non-visual spatial characteristics, that is, through which sensory modalities the landscape identity of Dalmatia is constituted and to which extent. Identification of some of the most recognizable characteristics within each sensory modality, which are typical of the region's landscape, was yet another aim.

Methodology

This thesis makes use of the multi-method empirical approach, within which three research methods have been utilised. The first applied method was that of the public opinion survey carried out on the sample of 2708 participants (local inhabitants and visitors). A questionnaire, consisting of 18 questions, was compiled for this purpose. The survey was conducted in two stages, first of which was the distribution of print (paper) questionnaire per post, and the second included the creation of an online version of the same questionnaire, which found its way to participants via e-mail, websites, web portals, as well as through social network Facebook. Answers gathered via both questionnaire forms were based on the principle of non-probability sampling (a combination of convenience and snowball sampling).

In the following stage, a method called sensory walk was utilised – relatively recently introduced and primarily qualitative method. It is based upon direct contact of participants with landscape and on focusing of attention to sensory characteristics of the environment,

and is achieved through the activity of walking. Seven sensory walks were conducted in which a total of 41 participants partook. Prior to the walk commencement they were given a tabular template into which they were supposed to record their experiences and evaluate them in terms of their typicality of the Dalmatian region on the scale ranging from 1 (not typical at all) to 5 (pronouncedly typical). Data gathered from templates of all participants at all locations were then entered into an MS Excel spread sheet, where they were then analysed and interpreted in qualitative terms.

The third method was content analysis. Two different media of social communication were analysed here – lyric poetry and promotional, mostly tourist, materials (print ones, such as brochures, tourist guides and leaflets, as well as Internet ones, such as websites of tourist boards and private accommodation renters). In the search of words, phrases and sentences describing sensory experiences of Dalmatia, the analysis included 510 lyric poems and 765 units of promotional materials.

Results and discussion

Results of the public opinion survey

The first two general questions about Dalmatia in the questionnaire reveal that Dalmatia is experienced through a number of landscape as well as cultural characteristics (e.g. the perception of local inhabitants' mentality and lifestyle), and concepts such as summer and summer vacation. Although, in sensory terms, visual associations prevailed in those questions (karst, islands, indented coastline, dry stone walls, olive orchards, Mediterranean vegetation, architecture and historic monuments etc.), it is evident that the region is observed through non-visual characteristics as well. The most numerous among these included tactile experiences of the sun and the warm climate and gustatory ones – Dalmatian food and beverages. Overall, the strongest association of the region is the sea, which stimulates all five examined senses and was mentioned by 91,8% of research participants.

Sounds and smells were less present among first associations. However, responses to following questions have revealed that the region has a very strong auditory and olfactory identity. According to the questionnaire, smells were evaluated as the second most distinguishing characteristic of Dalmatia (after visual ones), with an average value of 4,29 (on the scale from 1 to 5). The local cuisine and sounds, with the value of 3,96, are yet another factor that distinguishes the region from other regions and countries. Further, 90,6% of the participants believed that there existed some smells typical of Dalmatia, and provided examples thereof, while 86% gave examples of sounds typical of Dalmatia, which strongly confirms the existence of olfactory and auditory identity. More than a half of participants (56%) stated that their experience of Dalmatia would be significantly worse could they not perceive sounds, smells, tactile sensations and tastes, and another 37,3% of them believed that this would at least impair the quality of an experience. Interestingly, environmental smells were, despite their comparatively more elusive nature, generally more frequently selected (in multiple-choice questions) and higher evaluated than sounds.

The participants' answers differed to a certain extent depending on whether they live in Dalmatia or elsewhere (in another Croatian region or in another country) as well as on the frequency of their visits to Dalmatia (if they do not live there). The differences in responses between mentioned groups have proved to be statistically significant mainly in questions which required evaluation on the scale from 1 to 5 (e.g. how much does Dalmatia differ from other regions and countries in terms of given characteristics, how pleasant is Dalmatian ambience to them, how important are visual, olfactory, auditory and tactile sensations to them in the overall experience). However, the average values (Mean) vary only in the interval of 0,5 points. Despite certain differences in the choice of responses to certain questions, it should be noted that both for local inhabitants and visitors (and regardless of the frequency of visits) the conception of Dalmatia is built upon visual as well as non-visual landscape characteristics.

To the best knowledge of the thesis author, no questionnaire of a comparable purpose has yet been undertaken in Dalmatia or elsewhere, so that there are no similar studies the results could be compared with. As the method's shortcoming might be considered the non-probability sample in the population of local inhabitants. Namely, the data of the Croatian Bureau of Statistics might be used in the formation of a random sample of the population living in Dalmatia (i.e. in four Dalmatian counties). For visitors, such a sample could not be formed, for there are no data on who visited the research region at least once. Consequently, the results may not be generally applied to the population of Dalmatia or Croatia, but the research value in this regard is partly compensated by the large sample.

Results of the sensory walk

The sensory walk method has also shown that Dalmatia has distinguishing non-visual landscape characteristics. These included some of the characteristics that occurred in the questionnaire as well (such as the murmur of the sea, the chirping of cicadas, the screeching of seagulls, traditional music, the smell of the sea and aromatic herbs, the warmth, the heat, the sun, sultriness, the sense of wind etc.).

Visual spatial experiences were dominant in all sensory walks (44%). This number comprises repeated recording of same characteristics by various participants and at different locations. These were followed by auditory (26%) and olfactory (13,5%), and less frequently tactile (8,4%) and compound experiences (7,7%). Gustatory experiences were not researched within this method (although five of them were recorded). Most of the recorded experiences (64%) were evaluated as pronouncedly typical (5) of Dalmatia, and only 20% thereof ranged from 1 (not typical at all) to 3 (moderately typical). The proportion of typical (value 4 and 5) to less typical (values 1 to 3) characteristics is similar in all sensory modalities. This large share of typical characteristics may be explained through the fact that, in the evaluated space, characteristics typical of that space prevail, but may as well imply, that selected locations represent the researched area well. Further, it may result from the influence of the overall ambience upon the evaluation of an individual characteristic, since space is not a sum of characteristics but a result of their dynamic interaction.

A significant feature of this method is the dependence of its results upon on-site conditions during the course of sensory walk. Consequently, some typical region's characteristics might not be always present and therefore perceived. At the same time, it is possible to perceive and record characteristics which are less easily discernible through other methods (e.g. the smell of fuel oil in harbours, the sound of summer footwear sliding (flip-flops), lights flickering in the night and their reflection in the sea).

This thesis is the first to utilise the sensory walk method in a research into a landscape identity and the first to cover the area of a region. Thus far the method was mostly used in researches into sensory experiences in urban areas (Drever, 2011; Henshaw and Bruce, 2012; Henshaw et al., 2010) and it was usually directed to one sensory component of the environment. Employed in this context, the sensory walk method has suggested that the concept of typicality is ambiguous. Namely, typical characteristic is always observed in relation to something else (another or same time, place) and can result from a characteristic's quantity or its uniqueness (Kučan, 1996). In addition to providing understandings regarding recognizable sensory characteristics of Dalmatia, the research is valuable for it has shown that the method allows rather precise insight into the composition of place identity, and has also identified certain aspects that could enhance its future utilisation in this context.

Results of the content analysis

The analysis comprised two different types of content (lyric poetry and promotional materials) in which the Dalmatian region and landscape are frequently described. The aim was to establish which sensory modalities and to which extent is the notion of Dalmatia built upon. The differences in character and purpose of the two content groups have, consequently, been reflected in the results.

The most valuable finding is that, in both groups of content, Dalmatia is described through all sensory modalities. Further, it has been established that visual descriptions prevail in both of them, with around 30% in the respective overall content. The share of other modalities depends upon the content character and purpose. Promotional materials, in addition to visual, lay emphasis on gustatory characteristics (18%), primarily those referring to the local cuisine with indigenous foodstuffs, traditional dishes and specific beverages. Compound experiences have the same share (18%) and are used to present typical ambiances, customs and events as sources of multisensory experiences, while auditory, olfactory and tactile characteristics are less frequently represented. Pan and Ryan (2009) have come to similar results in their review of tourism materials. Having a strong sentimental tone, lyric poetry, on the other hand, does not put that much emphasis on gustatory and compound experiences (6%), but rather on auditory (24%), tactile (19%) and olfactory (15%) characteristics.

The qualitative segment of the analysis has revealed the most distinctive landscape characteristics within each modality. It has been established that these largely correspond with characteristics identified within the preceding two methods. A shortcoming of this analysis might refer to coding, where a simultaneous work of at least two independent coders is advisable (Halimi, 1996; Pan and Ryan, 2009). This was not the case in this

research, for it was done – due to some limited resources and possibilities – by the researcher herself. The significance of the analysis, however, lies in the selection of two different types of content, whose results supplement one another, thus giving a more complete idea of Dalmatian landscape identity.

Conclusions and recommendations

The obtained results have confirmed all the four hypotheses. The main conclusions drawn from the results are:

- 1 The individual and social conception of the Dalmatian region is multisensory and built upon typical sights, sounds, smells, tactile sensations, tastes and ambience features. Moreover, it is not only established upon modally distinct characteristics, but on constantly fluctuating combinations thereof.
- 2 Although no similar studies have been conducted that would allow a comparison, the fact that various distinguishing characteristics of the region were identified within each modality suggests that the landscape of Dalmatia is diverse in sensory terms – both horizontally (within each modality) and vertically (through all the modalities together).
- 3 Non-visual landscape characteristics shape the identity of Dalmatia both for local people, whose daily life takes place in it, and visitors. The set of characteristics that the notion of Dalmatia is based upon varies insignificantly between its inhabitants and its more or less frequent visitors. This corroborates the assumption that, despite the attention being directed mostly to the visible environment, the authenticity of a place, its *genius loci*, is discerned through a mosaic of sensory information from the environment, even in places we visit for the first time.
- 4 Multi-method approach is very useful in the research of sensory landscape identity, for it gives more complete knowledge on the issue. Thereby, sensory walk, as an instrument for examination of direct experiences of landscape, provides an insight into experiences that are not available to the researcher through the other two methods requiring retrospection. Beach facilities, the reflection of lights on the sea surface at night, sounds of people, of their footwear sliding, sounds in ports and dry docks, smells of oil in ports, the smell of sunscreen and summer perfumes, to name a few.
- 5 Creating highly recognisable experiences in all sensory modalities (vistas, sounds, and smell of the sea, saltiness, warmth), the sea can be considered the strongest distinguishing feature of Dalmatia. A number of other landscape features also generate identity in more than one modality (e.g. vegetation – visual, olfactory and gustatory; sun – visual and tactile; church towers (bells), boats, seagulls – visual and auditory; local food – gustatory and olfactory, etc.). Thus sensorially different information create harmonious landscape impressions and identity.

- 6 Landscape elements and properties do not have to be constantly present in order to constitute identity. As this research showed, non-visual characteristics participate in place identity regardless of their ephemerality.

Sensory characteristics of the environment may significantly influence our attitudes, emotions and behaviour. This fact has already been used for marketing purposes in terms of designing interior spaces in such a way to stimulate sales (Jihyun, 2010). Landscape design may be directed towards the creation of healthier and more pleasant ambiances and ambiances suitable for specific groups (e.g. landscapes for the blind, children and similar). Sensory characteristics are a part of the heritage and identity of a place (O'Connor, 2011), as well as of the landscape diversity. These values might be preserved by taking a multisensory approach to spatial planning, while negative sensory aspects, such as noise or smog, might be lessened or eliminated. Appealing to all senses is extremely useful in the promotion of tourist destinations (Agapito et al., 2013), services and products. The use of sensory potentials can also be used in the field of medical tourism and the creation of therapeutic landscapes.

The body of researches into sensoriality is still very limited. In that sense, this doctoral thesis contributes to the overall knowledge in the areas dealing with the relationship between the man and landscape as well as his environment in general, for sensory identification takes place in spaces of different scales, from a room to a neighbourhood, a city, etc. Alongside some other studies (Ong, 2012), it encourages a reconsideration of the concept of aesthetics, nowadays mostly accepted as 'the beauty of the visual'. It also contributes to the establishment of a platform for future researches into sensory landscape characteristics and to the development of strategies for the application of the gained knowledge in the design of sustainable landscapes.

8.2 POVZETEK

Teoretični okvir

Krajinska identiteta se v znanstvenem in strokovnem diskurzu večinoma enači z vizualno prepoznavnostjo in edinstvenostjo krajine. V tem delu se ta vidik preučuje s protitezo čutne krajinske identitete, ki temelji na predpostavki, da ima krajina tudi nevizualno identiteto, vsebovano v zvokih, vonjih, taktilnih občutkih in okusih okolja. Tema se ujema z razvijajočim trendom čutnih študij v družbenih in humanističnih znanostih, ki jih je Howes (2006b) poimenoval kot čutni obrat (sensory turn) ali revolucija. V tem kontekstu so v drugi polovici 20. stoletja v okviru znanosti s področja razmerja med človekom in okoljem nastali pojmi, ki označujejo njene posamezne čutne dimenzije: najprej zvočna krajina (Schafer, 1994), nato vonjalna krajina (Porteous, 1985b) in celo taktilna krajina ter okušalna krajina.

Definicija krajine tukaj temelji na dveh predpostavkah. Prva je ta, da je krajina za človeka multičutno, vendar ne izključno vidno okolje. Druga je, da je krajina sestavljena iz naravnih in kulturnih (človeško oblikovanih) komponent, tako v vizualnih kot tudi v drugih modalitetah. Zvonjenje cerkvenih zvonov (Anzani, 2010) in tradicionalna glasba sta primera kulturnih akustičnih značilnosti krajine, vonj hrane pa je značilnosti kulturne

vonjalne krajine. Zato tudi nevizualna krajina vsebuje naravne in kulturne (človeško oblikovane) elemente oziroma zvoke, vonje, taktilne čute in okuse.

Krajinska identiteta se lahko definira kot miselni konstrukt družbe; načelo in ideja o krajini, zgrajena na nekih njegovih elementih in značilnostih. Človekova identifikacija s prostorom izhaja iz telesne umeščenosti oziroma interakcije človeka in kraja, zgodi pa se, kot pojasnjuje Casey (1993), že pri kratkem bivanju v nekem kraju in ne samo s vsakdanjim življenjskim okoljem. Poudarja tudi, da identifikacija poteka na vseh prostorskih ravneh, od prostora do mesta, regije in države.

Raziskovanje posega v polje fenomenologije krajine, kjer je predmet obravnave prvenstveno individualna in kolektivna podoba krajine in ne toliko objektivne krajinske lastnosti. Poudarek na vseh čutih zahteva razumevanje človeškega zaznavanja. Zaznavanje je kompleksna aktivnost, ki zajema občutek (registriranje dražljajev) in spoznavanje (razumevanje, prepoznavanje in kontekstualizacijo informacije, ki jo dražljaj prenaša) sveta okoli nas in nas samih v njem. Nadalje vsakodnevno zaznavanje določajo biološki, sociološki in individualni dejavniki, in kar je tukaj prav tako pomembno, zaznava ni vedno zavedno opažanje, temveč lahko poteka brez neposredne usmerjenosti pozornosti ali nezavedno.

V tem delu je sprejet koncept Gibsonovega (1986) ekološkega zaznavanja, po katerem oseba ni pasivni prejemnik, temveč aktivni raziskovalec informacij iz okolja. Z vpeljavo pojma čutnih sistemov Gibson (1966) pojasnjuje, da človek okolja ne zaznava samo s čutili (z očmi, ušesi itd.), temveč se zaznavanje udejanja z gibanjem posameznih delov telesa (npr. s premikanjem glave v vse smeri) in gibanjem celega telesa v prostoru. Popolna umeščenost (emplacement) – telesno, duševno in čustveno, kjer je človek del okolja, je ena od izhodiščnih točk multičutnega pristopa h krajinski identiteti.

Področje raziskovanja, cilji in hipoteze

Raziskava čutne krajinske identitete je izvedena na področju Dalmacije – sredozemske regije v južnem hrvaškem obalnem območju. V okviru dela Dalmacija zajema štiri 'dalmatinske' županije: Zadrsko, Šibensko-kninsko, Splitsko-dalmatinsko in Dubrovniško-neretvansko, z izjemo severovzhodnega dela Zadrske županije, ki geografsko in kulturno pripada regiji Like. Interakcija podnebja, krajine in kulture se odraža v edinstveni regionalni identiteti tako za lokalne prebivalce, kot tudi za druge prebivalce Hrvaške, ki tukaj pogosto preživljajo poletne počitnice. V vsakdanjem pogovoru lokalnih ljudi, medijih in reklamah ter dalmatinski glasbi je veliko krajinskih motivov in značilnosti in tako nastane vtis čutne raznolikosti te regije in povezanosti prebivalcev z okoliško krajino skozi vsa čutila.

Na podlagi navedenih spoznanj in opazovanj so postavljene naslednje hipoteze:

- 1 da je krajinska identiteta Dalmacije poleg vizualnih sestavljena tudi iz avditornih, olfaktornih, taktilnih in gustatornih značilnosti področja,
- 2 da je dalmatinska krajina zaznana kot raznolika v smislu čutnih značilnosti, oziroma da vsaka čutna modaliteta nudi več prepoznavnih značilnosti,

- 3 da nevizualne kvalitete prispevajo k celotnemu doživljanju prostora in vplivajo na občutek kraja, in
- 4 da podoba dalmatinske krajine pri lokalnih prebivalcih in obiskovalcih temelji na enakih značilnostih.

Z raziskavo je zajetih pet modalitet – vizualna, avditorna, olfaktorna, taktilna in gustatorna, kot šesta kategorija so dodana še sestavljena doživetja, ki se nanašajo na doživetja v katerih se združuje dve ali več modalno različnih občutenj (npr. čisto morje – vizualni in olfaktorni). Osnovni cilj raziskave je bil ugotoviti, ali podoba Dalmacije temelji tudi na nevizualnih prostorskih značilnostih oziroma skozi katere čutne modalitete je konstituirana regionalna krajinska identiteta Dalmacije in v kolikšni meri. Prav tako je bil namen znotraj vsake modalitete identificirati nekatere najočitnejše značilnosti, tipične za krajino regije.

Metodologija

Uporabljen je multi-metodični empirični pristop znotraj katerega so izbrane tri raziskovalne metode: anketno raziskovanje, čutni sprehod in analiza vsebin.

Anketno raziskovanje

Anketno raziskovanje javnega mnenja je opravljeno na vzorcu, ki je zajemal 2708 izprašancev (lokalnih prebivalcev in obiskovalcev). V ta namen je sestavljen vprašalnik v hrvaškem jeziku, sestavljen iz 18 vprašanj in preveden v štiri jezike (angleškega, slovenskega, nemškega in italijanskega). Raziskovanje je potekalo v dveh fazah. Prva je bila distribucija tiskanega (na papirju) vprašalnika, poslanega po pošti. V Dalmaciji in drugih regijah Hrvaške (čeprav ne enakomerno) so najdene začetne kontaktne osebe, katerih naloga je bila izpolniti anketni vprašalnik in najti nadaljnjih 10 do 30 udeležencev. Druga faza je zajemala izdelavo spletne (on-line) inačice istega vprašalnika, v mrežni aplikaciji strežnika SurveyGizmo, ki je pot do izprašancev našla preko e-pošte, spletnih strani in portalov ter družbene mreže Facebook. Kriterija za sodelovanje v tem raziskovanju sta bila polnoletnost in da je izprašanec obiskal Dalmacijo najmanj enkrat ali v njej živi.

V obeh vprašalnikih so dobljeni odgovori temeljili na neverjetnostnem vzorčenju (kombinacija priložnostnega vzorca in vzorca snežne kepe). V skupnem vzorcu je natisnjen vprašalnik izpolnilo 37,4 % in spletnega 62,6 % izprašancev. V raziskavi je sodelovalo več ženskih (64,1 %) kot moških oseb (35,9 %), glede na kraj bivanja pa je izprašanih nekoliko več oseb, ki živijo v drugi hrvaški regiji in tujini (56,3 %) kot tistih, ki živijo v Dalmaciji (43,7 %). S 36,7 % so prevladovali izprašanci stari med 26 in 35 let, sledi skupina od 36 do 45 let (22,5 %), nato izprašanci od 18 do 25 in 46-55 zastopani s približno 15 %, najmanj izprašanih oseb pa je starejših od 56 let (10,7 %). Po izobrazbi je v vzorcu zajetih 60,7 % oseb z visokošolsko izobrazbo, okoli četrtina jih ima končano srednjo šolo ter 11,9 % oseb ima podiplomsko diplomu.

Odgovori na odprta vprašanja in spremenljivke so kodirane, nekateri med njimi pa so bili uporabljeni za kvalitativni prikaz. Podatki so bili obdelani v programu SPSS, grafi in analize so bili izdelani v programu MS Excel.

Čutni sprehod

Naslednjo etapo raziskovanja tvori metoda, imenovana čutni sprehod – relativno nova in prvenstveno kvalitativna metoda. Temelji na neposrednem stiku udeleženca s krajino, ki se udejanja z aktivnostjo hoje, in na usmerjenosti pozornosti na čutne značilnosti okolice. Metoda datira v sedemdeseta leta 20. stoletja, ko je bila prvič uporabljena v obliki zvočnega sprehoda v okviru World Soundscape Projecta (Schafer, 1994) pod vodstvom kanadskega skladatelja in okoljskega strokovnjaka R. M. Schafera.

Zvočni sprehodi so bili nekaj časa edina oblika čutnega sprehoda, saj so se, čeprav je že Porteous v 1990-ih sugeriral sprehode vonjav kot sredstvo raziskovanja vonjalne krajine (Porteous, 2006), začeli uporabljati šele v zadnjem desetletju. Med prvimi (če ne celo prva) se je s tem začela ukvarjati Victoria Henshaw, njeno področje zanimanja pa je raziskovanje urbanih vonjalnih krajin. V znanstvenem kontekstu je uporaba metode za raziskovanje taktilnih, predvsem pa gustatornih značilnosti okolja omejena oziroma takšne študije niso znane.

Za to raziskavo je izbranih sedem lokacij za čutne sprehode v dveh dalmatinskih županijah (Zadrski in Šibensko-kninski). Vseh sedem sprehodov je potekalo v poletnih mesecih leta 2010. Sodelovalo je skupaj 41 oseb. Cilj je bil raziskati s katerimi čutili in v kolikšni meri bodo udeleženci doživeli nekatere dalmatinske ambiente in za katere značilnosti menijo, da so tipične za Dalmacijo. Pred sprehodom je udeležencem pojasnjena naloga in dobili so obrazec, kamor so morali zapisovati posamezna doživetja in jih oceniti kot tipične za dalmatinsko regijo na lestvici od 1 (sploh ni tipično) do 5 (zelo tipično). Podatki iz obrazca vseh udeležencev iz vseh lokacij so vneseni v MS Excel, kjer so bili kasneje obdelani in kvalitativno interpretirani.

Analiza vsebin

Vrednote, preference in stališča o krajini neke družbe, so vtakane v različne segmente človeškega izražanja in komunikacij. Vizualni, zvočni, tekstualni in drugi mediji so dober vir spoznanj o krajinski identiteti nekega kraja. Zato je kot tretja metoda izbrana analiza vsebin. Ker so tema raziskave prvenstveno nevizualna doživetja prostora, je bil za analizo primeren besedilni medij. Za razliko od vizualnih in zvočnih medijev je jezik sistem, s katerim se lahko izrazijo vizualne in nevizualne izkušnje. Z njim se lahko prenesejo in pričarajo tako prizori, kot tudi zvoki, vonji, dotiki in okusi.

Tukaj sta analizirani dve zelo različni vrsti pisnih vsebin – lirska poezija, vsebinsko vezana na Dalmacijo in promocijski, predvsem turistični materiali – tiskani (npr. brošure, turistični vodiči in letaki) in spletni (npr. spletne strani turističnih skupnosti in zasebne namestitve). Pri iskanju besed, fraz in stavkov, ki opisujejo čutna doživetja Dalmacije, je v analizo zajetih 510 lirskih pesmi in 765 enot promocijskega materiala. V obeh primerih je vzorec enote sestavljen po oceni raziskovalca (namerni vzorec), kar je zelo koristno, ko se, kot v tem primeru, želi raziskati in pojasniti pojav, o katerem se ne ve veliko (Tkalac Verčič et al., 2011). Za vsak naveden material je definirana enota analize (tj. ena pesem in ena spletna stran ali ena brošura) in enota beleženja, ki jo tvori beseda, izraz ali stavek, s katero je pričarano značilno čutno doživetje dalmatinske krajine.

Za potrebe izvedbe analize so definirane kategorije za klasifikacijo v besedilu najdenih čutnih zapisov. Poleg osnovnih kategorij, ki so predstavljale raziskovane zaznavne modalitete (tj. vizualna, avditorna, olfaktorna, taktilna, gustatorna in skupina sestavljenih doživetij) je vsaka od njih vsebovala podkategorije, ki se nanašajo na specifično značilnost ali skupino značilnosti znotraj modalitete (npr. podskupini *Vizualno – morje* pripadajo „modro morje“, „viharno morje“, „pod mesečino srebrno morje“ itd.). Za potrebe izvedbe analize je oblikovana tabela za vnos podatkov. Končni podatki so prav tako obdelani v programu SPSS, grafi in analize pa v MS Excelu.

Rezultati in obravnava

Rezultati anketnega raziskovanja

Iz prvih dveh splošnih vprašanj o Dalmaciji je v vprašalniku razvidno, da se le-ta doživlja skozi niz krajinskih in tudi kulturoloških značilnosti (npr. zaznava mentalitete lokalnih prebivalcev in načina življenja) ter konceptov kot sta poletje in poletni dopust. Čeprav so bile v omenjenih vprašanjih v čutnem smislu najštevilnejše vizualne asociacije (skalnjak, otoki, razčlenjena obala, suhi zidovi, oljčniki, sredozemska vegetacija, arhitektura in zgodovinski spomeniki itd.), je vidno, da se regija opazuje tudi skozi nevizualne značilnosti. Med njimi so bila tukaj najštevilčnejša taktilna doživetja sonca in toplega podnebja in gustatorna – dalmatinska hrana in pijača. Najbolj izražena asociacija na regijo je morje, ki stimulira vseh pet obravnavanih čutov, omenilo pa ga je 91,8 % izprašancev.

Med prvimi asociacijami so zvoki in vonji manj zastopani. Vendar so odgovori na nadaljnja vprašanja pokazali, da ima regija zelo močno avditorno in olfaktorno identiteto. Po vizualnih značilnostih so izprašanci ocenili vonj kot najmočnejšo značilnost Dalmacije, in sicer s povprečno oceno 4,29 na lestvici od 1 do 5. Z oceno 3,96 se od drugih regij in držav zares razlikuje tudi po zvokih in lokalni kuhinji. Nadalje, 90,6 % izprašancev je menilo, da obstajajo vonji, tipični za Dalmacijo, najpogostejši primeri pa so vonj morja, vonj borovcev in cipres (iglavci), vonj sivke in vonji drugih aromatičnih rastlin. Zvoke, tipične za Dalmacijo, je navedlo 86,0 % izprašancev in največkrat so navedli zvok škržati in murnov, zvok morja, oglašanje galebov, zvok vetra in dalmatinsko glasbo. Ti rezultati močno potrjujejo obstoj olfaktorne in avditorne identitete regije. Več kot polovica (56 %) izprašancev je izjavilo, da bi bilo brez možnosti zaznavanja zvokov, vonjev, taktilnih čutov in okusov njihovo doživetje Dalmacije bistveno slabše, za še 37,3 % izprašancev pa bi se zmanjšala kakovost doživetja. Zanimivo je, da so okoliške vonje, kljub komparativno bolj neulovljivi naravi, na splošno pogostejše izbirali (pri vprašanjih večkratne izbire) in vrednotili od avditornih značilnosti.

Odgovori izprašancev so se do neke mere razlikovali glede na to, ali živijo v Dalmaciji ali drugje (v drugi hrvaški regiji ali v drugi državi) in glede na to, kako pogosto obiskujejo Dalmacijo (če v njej ne živijo). Razlike so se pokazale kot statistično pomembne predvsem pri vprašanjih vrednotenja na lestvici od 1 do 5 (npr. v kolikšni meri se Dalmacija razlikuje od drugih regij in držav po ponujenih značilnostih, kako prijeten menijo, da je dalmatinski ambient, koliko so jim v celotnem doživetju pomembni vizualni, olfaktorni, avditorni in taktilni čuti), čeprav povprečne vrednosti (Mean) variirajo samo v intervalu do 0,5 točke. Pri posameznih spremenljivkah so se pojavile statistično pomembne razlike, čeprav

večinoma zelo slabe. Kljub določenim razlikam pri izbiri odgovorov na posamezna vprašanja je pomembno poudariti, da se koncept Dalmacije tako pri lokalnem, kot tudi pri obiskovalcih (tudi ne glede na pogostost obiskov) gradi na vizualnih in nevizualnih krajinskih značilnostih.

Kolikor je znano, vprašalnik s podobnim namenom do sedaj ni bil izveden niti v Dalmaciji niti drugje, zato ni podobnih študij s katerimi bi bili rezultati primerljivi. Za pomanjkljivost metode bi lahko smatrali neverjetnostno vzorčenje pri populaciji lokalnega prebivalstva. Slučajni vzorec iz populacije, ki živi v Dalmaciji oziroma štirih dalmatinskih županijah, bi se namreč lahko sestavil s pomočjo podatkov Državnega zavoda za statistiko Republike Hrvaške. Za populacijo obiskovalcev takšnega vzorca ne bi bilo možno doseči, saj ne obstajajo podatki o tem, katere osebe so najmanj enkrat obiskale raziskovano regijo. Rezultatov zato ni možno generalizirati na populacijo Dalmacije ali Hrvaške, vendar vrednost raziskave v tem smislu deloma nadomešča veliki vzorec.

Rezultati čutnega sprehoda

Metoda čutnega sprehoda je pokazala tudi, da ima Dalmacija prepoznavne nevizualne krajinske karakteristike. Med njimi so nekatere značilnosti, ki so se pojavile tudi v vprašalniku (šum morja, cvrčanje škržati, oglašanje galebov, tradicionalna glasba, vonj morja in aromatičnih rastlin, toplota, vročina, sonce, sopara, občutje vetra itd.).

V vseh čutnih sprehodih so dominirala vizualna doživetja prostora (44 %). Ta številka vključuje ponavljanje iste značilnosti več udeležencev in na več lokacijah. Sledila so avditorna (26 %) in olfaktorna (13,5 %) in najmanj zastopana taktilna (8,4 %) in sestavljena (7,7 %). Gustatorna doživetja niso bila predmet raziskave s to metodo (čeprav jih je zabeleženih pet). Večina vseh zabeleženih doživetij (64 %) je ovrednotena kot zelo tipična (5) za Dalmacijo in le 20 % jih je ovrednotenih z ocenami od 1 (sploh ni tipično) do 3 (srednje tipično). Razmerje tipičnih (ocena 4 in 5) in manj tipičnih (ocene 1 do 3) značilnosti je enako pri vseh čutnih modalitetah. Velik delež tipičnih značilnosti se lahko pojasni z dejstvom, da v prostoru, ki se vrednosti, prevladujejo značilnosti, tipične za ta prostor, lahko pa tudi pomeni, da izbrane lokacije dobro predstavljajo raziskovano regijo. To je lahko tudi rezultat vpliva celotnega ambienta na vrednotenje posameznih značilnosti, saj prostor ni seštevek značilnosti, temveč rezultat njihove dinamične interakcije.

Pomemben aspekt metode je, da so rezultati odvisni od pogojev, ki so med sprehodom prisotni na terenu. Zaradi tega so lahko neke tipično regionalne značilnosti trenutno neprisotne in zato nezaznavne, hkrati pa je možno zaznati in zabeležiti značilnosti, ki se z drugimi metodami težje odkrijejo (npr. vonj nafte v pristaniščih, zvok poletne obutve, svetlikanje luči ponoči in odsev na morju). V tem kontekstu uporabljen čutni sprehod je pokazal tudi na večpomenskost koncepta tipičnosti. Zaznava tipičnosti je namreč odvisna od primerjave s kontekstom v katerem se opazuje, na primer druga ali ista čas ali kraj. Tipičnost lahko izhaja iz kvantitete določene značilnosti ali njene izjemnosti (Kučan, 1996).

To je prva uporaba čutnega sprehoda za raziskovanje krajinske identitete. Z njim so se do sedaj raziskovala predvsem čutna doživetja v urbanih sredinah (Drever, 2011; Henshaw

and Bruce, 2012; Henshaw et al., 2010) in najpogosteje so tudi usmerjene na eno čutno komponento okolja. V tem smislu je ta raziskava premik k multičutni uporabi in regiji, ki zajema bistveno večji prostor. Za razliko od urbanih celot sistematično raziskovanje večjih področij kot so regije ali države zahteva več časa ter človeških in finančnih sredstev. Razen uporabe v znanosti in ekonomiji (tj. čutno oblikovanje izdelkov in storitev), je čutni sprehod lahko tudi poučna (Henshaw, 2012b; National Wildlife Federation, 2005; Scottish earth science education forum, 2012) in terapevtska (Haskin-Popp, 2011) aktivnost.

Poleg spoznanj o prepoznavnih čutnih značilnostih Dalmacije je raziskovanje dragoceno, saj je pokazalo, da se z metodo lahko dobi precej natančen vpogled v kompozicijo prostorske identitete in so z njo identificirani aspekti, ki lahko izboljšajo njeno prihodnjo uporabo. Med najpomembnejše sodijo: izbira lokacij, ki dobro predstavljajo raziskovalno področje; izvedba sprehodov v različnih letnih časih, obdobjih dneva in vremenskih razmerah; vključevanje izprašancev različnih profilov (starost, spol, stopnja izobrazbe, poklic, lokalni, obiskovalci, itd.); raziskovanje zasebne modalitete zaradi boljše usmeritve pozornosti; intervjuji ali fokus skupine med sprehodom ali po sprehodu, da bi izprašanci bolje obrazložili subjektivna doživetja in ocene.

Rezultati analize vsebin

Namen analize dveh vrst vsebin, v katerih se pogosto opisujeta dalmatinska regija in krajina, je bil ugotoviti, na katerih čutnih modalitetah in v kolikšni meri temelji podoba o Dalmaciji. Vsebine lirske poezije in promocijskih materialov imajo različni karakter in namen, kar se je odražalo na rezultatih. Najpomembnejša ugotovitev je, da se v obeh vsebinah Dalmacija opisuje skozi vse čutne modalitete. Prav tako s približno 30 % v obeh prevladujejo vizualni opisi. Delež drugih modalitet v prezentaciji je odvisen od karakterja in namena vsebine. Tako je v promocijskih materialih poleg vizualnih poudarek tudi na gustatornih značilnostih (18 %), prvenstveno v povezavi z gastronomsko ponudbo z lokalnimi živili, tradicionalnimi jedmi in specifičnimi pijačami. V istem deležu (18 %) so zastopana tudi sestavljena doživetja, s katerimi so predstavljeni tipični ambienti, običaji in dogodki kot viri multičutnih izkušenj, medtem ko so avditorne, olfaktorne in taktilne značilnosti manj zastopane. Podobne rezultate pregleda turističnih materialov so dobili Pan in Ryan (2009). V lirski poeziji, kjer je izražen sentimentalni ton, je manjši poudarek na gustatornih in sestavljenih (6 %) in bistveno večji na avditornih (24 %), taktilnih (19 %) in olfaktornih (15 %) značilnostih.

Kvalitativni del analize je pokazal najbolj izražene krajinske značilnosti znotraj vsake modalitete, ki zelo sovpadajo z značilnostmi, ugotovljenimi s predhodnima metodama. Pomanjkljivost te analize bi lahko bila v postopku kodiranja, za katerega se priporoča simultano delo najmanj dveh neodvisnih koderjev (Halmi, 1996; Pan and Ryan, 2009), tukaj pa ga je, v skladu z zmožnostmi, avtor izvedel samostojno. Po drugi strani pa je vrednost analize v izbiri dveh različnih vsebin, katerih rezultati se dopolnjujejo in tako tvorijo popolnejšo idejo dalmatinske krajinske identitete.

Sklepi in priporočila

Dobljeni rezultati so potrdili vse štiri hipoteze. Moč raziskovanja je v multi-metodičnem pristopu, kjer se rezultati, dobljeni s tremi metodami, podpirajo in tudi dopolnjujejo. Glavne ugotovitve iz rezultatov so:

- 1 Individualna in družbena podoba dalmatinske regije je multičutna in zgrajena na značilnih vizurah, zvokih, vonjih, taktilnih čutih, okusih in ambientalnih lastnostih. Še več, ni zgrajena samo na modalno različnih značilnostih, temveč na njihovih konstantno fluktuirajočih kombinacijah.
- 2 Čeprav zaradi pomanjkanja podobnih raziskav ni možna primerjava, pa dejstvo, da je v vsaki modaliteti identificiranih več prepoznavnih regionalnih značilnosti, nakazuje, da je krajina Dalmacije čutno raznolika – horizontalno (znotraj vsake modalitete) in vertikalno (skozi vse modalitete skupaj). Pri tem sodelujejo naravne in kulturne značilnosti regije.
- 3 Nevizualne krajinske značilnosti oblikujejo identiteto Dalmacije tako za lokalne prebivalce, katerih vsakodnevno življenje poteka v njem, kot tudi za obiskovalce. Skupina značilnosti, na katerih temelji predstava Dalmacije variira le malo med njenimi prebivalci in več ali manj pogostimi obiskovalci. To potrjuje, da kljub pozornosti, ki je v glavnem usmerjena na vizualno okolje, avtentičnost kraja, njegov *genius loci*, razberemo skozi mozaik čutnih informacij iz okolja, celo v krajih, ki jih prvič ali redko srečamo.
- 4 Multi-metodični pristop je zelo koristen v raziskovanju čutne krajinske identitete, ker daje popolnejšo predstavo o njej kot mono-metodični. Pri tem, čutni sprehod, kot instrument proučevanja neposrednega doživljanja kraja, daje vpogled v doživljanje, ki niso dostopni z drugim dvema metodama, ki zahtevajo retrospekcijo. Vsebina na plaži, odraz luči v morju ponoči, zvoki ljudeh, šušljanje poletne obutve, zvoki v marini, vonji nafte in ladijskih olj v pristaniščih, vonji krem za sončenje in poletnih parfumov, samo so nekateri od primerov.
- 5 Zaradi tega ker oblikuje zelo prepoznavne doživljanje v vseh čutnih modalitetah (vizure, zvoki in vonji morja, slanost, toplota) lahko morje imenujemo najmočnejšim ločevalnim znamenjem Dalmacije. Tudi nekatere druge krajinske značilnosti ustvarjajo identiteto v več kot enem modalitetu (npr. vegetacija – vizualni, olfaktorni in gustatorni; sonce – vizualni in taktilni; zvoniki, galebi, ladje – vizualni in avditorni; lokalna hrana – gustatorni in olfaktorni itn.). Zato čutno različne informacije oblikujejo skladne (harmonious) krajinske impresije in identiteto.
- 6 Krajinski elementi in pojave ne morajo biti vedno prisotni, da bi konstituirali identiteto. Kot je to raziskovanje pokazalo, ne-vizualne značilnosti sodelujejo v prostorni identiteti ne glede na njihovo minljivost (efemernost).

Najvidnejša značilnost vizualne identitete je morje, pogosto (in včasih skupaj z nebom) abstrahirano na modro barvo. Vizualna krajina Dalmacije je njena lastnost, po kateri se močno razlikuje od drugih regij in dežel. Ta slika zajema v največji meri razčlenjeno obalo s številnimi otoki in zalivi, kraško krajino in makijo, bogato sredozemsko vegetacijo (na splošno in tudi njene številne posamezne vrste), kot elementi kulturne krajine pa so tipični suhi zidovi in kažuni /*majhna kamnita hiša, običajno okrogle oblike, s stožčasto streho op. prev.*/, oljčniki in vinogradi, tradicionalna arhitektura mest in naselij in kulturni spomeniki ter čolni na morju in v lukah. Morje je tudi zelo izražena značilnost zvočne identitete. Za Dalmacijo so tipični zvoki škrižati in murnov, oglašanja galebov, zvok vetra, kulturno zvočno krajino pa tvorijo tradicionalna in zabavna dalmatinska glasba, zvoki ladij in razni zvoki v naselju (npr. lokalni dialekti, tuji jeziki, zvonjenje zvonov).

Olfaktorna identiteta regije izhaja iz vonja morja, borovcev in cipres ter raznolikega aromatičnega rastlinja, kjer izstopa predvsem sivka in malo manj rožmarin. Vpliv kulture na vonjalno krajino se odraža v vonjih tipičnih lokalnih jedi, na primer rib in mesa na žaru. Po čutnem sprehodu so v kulturni vonjalni krajini tipični vonji tržnic in ribarnic in vonj krem za sončenje na plažah. Taktilnost dalmatinske krajine je najbolj prepoznavna po toplem podnebju, vročini, sopari, občutenju dominantnih vetrov (burja, jugo) in poleti po osvežujočem maestralu. Čutni sprehod je znova pokazal na tipičnost podlage iz borovih iglic, toplega kamna in gladkih kamnitih tlakovcev. Analiza vsebin je pokazala, da obstajajo taktilni potenciali, ki so trenutno še slabo osveščeni, prepoznani in izkoriščeni v promocijske namene (npr. hladna izvirska voda, prodnate ali peščene plaže, toplo ali osvežujoče morje).

Glavni nosilec gustatorne identitete Dalmacije so lokalna živila in jedi, kjer prevladujejo sveža in kuhana zelenjava, morski sadeži, mesne jedi kot je jagnjetina, ki so bolj značilne za zaledje, izdelki kot so pršut, siri, olive, oljčno olje, kapre, nato različne začimbe, avtohtone sladice, suho in drugo sadje (smokve, mandlji) in drugo. Del gustatorne identitete tvorijo tudi pijače, predvsem vina, likerji kot je maraskino in likerji, aromatizirani z aromatičnim rastlinjem (npr. mirta, rožič, koromač). Najbolj poudarjen okus neposredne krajine je slanost, ki se odraža v morju in tudi v skalah in rastlinah, ki so v dosegu slanega vetra (najpogosteje burja).

Ambientalne značilnosti Dalmacije se lahko razdelijo v dve doživljajsko različni skupini. Prvo tvorita mir in tišina, ki se najpogosteje povezujeta z naravno krajino, sproščenostjo, upočasnjanim življenjskim ritmom, ki ga pogosto zaznamujejo sprehodi, druženje in kramljanje ob kavi in podobno. Druga skupina zajema živahnost, vrvež, gneče, polne ulice in trge, zabave in dogajanja, vendar se ta živost povezuje predvsem s poletnim kontekstom v naseljenih krajih.

Čutne lastnosti okolja lahko bistveno vplivajo na človeška stališča, čustva in obnašanje. Ta postavka se že uporablja v marketinške namene v smislu oblikovanja interjerjev, ki spodbujajo potrošnjo (Jihyun, 2010). Krajinsko oblikovanje se lahko usmeri v oblikovanje bolj zdravih in prijetnejših ambientov in ambientov, primernih za specifične skupine ljudi (npr. krajine za slepe, za otroke in podobno). Čutne lastnosti so del dediščine in identitete nekega kraja (O'Connor, 2011) in hkrati del krajinske raznolikosti. Z multičutnim pristopom k prostorskemu načrtovanju so te vrednosti pričakovane, negativni čutni aspekti,

kot sta hrup ali smog, pa se lahko zmanjšajo ali v celoti odpravijo. Usmerjenost na vse čute (appealing to all senses) je zelo koristna pri promociji turističnih destinacij (Agapito et al., 2013), storitev in izdelkov in pogosto je s tem tesno povezano izkoriščanje čutnih potencialov na področju zdravstvenega turizma in ustvarjanja terapevtskih krajin.

Korpus raziskav o krajinski čutnosti (sensoriality) je še vedno skromen. V tem smislu to delo prispeva celotnemu znanju na področjih, ki se ukvarjajo z razmerjem človeka in krajine in okolice nasploh, saj čutna identifikacija poteka s prostori z različnimi merili, od prostorov do mestnih četrti, mesta itd. Skupaj z nekaterimi drugimi študijami (Ong, 2012) spodbuja ponovno obravnavo koncepta estetike, predvsem okoljske estetike, danes predvsem sprejetega kot 'lepota vizualnega'. Prispeva pa tudi k tvorbi platforme za prihodnje raziskave čutnih lastnosti krajine in razvoj strategij za uporabo teh znanj pri oblikovanju trajnostnih krajin.

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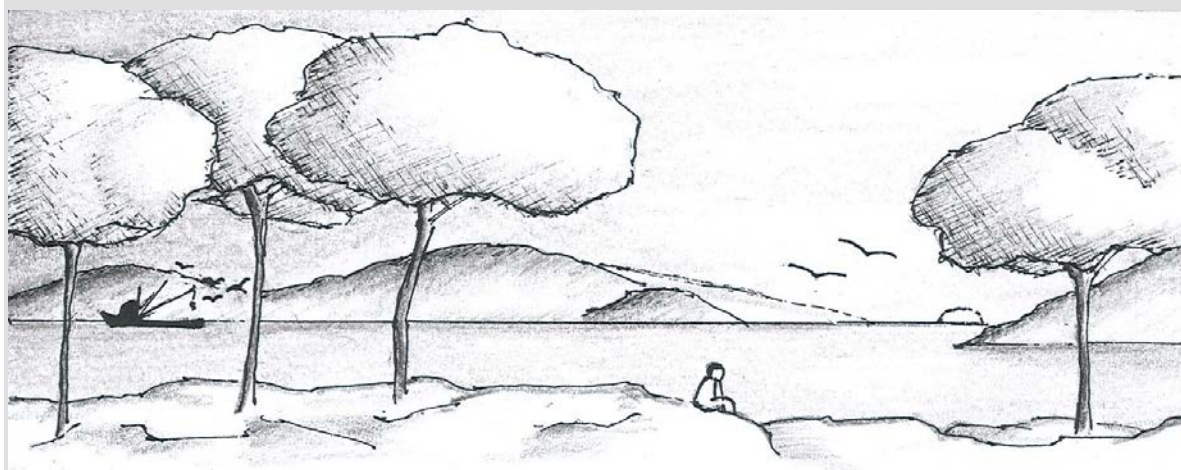
Above all, I thank the Lord for giving me the health and abilities, for providing positive circumstances, but equally for all the obstacles and life lessons on my way to this goal.

ANNEX A

Questionnaire (English version, for print)

Note: The questionnaire was originally printed as a booklet and folded to an A5 format

UNIVERSITY OF LJUBLJANA
BIOTECHNICAL FACULTY
DEPARTMENT OF LANDSCAPE ARCHITECTURE



SURVEY QUESTIONNAIRE
*ON DALMATIAN IDENTITY AND THE CHARACTERISTICS OF DALMATIAN
LANDSCAPE*

July, 2010

SURVEY QUESTIONNAIRE

ON DALMATIAN IDENTITY AND THE CHARACTERISTICS OF DALMATIAN LANDSCAPE

July, 2010

I am a postgraduate student of Landscape Architecture Study at the Biotechnical Faculty, University of Ljubljana. Within the doctoral dissertation thesis I am conducting a survey on how the residents of Dalmatia and its visitors (the tourists) experience the landscape and nature of the Dalmatian region, especially with respect to the elements they recognize as characteristics of Dalmatian identity.

The aim of this survey is to explore what are the main features that constitute the spatial identity of Dalmatia. This questionnaire is an instrument for collecting such data, which are consequently expected to be of importance for the future planning and improvement of urban and rural areas, as well as in the process of landscape natural and cultural values conservation.

The questionnaire is anonymous, so your name is not required. Please, give your candid and detailed answers.

Thank you for your participation and help in the realization of this project!

SURVEY QUESTIONNAIRE –
ON DALMATIAN IDENTITY AND THE CHARACTERISTICS OF DALMATIAN LANDSCAPE

P 1. Specify the first five (5) terms that you think of when you think about Dalmatia?

1. _____ ! !
2. _____ ! !
3. _____ ! !
4. _____ ! !
5. _____ ! !

P 2. Specify three (3) elements that are inevitable, in your opinion, of the typical Dalmatian atmosphere.

1. _____ ! !
2. _____ ! !
3. _____ ! !

P 3. What do you think, how much does Dalmatia differ from your country (place where you live) according to the following characteristics?

	Not at all	A little	Medium	A lot	Very much	
Lifestyle	1	2	3	4	5	! !
Architecture	1	2	3	4	5	! !
Smells (scents) of the environment/landscape	1	2	3	4	5	! !
Sounds of the environment/landscape	1	2	3	4	5	! !
Visual landscape	1	2	3	4	5	! !
Mentality	1	2	3	4	5	! !
Cuisine (food and drinks)	1	2	3	4	5	! !
Other (specify): _____	1	2	3	4	5	! !

P 4. During your visit(s) to Dalmatia, have you noticed any smells (scents) that you would describe as typical for Dalmatia? If yes, please provide some examples.

1. Yes, _____ ! !
2. No _____ ! !
3. I do not know _____ ! !

P 5. During your visit(s) to Dalmatia, have you noticed any sounds that you would describe as typical for Dalmatia? If yes, please provide some examples.

4. Yes, _____ ! !
5. No _____ ! !
6. I do not know _____ ! !

P 6. How would you assess your experience of Dalmatian nature and the whole atmosphere?

1. Unpleasant ! !
2. Somewhat pleasant ! !
3. Pleasant ! !
4. Very pleasant ! !
5. Extremely pleasant ! !

P 7. In your experience of Dalmatia how important are the following aspects:

	Not at all	A little	Medium	A lot	Very important	
Visual appearance of the landscape	1	2	3	4	5	! !
Smells (scents) of the environment/landscape	1	2	3	4	5	! !
Sounds of the environment/landscape	1	2	3	4	5	! !
Tactile sensations (temperature of the sea, the air, the wind, the sun...)	1	2	3	4	5	! !

P 8. With which of the souvenirs listed below would you best present Dalmatia to your friend? Please, circle only one (1) answer.

1. A painting depicting Dalmatian landscape ! !
2. A potpourri, oil or some other product with the scent of aromatic Dalmatian herbs (rosemary, lavender, immortelle, fig...) ! !
3. A bottle of Dalmatian wine ! !
4. A bottle of olive oil ! !
5. A replica of an old stone house ! !
6. A box of dried figs ! !
7. Sea shells, pebbles from the beach, sponges or some other natural objects (materials) ! !
8. CD with sounds of Dalmatia, folk songs or something similar ! !
9. Other (specify): _____ ! !

P 9. Which of the following items remind you of Dalmatia the most? Please, circle three (3) answers and rate them according to your preferences on the scale from 1 to 3, with 1 being the item that reminds you of Dalmatia the most. Write the mark on the line by the answer.

- | | |
|---|-----|
| 1. ____ Rocky ground (karst) and undergrowth | 1 2 |
| 2. ____ Old Dalmatian city centres | 1 2 |
| 3. ____ Seaside promenades | 1 2 |
| 4. ____ Lighthouses | 1 2 |
| 5. ____ Night swimming | 1 2 |
| 6. ____ Taverns, the smell and taste of food and wine | 1 2 |
| 7. ____ Fishing ports | 1 2 |
| 8. ____ Dalmatian fiestas | 1 2 |
| 9. ____ Characteristic smells and sounds of nature | 1 2 |
| 10. ____ Crazy summer fun | 1 2 |
| 11. ____ Swimming and sunbathing | 1 2 |
| 12. ____ The feeling of sea salt on the skin | 1 2 |
| 13. ____ Other (specify): | 1 2 |

P 10. Please choose five (5) of the following with which you would describe Dalmatia.

- | | |
|---|-----|
| 1. Stone houses | 1 2 |
| 2. Dry-stone walls | 1 2 |
| 3. Smell of the sea | 1 2 |
| 4. Pine woods | 1 2 |
| 5. Chirring (sizzling) of cicadas | 1 2 |
| 6. The beauty of bays and beaches | 1 2 |
| 7. Sun-bathing | 1 2 |
| 8. Swimming in the sea | 1 2 |
| 9. Scent of aromatic Dalmatian herbs (immortelle, rosemary, lavender) | 1 2 |
| 10. The sound of waves | 1 2 |
| 11. Delicious food and good wine | 1 2 |
| 12. Sweet smell of figs | 1 2 |
| 13. Dalmatian folk songs (a cappella) | 1 2 |
| 14. Pleasant wind from the sea (maestral) | 1 2 |
| 15. Boats in sea-ports | 1 2 |
| 16. Scent of pines and cypresses | 1 2 |
| 17. Tolling of the church bell towers | 1 2 |
| 18. The sound of the boats and ships | 1 2 |
| 19. The smell of sunscreen | 1 2 |
| 20. Seagulls | 1 2 |

P 11. What, in your opinion, characterises Dalmatia the most in the winter?

1. In winter it is mostly characterised by: !!

2. I do not know, I have never been in Dalmatia in the winter !!

P 12. What do you think would your experience of Dalmatia be, if you could not feel its smells, sounds and tactile sensations?

1. A lot worse !!
2. Somewhat worse, but still good !!
3. The same, smells, sounds and tactile sensations do not mean a lot to me !!
4. Other (specify): !!

P 13. Were you born in Dalmatia?

1. Yes !!
2. No !!

P 14. Where do you live?

1. In Dalmatia !!
2. In another Croatian region (other than Dalmatia) !!
3. Abroad (not in Croatia) - please, specify country, region and/or city: !!

P 15. How often do you visit Dalmatia?

1. Several times a year !!
2. Once a year !!
3. Occasionally / I have visited Dalmatia several times !!
4. I am / I was in Dalmatia for the first time !!

P 16. Your gender is:

1. Male !!
2. Female !!

P 17. What year were you born?

_____ ! !

P 18. Education level you completed is:

- | | |
|---------------------------------|-----|
| 1. Unfinished elementary school | ! ! |
| 2. Elementary school | ! ! |
| 3. High school | ! ! |
| 4. University/college degree | ! ! |
| 5. Master's/Doctoral degree | ! ! |


Please write!

Date (questionnaire completed) _____

ANNEX B

Graphical display of the online questionnaire (English version)

Front (entry) page



ON DALMATIAN IDENTITY AND THE CHARACTERISTICS OF DALMATIAN LANDSCAPE

Dear all,

I am a postgraduate student of Landscape Architecture Study at the Biotechnical Faculty, University of Ljubljana. Within the doctoral dissertation thesis I am conducting a survey on how the residents of Dalmatia and its visitors (the tourists) experience the landscape and nature of the Dalmatian region, especially with respect to the elements they recognize as characteristics of Dalmatian identity.

This questionnaire is an instrument for collecting such data, which are consequently expected to be of importance for the future planning and improvement of urban and rural areas, as well as in the process of landscape natural and cultural values conservation.


The questionnaire is **anonymous** and it takes **about 10 minutes** to fill it out. So, I hope that you can take a little of your valuable time and participate.

Please, give your candid answers. Thank you in advance for your participation!

Maja

When were you born - please, select via calendar icon. *

The participants in this survey must be at least 18 years old. Therefore, those younger than 18 will be disqualified. On the calendar given below, you can use navigation arrows to reach the desired date.



Have you ever been in Dalmatia (Croatia)? *

☐ Yes


☐ No

Next

0%

University of Ljubljana - Biotechnical Faculty - Department of Landscape architecture

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ON DALMATIAN IDENTITY AND THE CHARACTERISTICS OF DALMATIAN LANDSCAPE

1. Specify the first five (5) terms that you think of when you think about Dalmatia. *

1.
2.
3.
4.
5.

2. Specify three (3) elements that are inevitable, in your opinion, of the typical Dalmatian atmosphere. *

1.
2.
3.

3. What do you think, how much does Dalmatia differ from your country (place where you live) according to the following characteristics:

	Not at all	A little	Medium	A lot	Very much
Lifestyle *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Architecture *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smells (scents) of the environment/landscape *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sounds of the environment/landscape *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visual landscape *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mentality *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cuisine (food and drinks) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (specify below)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you think that Dalmatia differs from your country/region by something else, please specify here, and evaluate in the last row of the table above.

Back

Next

17%

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ON DALMATIAN IDENTITY AND THE CHARACTERISTICS OF DALMATIAN LANDSCAPE

4. During your visit(s) to Dalmatia, have you noticed any smells (scents) that you would describe as typical for Dalmatia? *

If yes, please provide some examples.

☐ Yes, ☐ No ☐ I do not know

5. During your visit(s) to Dalmatia, have you noticed any sounds that you would describe as typical for Dalmatia? *

If yes, please provide some examples.

☐ Yes, ☐ No ☐ I do not know

6. How would you assess your experience of Dalmatian nature and the whole atmosphere? *

- ☐ Unpleasant
- ☐ Somewhat pleasant
- ☐ Pleasant
- ☐ Very pleasant
- ☐ Extremely pleasant

7. In your experience of Dalmatia how important are the following aspects: *

	Not at all	A little	Medium	A lot	Very important
Visual appearance of the landscape	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smells (scents) of the environment/landscape	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sounds of the environment/landscape	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tactile sensations (temperature of the sea, the air, the wind, the sun...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

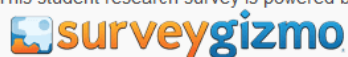
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33%

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ON DALMATIAN IDENTITY AND THE CHARACTERISTICS OF DALMATIAN LANDSCAPE

8. With which of the souvenirs listed below would you best present Dalmatia to your friend? *

- ☐ A painting depicting Dalmatian landscape
- ☐ A potpourri, an oil or some other product with the scent of aromatic Dalmatian herbs (rosemary, lavender, immortelle, fig...)
- ☐ A bottle of Dalmatian wine
- ☐ A bottle of olive oil
- ☐ A replica of an old stone house
- ☐ A box of dried figs
- ☐ Sea shells, pebbles from the beach, sponges or some other natural objects (materials)
- ☐ CD with sounds of Dalmatia, folk songs (a cappella) or something similar
- ☐ Other (specify):

9. a) Which of the following items remind you of Dalmatia the most? *

Please, select three (3) answers.

- ☐ Rocky ground (karst) and undergrowth
- ☐ Old Dalmatian city centres
- ☐ Seaside promenades
- ☐ Lighthouses
- ☐ Night swimming
- ☐ Taverns, the smell and taste of food and wine
- ☐ Fishing ports
- ☐ Dalmatian fiestas
- ☐ Characteristic smells and sounds of nature
- ☐ Crazy summer fun
- ☐ Swimming and sunbathing
- ☐ The feeling of sea salt on the skin
- ☐ Other (specify):

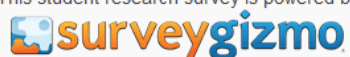
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9. b) Rank your three selected responses from the previous question, starting with the one that reminds you of Dalmatia the most. *

Drag items from the left-hand list into the right-hand list to order them.



10. Please, choose five (5) of the following with which you would describe Dalmatia. *

- | | |
|---|--|
| <input type="checkbox"/> Stone houses | <input type="checkbox"/> Delicious food and good wine |
| <input type="checkbox"/> Dry-stone walls | <input type="checkbox"/> Sweet smell of figs |
| <input type="checkbox"/> Smell of the sea | <input type="checkbox"/> Dalmatian folk songs (a cappella) |
| <input type="checkbox"/> Pine woods | <input type="checkbox"/> Pleasant wind from the sea (maestral) |
| <input type="checkbox"/> Chirring (sizzling) of cicadas | <input type="checkbox"/> Boats in sea-ports |
| <input type="checkbox"/> The beauty of bays and beaches | <input type="checkbox"/> Scent of pines and cypresses |
| <input type="checkbox"/> Sun-bathing | <input type="checkbox"/> Tolling of the church bell towers |
| <input type="checkbox"/> Swimming in the sea | <input type="checkbox"/> The sound of the boats and ships |
| <input type="checkbox"/> Scent of aromatic Dalmatian herbs (immortelle, rosemary, lavender) | <input type="checkbox"/> The smell of sunscreen |
| <input type="checkbox"/> The sound of waves | <input type="checkbox"/> Seagulls |

11. What, in your opinion, characterises Dalmatia the most in the winter? *

☐ I do not know, I have never been in Dalmatia in the winter

☐ In winter it is mostly characterised by:

12. What do you think would your experience of Dalmatia be, if you could not feel its smells, sounds and tactile sensations? *

- ☐ A lot worse
- ☐ Somewhat worse, but still good
- ☐ The same, smells, sounds and tactile sensations do not mean a lot to me
- ☐ Other (specify):

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13. Were you born in Dalmatia? *

- ☐ Yes
☐ No

14. Where do you live? *

- ☐ In Dalmatia
☐ In another Croatian region (other than Dalmatia)
☐ Abroad (not in Croatia) - please specify country, region and/or city:

How often do you visit Dalmatia?

- ☐ Several times a year
☐ Once a year
☐ Occasionally / I have visited Dalmatia several times
☐ I am / I was in Dalmatia for the first time

15. Your gender is: *

- ☐ Male
☐ Female

16. Education level you completed is: *

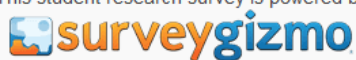
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Thank you for your participation and help in the realization of this project!

Have a nice day

100%

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ANNEX C

Questionnaire survey results (Contingency tables)

		P1 / The first five terms coming to mind when thinking of Dalmatia																									N
		SEA	SUN AND WARMTH	OTHER CHARACTERISTICS OF THE CLIMATE	DALMATIAN FOOD AND CUISINE	WINE	DALMATIAN TOWNS AND VILLAGES	ARCHITECTURE, HISTORICAL SITES AND URBAN OPEN SPACE	DALMATIAN KARST LANDSCAPE	OLIVE TREES AND GROVES	COASTAL LANDSCAPE	BOATS, SHIPS AND PORTS	OTHER LANDSCAPE FEATURES	AROMATIC PLANTS	PINES AND CYPRESSES	SMELLS OF DALMATIA	DALMATIAN MUSIC	SOUNDS OF NATURE	OTHER SOUNDS	LIFESTYLE, CULTURE, ATMOSPHERE AND PLACE ATTACHMENT	PERCEPTION OF LOCAL PEOPLE (MENTALITY)	SUMMER	ACTIVITIES BY THE SEA	REST AND RELAXATION	OTHER SUMMER EXPERIENCES	OTHER	
		Cases Percent (%)																									Count
Mode	Printed version	91,9	47,6	11,1	39,3	11,2	8,4	21,6	36,7	32,3	36,2	14,2	20,3	6,1	10,3	8,6	12,8	15,4	2,5	13,3	6,7	8,5	7,3	8,5	20,2	8,8	1014
	Online version	91,8	48,9	8,1	37,1	11,2	11,0	13,2	29,5	18,1	35,4	9,5	33,2	5,5	11,6	8,9	11,5	9,3	2,5	27,6	14,1	8,8	3,5	17,0	17,0	15,5	1694
Born in Dalmatia?	Yes	93,6	52,9	11,0	35,6	8,9	8,6	18,0	35,3	27,2	32,5	13,6	27,9	5,0	9,7	6,2	11,7	11,2	1,9	27,8	9,9	9,9	5,7	8,0	17,4	10,6	1181
	No	90,5	45,0	7,9	39,7	13,0	11,1	15,1	29,8	20,5	38,2	9,4	28,8	6,2	12,2	10,8	12,3	11,9	2,9	18,0	12,5	7,7	4,3	18,3	18,9	14,8	1526
Where do you live?	In Dalmatia	93,2	52,4	11,2	37,1	9,5	9,0	18,4	38,0	28,9	33,9	13,6	26,8	5,1	9,0	5,6	12,7	11,5	1,7	23,6	9,1	10,1	5,5	7,1	17,3	9,7	1183
	In other Croatian region	91,7	49,3	6,8	35,5	12,8	7,9	14,5	30,1	23,3	32,7	10,0	28,2	6,9	13,3	13,4	8,7	15,1	3,2	19,8	12,2	8,2	5,0	20,6	18,5	12,4	992
	Abroad (not in Croatia)	89,3	37,9	9,4	44,6	12,1	16,6	15,1	23,4	11,1	45,2	8,3	32,4	5,1	11,5	7,3	16,8	5,3	2,8	24,1	14,7	6,4	3,4	16,0	19,6	21,3	531
How often do you visit Dalmatia?	Several times a year	94,1	46,8	6,6	39,1	12,8	11,5	12,9	28,2	24,0	32,5	11,3	28,2	6,9	11,8	10,5	10,7	10,5	1,8	26,7	9,6	8,8	4,1	17,2	18,8	14,4	850
	One a year	90,6	45,6	8,3	37,8	11,9	10,5	15,0	27,7	18,3	38,0	8,5	29,1	4,9	14,3	14,3	10,7	13,6	4,0	18,6	13,9	7,8	5,6	18,8	19,0	12,8	447
	Occasionally/been several times...	87,2	40,8	7,2	36,1	12,5	13,7	18,7	27,1	12,1	43,3	6,5	28,7	5,0	11,8	6,9	15,6	10,6	5,6	18,1	18,7	6,9	4,0	18,7	21,8	22,1	321
	Visiting for the first time	76,3	60,5	7,9	36,8	10,5	2,6	28,9	26,3	13,2	52,6	5,3	57,9	7,9	5,3	2,6	2,6			28,9	5,3	7,9		21,1	7,9	31,6	38
Education	Elementary school	75,0	37,5	25,0	50,0	6,3	12,5	31,3	37,5	12,5	43,8	18,8	37,5	12,5	6,3	18,8	12,5	12,5	6,3	6,3	25,0					12,5	16
	High school	92,3	46,7	9,9	38,0	10,9	11,9	17,7	31,6	28,0	37,0	13,1	26,2	6,8	10,4	7,2	11,5	13,7	1,5	17,3	9,1	7,3	6,9	10,1	23,2	11,6	724
	University / college	92,4	49,5	8,7	36,9	11,7	9,1	16,2	32,4	23,5	34,4	10,8	27,7	5,5	11,6	9,5	12,3	11,4	2,9	23,4	11,8	9,5	4,6	15,1	16,5	12,4	1644
	Mag. or Dr.	88,9	47,4	9,6	42,4	9,6	10,8	13,3	31,9	13,3	39,0	9,3	36,2	4,0	10,2	8,4	11,8	7,7	2,5	28,5	13,3	7,7	2,2	16,1	16,7	18,9	323
Age	18-25	97,2	44,7	5,6	36,7	11,8	15,5	19,5	29,6	28,9	41,9	9,4	20,5	5,9	6,4	4,5	13,6	10,1	2,4	19,5	11,8	9,4	5,4	10,4	23,8	15,5	425
	26-30	94,9	45,3	8,6	35,2	11,7	12,3	16,9	32,5	23,5	35,6	11,7	26,8	5,1	10,5	6,0	13,2	9,3	3,1	23,7	12,8	8,8	5,4	16,9	17,5	12,1	514
	31-35	90,6	52,9	8,6	37,9	9,8	7,9	10,7	33,7	21,3	35,4	9,8	27,2	6,5	9,6	8,4	10,7	13,2	2,5	26,4	11,5	11,1	4,2	19,9	16,5	13,8	478
	36-45	91,5	49,5	8,5	41,0	11,8	9,0	12,8	30,5	23,6	33,0	11,0	29,0	5,2	13,9	10,0	10,5	11,8	2,1	22,1	13,9	8,9	3,6	15,7	19,5	11,1	610
	46-55	91,5	52,4	12,1	36,2	10,3	9,3	18,3	34,4	21,1	31,1	11,8	30,8	6,2	14,4	13,1	13,4	12,3	1,8	20,8	6,4	7,2	5,9	10,0	16,7	12,3	389
	56-	81,7	43,8	14,1	40,7	11,7	4,8	25,2	33,4	21,4	39,7	15,5	39,7	5,9	11,0	12,4	11,0	13,4	3,1	19,3	9,0	5,2	5,9	4,5	13,4	14,1	290
Sex	Male	88,9	41,8	10,0	42,6	16,1	13,9	13,8	29,7	21,2	36,5	11,5	30,9	3,1	7,5	5,6	11,8	8,4	1,8	21,0	15,4	9,1	3,7	11,3	21,8	22,1	971
	Female	93,5	52,1	8,8	35,3	8,5	7,9	17,8	33,6	24,6	35,3	11,1	27,0	7,2	13,1	10,6	12,1	13,4	2,9	23,0	9,0	8,5	5,6	15,2	16,2	7,8	1737
Total		91,8	48,4	9,2	38,0	11,2	10,0	16,4	32,2	23,4	35,7	11,3	28,4	5,7	11,1	8,8	12,0	11,6	2,5	22,3	11,3	8,7	4,9	13,8	18,2	13,0	2708

		P2/ Three elements inevitable for the typical Dalmatian atmosphere																				N
		SEA	MEDITERRANEAN CLIMATE	DALMATIAN FOOD AND CUISINE	WINE	STONE HOUSES	URBAN OPEN SPACE	OTHER ARCHITECTURAL AND URBAN ELEMENTS	DALMATIAN KARST LANDSCAPE	OLIVE TREES AND GROVES	COASTAL LANDSCAPE	BOATS, SHIPS AND PORTS	OTHER LANDSCAPE FEATURES	AROMATIC PLANTS	PINES AND CYPRESSES	SMELLS OF DALMATIA	DALMATIAN MUSIC	OTHER SOUNDS	TRADITION AND DALMATIAN LIFESTYLE	TAVERNS	OTHER	
		Cases Percent (%)																				Count
Mode	Printed version	47,2	18,3	21,1	5,4	18,9	10,7	9,6	37,7	22,6	13,8	10,3	12,2	5,8	7,9	6,3	12,8	8,7	14,1	11,7	4,8%	1014
	Online version	51,7	19,9	18,8	8,0	14,0	9,9	10,7	38,1	16,3	11,3	6,5	16,2	6,3	11,4	4,8	10,3	6,7	22,8	7,7	8,5%	1691
Born in Dalmatia?	Yes	49,1	20,2	19,7	6,0	17,5	11,9	10,4	37,5	21,0	10,8	9,4	12,7	4,4	7,9	4,3	12,3	7,4	19,2	11,9	6,4%	1180
	No	50,8	18,6	19,7	7,9	14,5	8,8	10,2	38,3	16,7	13,4	6,8	16,3	7,5	11,7	6,2	10,5	7,5	19,8	7,1	7,7%	1524
Where do you live?	In Dalmatia	48,6	19,6	19,7	5,3	18,8	12,8	10,5	39,1	21,5	10,8	8,9	12,7	4,6	7,6	4,1	12,2	6,8	18,0	12,3	6,1%	1183
	In other Croatian region	51,1	19,4	16,7	7,8	14,9	9,6	9,0	41,7	18,0	10,9	8,3	15,8	7,3	12,3	7,7	9,6	9,1	15,3	8,3	7,3%	992
	Abroad (not in Croatia)	50,9	18,6	25,2	9,7	11,0	5,3	12,3	28,6	13,3	17,8	4,9	17,2	7,6	11,4	3,8	12,5	5,7	31,1	4,0	9,1%	528
How often do you visit Dalmatia?	Several times a year	53,5	16,9	20,5	9,8	14,2	9,2	8,1	40,7	17,2	11,3	7,4	14,7	6,9	11,6	5,3	11,6	7,1	17,8	9,6	6,5%	850
	One a year	47,2	20,4	20,6	7,8	14,3	8,7	9,4	35,6	15,9	13,4	8,3	15,0	8,3	11,9	8,3	10,3	10,7	19,0	6,5	8,3%	447
	Occasionally/been several times...	49,8	18,2	18,2	7,8	11,3	8,5	14,1	33,2	14,1	15,4	6,3	19,7	5,6	10,3	5,3	11,6	6,6	27,6	6,9	9,1%	319
	Visiting for the first time	40,5	29,7	21,6	5,4	8,1	5,4	13,5	13,5	10,8	24,3	8,1	29,7	8,1	8,1		5,4		51,4		16,2%	37
Education	Elementary school	37,5	12,5	43,8	12,5	12,5		12,5	18,8	25,0	18,8	12,5	25,0			37,5	6,3		12,5	12,5		16
	High school	48,1	18,0	20,7	7,5	16,2	10,1	7,9	34,9	21,0	15,2	8,1	12,6	5,5	7,3	8,1	11,9	8,8	19,9	11,6	6,5%	724
	University / college	50,7	19,6	18,7	6,3	16,8	10,5	10,9	39,4	18,6	10,8	8,2	14,5	6,1	10,6	4,3	11,4	7,2	18,7	9,1	7,6%	1644
	Mag. or Dr.	51,3	21,3	20,9	9,7	10,3	9,4	12,5	38,4	13,1	12,8	5,6	20,3	8,1	14,1	2,8	9,7	5,9	23,1	4,4	6,3%	320
Age	18-25	49,2	14,4	27,3	11,5	14,6	8,2	6,8	31,8	22,8	12,2	6,6	9,6	6,6	3,8	5,2	20,2	5,2	24,5	12,2	7,3%	425
	26-30	51,9	16,2	23,4	8,6	15,0	10,3	9,6	37,4	18,1	11,5	5,1	13,3	5,8	12,5	2,9	14,8	8,2	18,9	10,1	6,4%	513
	31-35	44,9	18,0	18,2	7,3	17,6	9,2	8,6	42,8	20,3	10,7	6,5	15,1	6,9	12,6	5,7	8,6	9,0	21,0	8,8	8,0%	477
	36-45	56,2	21,6	16,7	5,6	13,8	8,7	10,5	41,3	18,0	11,1	7,9	15,9	6,2	12,0	4,9	6,7	7,2	17,5	8,7	9,3%	610
	46-55	51,0	24,2	15,5	4,6	17,3	11,6	12,6	38,9	17,5	13,9	9,3	16,2	5,4	10,1	6,7	9,3	8,2	15,2	7,2	4,9%	388
	56-	42,1	22,4	16,2	3,8	19,0	15,5	15,5	31,7	13,4	16,2	15,2	19,7	5,5	6,9	8,6	8,6	6,2	21,4	7,2	4,8%	290
Sex	Male	50,8	20,8	21,2	10,1	14,2	8,5	9,4	34,0	15,6	13,1	8,5	17,8	3,2	8,9	3,9	11,0	6,9	24,7	8,8	8,6%	970
	Female	49,6	18,4	18,8	5,4	16,8	11,1	10,8	40,2	20,3	11,8	7,6	13,0	7,8	10,7	6,2	11,4	7,7	16,7	9,5	6,3%	1735
Total		50,0%	19,3	19,7	7,1	15,9	10,2	10,3	38,0	18,6	12,2	7,9	14,7	6,1	10,1	5,4	11,3	7,4	19,6	9,2	7,1	2705

		P3/ How much does Dalmatia differ from other regions / countries								
		Lifestyle	Architecture	Smells of the landscape	Sounds of the landscape	Visual landscape	Mentality	Cuisine (food and drinks)	Other	N
		Mean								Count
Mode	Printed version	3,77	3,91	4,17	3,87	4,47	4,15	4,12	4,02	1014
	Online version	3,88	3,96	4,36	4,01	4,32	4,11	3,87	3,43	1694
Born in Dalmatia?	Yes	3,85	3,96	4,27	3,94	4,43	4,24	4,16	3,72	1181
	No	3,83	3,93	4,3	3,97	4,33	4,04	3,81	3,41	1526
Where do you live?	In Dalmatia	3,84	3,95	4,24	3,91	4,43	4,24	4,15	3,79	1183
	In other Croatian region	3,79	3,86	4,32	3,98	4,29	4,07	3,84	3,21	992
	Abroad (not in Croatia)	3,94	4,09	4,32	4,02	4,39	3,97	3,78	3,67	531
How often do you visit Dalmatia?	Several times a year	3,87	3,92	4,38	4,01	4,34	4,13	3,94	3,3	850
	One a year	3,83	3,91	4,32	4,02	4,35	4,02	3,76	3,55	447
	Occasionally/been several times...	3,88	4,02	4,29	4,01	4,3	4,03	3,8	3,65	321
	Visiting for the first time	3,66	4,05	4,03	3,71	4,24	3,68	3,63	3,86	38
Education	Elementary school	3,69	4,19	4	3,56	4,31	3,75	4,44	4,2	16
	High school	3,78	3,86	4,27	3,96	4,42	4,12	4,05	3,48	724
	University / college	3,86	3,96	4,29	3,95	4,35	4,15	3,95	3,46	1644
	Mag. or Dr.	3,88	4,07	4,33	4,01	4,4	4,05	3,83	3,93	323
Age	18-25	3,77	3,81	4,21	3,92	4,4	4,15	4	3,58	425
	26-30	3,88	3,98	4,27	3,91	4,35	4,23	3,98	3,38	514
	31-35	3,82	3,91	4,26	4,02	4,31	4,09	3,88	3,29	478
	36-45	3,79	3,89	4,35	3,98	4,32	4,06	3,88	3,45	610
	46-55	3,88	4,03	4,33	4,02	4,48	4,11	4,07	3,7	389
	56-	3,97	4,15	4,3	3,87	4,45	4,14	4,05	3,93	290
Sex	Male	3,86	3,94	4,24	3,86	4,38	4,06	3,95	3,5	971
	Female	3,83	3,95	4,31	4,01	4,37	4,16	3,97	3,59	1737
Total		3,84	3,95	4,29	3,96	4,37	4,13	3,96	3,55	2708

		P4/ Are there smells typical of Dalmatia?			N
		Yes	No	I don't know	
		Count Percent			Count
Mode	Printed version	90,5	1,4	8,1	1014
	Online version	90,7	2,9	6,4	1694
Born in Dalmatia?	Yes	93,4	0,9	5,7	1181
	No	88,5	3,4	8,1	1526
Where do you live?	In Dalmatia	92,4	1,4	6,2	1183
	In other Croatian region	91,0	2,1	6,9	992
	Abroad (not in Croatia)	85,9	4,7	9,4	531
How often do you visit Dalmatia?	Several times a year	92,9	1,4	5,6	850
	One a year	92,6	1,8	5,6	447
	Occasionally/been several times...	80,4	6,2	13,4	321
	Visiting for the first time	52,6	18,4	28,9	38
Education	Elementary school	87,5	6,3	6,3	16
	High school	89,0	2,2	8,8	724
	University / college	91,1	2,4	6,5	1644
	Mag. or Dr.	92,3	1,9	5,9	323
Age	18-25	83,1	1,9	15,1	425
	26-30	87,2	3,1	9,7	514
	31-35	90,6	3,8	5,6	478
	36-45	93,8	1,3	4,9	610
	46-55	94,6	2,1	3,3	389
	56-	95,9	1,7	2,4	290
Sex	Male	89,1	3,4	7,5	971
	Female	91,5	1,7	6,8	1737
Total		90,6	2,3	7,1	2708

		P4/ Smells that are typical of Dalmatia (3x)								N
		SMELL OF THE SEA	SCENTS OF PINES AND CYPRESSES	SCENT OF LAVENDER	SCENT OF ROSEMARY	SCENT OF IMMORTELLE	SCENTS OF OTHER AROMATIC PLANTS	SMELLS OF FOOD AND TAVERNS	OTHER SMELLS	
		Cases Percent (%)								Count
Mode	Printed version	67,1	37,2	30,7	14,1	5,5	25,1	12,5	5,5	911
	Online version	55,0	42,3	30,6	11,2	7,3	31,1	11,5	10,9	1526
Born in Dalmatia?	Yes	64,6	32,4	32,9	13,0	5,4	30,6	12,2	11,1	1094
	No	55,3	46,9	28,8	11,7	7,6	27,5	11,5	7,1	1342
Where do you live?	In Dalmatia	66,3	32,7	33,8	13,0	5,4	29,0	11,9	9,8	1084
	In other Croatian region	57,3	47,9	30,4	13,6	10,1	29,9	10,4	5,7	900
	Abroad (not in Croatia)	47,5	43,7	23,7	8,0	2,4	26,6	14,9	13,1	451
How often do you visit Dalmatia?	Several times a year	56,5	42,6	31,1	14,0	10,7	31,6	11,7	8,4	787
	One a year	55,4	52,2	30,5	9,8	5,1	28,5	11,2	6,6	410
	Occasionally/been several times...	53,5	44,1	23,8	9,4	2,7	23,8	14,1	11,7	256
	Visiting for the first time	25,0	30,0	15,0			25,0	15,0	10,0	20
Education	Elementary school	71,4	21,4	14,3		14,3	35,7	14,3	14,3	14
	High school	64,6	35,7	30,7	11,7	3,4	24,3	12,8	8,9	641
	University / college	58,7	41,3	31,5	12,5	7,7	30,5	11,3	8,8	1484
	Mag. or Dr.	51,9	46,5	26,6	12,8	7,7	30,6	13,1	9,1	297
Age	18-25	67,9	34,1	30,7	12,6	1,4	18,1	15,5	8,0	349
	26-30	63,3	45,9	32,2	11,4	4,0	20,8	12,8	8,7	447
	31-35	60,9	44,4	29,2	10,9	5,8	27,1	8,1	8,3	432
	36-45	54,5	45,0	27,2	11,6	8,3	30,1	11,2	10,0	569
	46-55	52,1	36,3	34,1	13,6	10,2	38,8	12,5	9,7	361
	56-	59,9	29,2	33,2	15,2	10,5	43,3	12,6	7,6	277
Sex	Male	53,9	37,4	32,1	11,9	4,7	31,0	10,3	7,6	856
	Female	62,6	42,0	29,9	12,5	7,7	27,8	12,8	9,6	1581
Total		59,5	40,4	30,7	12,3	6,6	28,9	11,9	8,9	2437

		P5/ Are there sounds typical of Dalmatia			
		Yes	No	I don't know	N
		Count Percent (%)			Count
Mode	Printed version	88,8	2,1	9,2	1014
	Online version	84,3	4,8	10,9	1694
Born in Dalmatia?	Yes	90,7	1,7	7,6	1181
	No	82,3	5,4	12,3	1526
Where do you live?	In Dalmatia	89,6	1,8	8,6	1183
	In other Croatian region	86,9	3,2	9,9	992
	Abroad (not in Croatia)	76,1	9,2	14,7	531
How often do you visit Dalmatia?	Several times a year	88,8	2,5	8,7	850
	One a year	83,9	3,8	12,3	447
	Occasionally/several times...	74,1	10,0	15,9	321
	Visiting for the first time	47,4	26,3	26,3	38
Education	Elementary school	81,3	6,3	12,5	16
	High school	84,8	2,9	12,3	724
	University / college	86,0	3,8	10,2	1644
	Mag. or Dr.	88,5	5,3	6,2	323
Age	18-25	79,8	3,5	16,7	425
	26-30	80,7	4,5	14,8	514
	31-35	85,6	4,6	9,8	478
	36-45	89,0	2,8	8,2	610
	46-55	90,2	4,1	5,7	389
	56-	92,8	3,1	4,1	290
Sex	Male	85,3	5,1	9,6	971
	Female	86,4	3,0	10,7	1737
Total		86,0	3,8	10,3	2708

		P5/ Sounds that are typical of Dalmatia (3x)								N
		SOUNDS OF THE SEA	SOUNDS OF CICADAS AND CRICKETS	SEAGULL CRIES	SOUNDS OF WIND	DALMATIAN MUSIC	SOUNDS OF BOATS AND SHIPS	SOUNDS OF LIFE IN SETTLEMENTS	OTHER SOUNDS	
		Cases Percent (%)								Count
Mode	Printed version	50,6	48,1	23,9	15,3	10,6	9,5	6,9	4,9	898
	Online version	41,1	58,8	19,0	14,4	12,0	8,2	8,5	8,2	1423
Born in Dalmatia?	Yes	45,6	52,1	22,1	18,6	10,2	8,8	9,6	8,1	1069
	No	44,0	56,8	20,0	11,4	12,5	8,5	6,4	5,8	1251
Where do you live?	In Dalmatia	47,4	52,1	22,2	17,5	10,3	9,4	9,9	7,7	1057
	In other Croatian region	43,9	61,8	20,6	12,5	9,4	8,2	6,5	5,3	861
	Abroad (not in Croatia)	39,4	46,4	18,5	12,0	19,0	7,7	5,5	8,2	401
How often do you visit Dalmatia?	Several times a year	45,4	57,9	21,6	15,4	11,2	8,0	6,3	5,2	751
	One a year	43,0	57,5	19,5	10,7	13,4	9,6	5,9	7,0	374
	Occasionally/several times...	38,9	51,5	19,2	7,5	16,7	7,5	9,2	10,5	239
	Visiting for the first time	33,3	55,6		11,1	11,1	11,1		16,7	18
Education	Elementary school	61,5	23,1	15,4	7,7		23,1	15,4	7,7	13
	High school	44,7	49,9	20,7	15,0	8,8	7,3	5,7	8,2	613
	University / college	44,7	57,8	21,4	14,9	11,9	8,9	8,4	5,5	1409
	Mag. or Dr.	44,2	51,2	19,6	13,7	15,4	9,5	9,8	10,9	285
Age	18-25	47,2	41,3	24,5	9,7	15,9	8,6	5,3	4,7	339
	26-30	40,1	59,4	22,0	11,8	17,4	7,5	7,0	3,9	414
	31-35	38,5	65,2	22,1	10,5	9,3	7,1	5,1	9,6	408
	36-45	44,8	59,5	19,0	16,8	8,3	8,3	7,6	5,9	543
	46-55	49,0	51,3	20,5	19,3	9,2	12,1	12,4	8,1	347
	56-	52,6	43,3	17,9	22,0	9,3	9,3	11,6	10,8	268
Sex	Male	41,9	53,1	18,3	16,2	9,8	8,7	7,4	6,7	823
	Female	46,3	55,5	22,4	14,0	12,3	8,6	8,1	7,0	1498
Total		44,8	54,7	20,9	14,7	11,5	8,7	7,9	6,9	2321

		P6/ Experience of Dalmatian nature and the whole atmosphere	N
		Mean	Count
Mode	Printed version	4,42	1014
	Online version	4,46	1694
Born in Dalmatia?	Yes	4,61	1181
	No	4,32	1526
Where do you live?	In Dalmatia	4,56	1183
	In other Croatian region	4,37	992
	Abroad (not in Croatia)	4,32	531
How often do you visit Dalmatia?	Several times a year	4,51	850
	One a year	4,33	447
	Occasionally/several times...	4,12	321
	Visiting for the first time	4,08	38
Education	Elementary school	4,31	16
	High school	4,45	724
	University / college	4,47	1644
	Mag. or Dr.	4,33	323
Age	18-25	4,42	425
	26-30	4,44	514
	31-35	4,44	478
	36-45	4,41	610
	46-55	4,54	389
	56-	4,43	290
Sex	Male	4,32	971
	Female	4,51	1737
Total		4,44	2708

		P7/ In experience of Dalmatia how important are the following aspects?				
		Visual appearance of the landscape	Smells of the landscape	Sounds of the landscape	Tactile sensations (temperature of the sea, the air, the wind, the sun...)	N
		Mean				Count
Mode	Printed version	4,45	4,19	3,98	4,5	1014
	Online version	4,62	4,3	4,03	4,51	1694
Born in Dalmatia?	Yes	4,61	4,26	4,09	4,56	1181
	No	4,52	4,26	3,95	4,47	1526
Where do you live?	In Dalmatia	4,58	4,24	4,03	4,55	1183
	In other Croatian region	4,57	4,36	4,07	4,47	992
	Abroad (not in Croatia)	4,5	4,13	3,85	4,48	531
How often do you visit Dalmatia?	Several times a year	4,59	4,36	4,1	4,51	850
	One a year	4,53	4,29	3,99	4,5	447
	Occasionally/several times...	4,5	4,15	3,87	4,42	321
	Visiting for the first time	4,5	3,58	3,55	4,42	38
Education	Elementary school	4,5	4,31	3,87	4,69	16
	High school	4,47	4,23	4,02	4,56	724
	University / college	4,59	4,28	4,02	4,49	1644
	Mag. or Dr.	4,61	4,22	3,97	4,47	323
Age	18-25	4,43	4,02	3,88	4,51	425
	26-30	4,54	4,19	3,96	4,49	514
	31-35	4,57	4,29	4,09	4,49	478
	36-45	4,56	4,35	4,05	4,45	610
	46-55	4,66	4,36	4,04	4,59	389
	56-	4,64	4,36	4,08	4,58	290
Sex	Male	4,47	4,07	3,87	4,43	971
	Female	4,61	4,37	4,1	4,55	1737
Total		4,56	4,26	4,01	4,51	2708

		P8/ Souvenirs wich present Dalmatia best?									N
		A painting depicting Dalmatian landscape	A potpourri, oil ... with the scent of aromatic Dalmatian herbs	A bottle of Dalmatian wine	A bottle of olive oil	A replica of an old stone house	A box of dried figs	Sea shells, pebbles ... or other natural objects	CD with sounds of Dalmatia, folk songs...	Other	
		Count Percent (%)									
Mode	Printed version	16,6	17,3	7,5	19,2	16,1	4,4	8,5	8,9	1,5	1012
	Online version	10,0	21,1	10,5	21,6	11,5	5,2	4,7	9,9	5,5	1694
Born in Dalmatia?	Yes	11,9	19,7	7,2	19,7	17,6	5,0	4,8	9,7	4,4	1179
	No	12,9	19,7	11,1	21,5	9,8	4,8	7,1	9,4	3,7	1526
Where do you live?	In Dalmatia	12,6	19,4	8,0	19,6	16,9	4,7	5,1	9,6	4,1	1182
	In other Croatian region	10,3	21,3	10,5	22,0	11,5	5,7	6,8	8,4	3,6	991
	Abroad (not in Croatia)	16,2	17,5	10,4	20,5	8,3	4,0	7,3	11,3	4,5	531
How often do you visit Dalmatia?	Several times a year	9,7	20,1	10,5	23,7	11,1	6,0	5,1	9,1	4,8	849
	One a year	15,2	19,7	8,9	19,5	13,2	4,3	8,1	8,5	2,7	447
	Occasionally/several times...	13,1	21,2	12,5	16,8	7,5	4,7	8,7	10,9	4,7	321
	Visiting for the first time	5,3	15,8	23,7	31,6	2,6	2,6	5,3	7,9	5,3	38
Education	Elementary school	31,3	6,3		31,3	12,5			12,5	6,3	16
	High school	15,2	18,2	8,0	17,3	16,3	4,3	10,5	8,1	2,1	724
	University / college	11,4	21,0	9,6	21,4	12,9	5,6	4,7	9,4	4,1	1642
	Mag. or Dr.	10,8	17,0	12,1	24,5	8,4	3,1	4,0	12,7	7,4	323
Age	18-25	14,8	16,7	12,0	18,6	12,9	2,8	10,1	10,4	1,6	425
	26-30	10,7	17,5	13,5	24,8	13,1	4,7	5,3	6,8	3,7	513
	31-35	9,8	18,6	10,0	23,4	13,6	6,1	5,2	9,4	3,8	478
	36-45	10,2	23,1	7,5	22,1	12,8	6,2	4,6	7,7	5,7	610
	46-55	15,2	22,9	6,2	17,2	12,6	4,4	6,2	11,8	3,6	389
	56-	17,3	18,3	5,5	13,8	15,2	4,5	6,2	13,8	5,2	289
Sex	Male	14,5	15,7	13,0	19,4	12,6	5,7	5,5	9,0	4,7	970
	Female	11,3	21,9	7,4	21,4	13,6	4,5	6,5	9,8	3,6	1736
Total		12,5	19,7	9,4	20,7	13,2	4,9	6,1	9,5	4,0	2706

		P9/ Properties that remind you of Dalmatia the most (3x) / Rate the 3 selected properties from 1 (the most) to 3																				
		Rocky ground (karst) and undergrowth				Old Dalmatian city centres				Seaside promenades				Lighthouses				Night swimming				
		0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3	N
		Count Percent (%)				Count Percent (%)				Count Percent (%)				Count Percent (%)				Count Percent (%)				Count
Mode	Printed version	54,4	19,5	12,1	13,9	42,6	28,0	16,4	13,0	78,2	5,7	8,7	7,4	93,7	1,1	3,0	2,3	97,3	0,5	1,4	0,8%	1014
	Online version	51,4	22,2	15,1	11,3	34,9	30,7	19,9	14,5	77,7	4,4	8,3	9,6	94,0	0,9	2,0	3,1	98,0	0,2	0,4	1,4%	1694
Born in Dalmatia?	Yes	53,7	20,7	13,0	12,6	32,9	35,2	18,4	13,5	78,2	5,4	8,6	7,7	93,6	1,4	2,5	2,6	98,8	0,2	0,6	0,4%	1181
	No	51,6	21,6	14,7	12,1	41,5	25,4	18,7	14,4	77,7	4,5	8,3	9,6	94,1	0,7	2,3	2,9	96,9	0,5	0,9	1,8%	1526
Where do you live?	In Dalmatia	52,1	22,1	12,8	13,1	34,2	34,7	19,3	11,9	77,9	5,2	8,8	8,2	93,4	1,6	2,5	2,5	98,5	0,2	0,6	0,8%	1183
	In other Croatian region	53,7	19,3	15,1	11,9	42,1	24,6	18,4	14,8	80,3	4,1	7,2	8,4	94,0	0,6	2,3	3,1	97,9	0,4	0,5	1,2%	992
	Abroad (not in Croatia)	51,2	23,0	14,5	11,3	37,7	28,2	17,3	16,8	73,6	5,6	10,0	10,7	94,7	0,2	2,3	2,8	95,9	0,6	1,5	2,1%	531
How often do you visit Dalmatia?	Several times a year	57,1	18,8	12,2	11,9	40,8	25,5	17,5	16,1	79,9	5,1	6,6	8,5	94,1	0,8	2,2	2,8	97,1	0,6	0,9	1,4%	850
	One a year	52,1	20,8	18,1	8,9	42,5	26,6	16,3	14,5	78,7	2,7	8,3	10,3	94,0		2,0	4,0	97,3	0,7	0,7	1,3%	447
	Occasionally/several times...	45,5	24,9	15,9	13,7	34,9	28,7	21,5	15,0	73,5	6,2	10,0	10,3	94,4	0,6	2,8	2,2	98,1			1,9%	321
	Visiting for the first time	55,3	26,3	7,9	10,5	36,8	36,8	10,5	15,8	52,6	7,9	28,9	10,5	97,4		2,6		92,1		5,3	2,6%	38
Education	Elementary school	56,3	31,3	6,3	6,3	31,3	25,0	18,8	25,0	87,5			12,5	81,3	6,3	12,5		100,0				16
	High school	56,6	19,3	12,7	11,3	44,6	26,1	16,3	13,0	78,2	5,0	8,4	8,4	92,1	1,2	3,3	3,3	96,1	0,7	1,5	1,7%	724
	University / college	52,0	20,0	15,0	13,0	36,1	31,3	18,8	13,9	77,9	5,0	8,3	8,8	94,7	0,9	1,7	2,7	98,5	0,2	0,4	0,8%	1644
	Mag. or Dr.	45,8	31,3	11,8	11,1	31,3	30,0	22,6	16,1	77,4	4,3	9,6	8,7	94,1	0,3	3,1	2,5	97,2		0,6	2,2%	323
Age	18-25	59,8	19,8	10,1	10,4	49,4	21,4	15,3	13,9	73,9	7,1	10,8	8,2	98,8	0,5		0,7	95,3	0,7	2,4	1,6%	425
	26-30	51,9	23,3	12,8	11,9	42,6	25,1	16,9	15,4	81,1	4,7	6,8	7,4	96,3	0,8	1,4	1,6	97,5	0,2	1,2	1,2%	514
	31-35	49,0	21,8	15,1	14,2	36,8	28,2	21,5	13,4	78,9	4,8	6,1	10,3	94,6	1,0	1,9	2,5	97,9	0,4	0,2	1,5%	478
	36-45	52,3	19,7	17,5	10,5	33,6	33,0	19,0	14,4	79,7	4,8	7,2	8,4	93,1	1,0	2,3	3,6	97,5	0,3	0,3	1,8%	610
	46-55	53,0	21,9	11,1	14,1	31,1	36,0	20,1	12,9	77,9	4,6	10,0	7,5	89,7	0,5	5,1	4,6	100,0				389
	56-	49,3	21,0	16,2	13,4	31,4	36,9	18,6	13,1	72,8	2,8	12,4	12,1	88,3	2,4	4,8	4,5	99,0	0,3	0,3	0,3%	290
Sex	Male	50,7	23,7	13,9	11,7	37,5	28,5	19,5	14,5	76,4	5,5	8,9	9,3	93,5	0,8	2,2	3,5	97,0	0,5	0,9	1,5%	971
	Female	53,6	19,8	14,0	12,6	37,9	30,3	18,1	13,6	78,8	4,5	8,2	8,5	94,1	1,0	2,5	2,4	98,2	0,2	0,6	1,0%	1737
Total		52,5	21,2	14,0	12,3	37,8	29,7	18,6	14,0	77,9	4,9	8,5	8,8	93,9	1,0	2,4	2,8	97,7	0,3	0,7	1,2	2708

		P9/ Properties that remind you of Dalmatia the most (3x) / Rate the 3 selected properties from 1 (the most) to 3																	
		Taverns, the smell and taste of food and wine				Fishing ports				Dalmatian fiestas				Characteristic smells and sounds of nature					
		0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3		N
		Count Percent (%)				Count Percent (%)				Count Percent (%)				Count Percent (%)					Count
Mode	Printed version	54,6	9,7	17,9	17,9	87,0	2,6	5,1	5,3	81,8	3,6	7,0	7,7	67,2	11,2	11,3	10,3	1014	
	Online version	51,7	9,7	14,9	23,6	86,8	1,7	5,8	5,8	88,2	1,3	4,0	6,6	63,6	15,4	13,9	7,1	1694	
Born in Dalmatia?	Yes	51,1	9,7	16,5	22,7	87,3	1,9	5,3	5,5	80,2	3,2	7,5	9,1	71,3	9,4	11,9	7,5	1181	
	No	54,2	9,7	15,7	20,4	86,6	2,1	5,6	5,7	90,1	1,3	3,3	5,3	60,0	17,3	13,8	8,9	1526	
Where do you live?	In Dalmatia	50,5	10,0	16,4	23,2	87,7	1,9	5,5	4,9	80,5	3,0	7,7	8,8	72,2	8,4	11,9	7,5	1183	
	In other Croatian region	53,4	9,7	15,8	21,1	87,1	2,2	4,8	5,8	89,6	1,1	3,4	5,8	56,3	20,7	13,5	9,6	992	
	Abroad (not in Croatia)	56,9	9,2	15,4	18,5	84,4	1,9	7,0	6,8	90,4	2,1	2,4	5,1	65,0	13,4	14,1	7,5	531	
How often do you visit Dalmatia?	Several times a year	50,5	11,5	18,0	20,0	85,6	2,4	5,6	6,4	86,7	1,4	4,5	7,4	60,7	17,1	14,2	8,0	850	
	One a year	57,5	8,1	15,9	18,6	87,9	1,8	5,4	4,9	91,9	0,7	2,5	4,9	56,4	21,0	12,8	9,8	447	
	Occasionally/several times...	55,8	9,7	12,5	22,1	85,4	1,9	6,9	5,9	89,7	2,5	2,8	5,0	64,8	13,1	12,8	9,3	321	
	Visiting for the first time	57,9	10,5	13,2	18,4	89,5		2,6	7,9	92,1		2,6	5,3	81,6	5,3	7,9	5,3	38	
Education	Elementary school	56,3	25,0	12,5	6,3	81,3		18,8		75,0		12,5	12,5	75,0		12,5	12,5	16	
	High school	51,7	11,3	16,2	20,9	88,1	2,3	5,1	4,4	80,9	3,3	7,2	8,6	66,7	13,8	11,2	8,3	724	
	University / college	52,1	9,2	16,2	22,4	86,7	1,8	5,5	6,0	86,9	1,9	4,6	6,6	64,6	14,1	13,1	8,2	1644	
	Mag. or Dr.	58,5	7,7	14,9	18,9	85,4	1,9	5,9	6,8	92,0	0,9	2,2	5,0	62,2	13,3	15,8	8,7	323	
Age	18-25	47,5	14,1	20,2	18,1	91,3	1,9	2,6	4,2	72,0	5,4	11,3	11,3	74,1	10,4	8,2	7,3	425	
	26-30	50,6	12,1	16,1	21,2	88,1	1,6	6,0	4,3	79,2	2,1	8,2	10,5	68,3	12,8	13,0	5,8	514	
	31-35	49,0	10,0	18,8	22,2	88,9	2,5	4,6	4,0	88,5	1,7	3,8	6,1	63,8	14,9	13,4	7,9	478	
	36-45	51,0	8,0	15,4	25,6	87,5	1,0	6,7	4,8	92,0	1,3	2,3	4,4	59,5	16,9	14,4	9,2	610	
	46-55	58,6	6,4	13,4	21,6	82,8	2,1	6,2	9,0	92,3	1,0	2,1	4,6	60,4	14,1	14,9	10,5	389	
	56-	66,6	6,6	10,0	16,9	78,6	4,1	7,2	10,0	91,4	1,4	2,8	4,5	65,2	12,1	13,1	9,7	290	
Sex	Male	50,6	10,3	16,6	22,6	86,8	2,1	6,4	4,7	85,9	1,9	4,8	7,4	71,5	11,1	10,5	6,9	971	
	Female	54,1	9,4	15,7	20,8	86,9	2,0	5,1	6,1	85,7	2,3	5,2	6,7	61,3	15,4	14,3	9,0	1737	
Total		52,8	9,7	16,0	21,5	86,9	2,0	5,5	5,6	85,8	2,1	5,1	7,0	65,0	13,8	12,9	8,3	2708	

		P9/ Properties that remind you of Dalmatia the most (3x) / Rate the 3 selected properties from 1 (the most) to 3																	
		Crazy summer fun				Swimming and sunbathing				The feeling of sea salt on the skin				Other					
		0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3		N
		Count Percent (%)				Count Percent (%)				Count Percent (%)				Count Percent (%)					Count
Mode	Printed version	92,1	1,3	2,7	3,9	61,8	15,1	11,0	12,0	89,0	2,1	3,5	5,5	99,6	0,2		0,2	1014	
	Online version	97,3	0,5	0,9	1,2	73,3	8,6	9,6	8,5	86,0	2,8	4,5	6,8	97,0	1,6	0,8	0,6	1694	
Born in Dalmatia?	Yes	95,1	0,6	1,7	2,6	72,1	9,5	9,1	9,3	86,6	2,8	4,3	6,3	98,6	0,6	0,5	0,3	1181	
	No	95,5	1,0	1,5	2,0	66,6	12,3	10,9	10,2	87,4	2,3	3,9	6,4	97,5	1,4	0,5	0,5	1526	
Where do you live?	In Dalmatia	95,1	0,6	1,4	2,9	70,4	9,8	9,8	10,0	88,4	2,5	3,0	6,1	98,7	0,8	0,2	0,3	1183	
	In other Croatian region	95,8	0,9	1,6	1,7	66,6	12,8	10,9	9,7	85,1	2,5	5,9	6,5	97,9	1,0	0,6	0,5	992	
	Abroad (not in Croatia)	95,1	1,1	1,9	1,9	70,6	10,2	9,4	9,8	87,9	2,6	3,0	6,4	96,4	1,9	1,1	0,6	531	
How often do you visit Dalmatia?	Several times a year	94,8	1,4	1,8	2,0	69,9	11,5	10,4	8,2	85,5	2,5	5,4	6,6	97,2	1,3	0,7	0,8	850	
	One a year	94,9	0,7	1,8	2,7	64,4	13,0	10,7	11,9	83,4	2,7	5,6	8,3	98,4	1,3	0,2		447	
	Occasionally/several times...	97,8	0,3	1,2	0,6	73,2	8,4	9,7	8,7	90,0	2,5	2,5	5,0	96,9	1,2	1,6	0,3	321	
	Visiting for the first time	94,7	2,6		2,6	60,5	7,9	10,5	21,1	92,1	2,6	5,3		97,4		2,6		38	
Education	Elementary school	100,0				62,5	12,5	6,3	18,8	93,8			6,3	100,0				16	
	High school	91,4	1,8	2,6	4,1	66,7	12,2	10,5	10,6	86,9	2,9	4,6	5,7	99,2	0,4	0,3	0,1	724	
	University / college	96,5	0,5	1,4	1,6	69,0	11,6	10,0	9,5	86,9	2,4	4,3	6,4	97,9	1,3	0,5	0,3	1644	
	Mag. or Dr.	97,8	0,3	0,3	1,5	74,6	5,9	10,2	9,3	87,9	2,2	2,5	7,4	95,7	1,5	0,9	1,9	323	
Age	18-25	87,1	2,4	4,7	5,9	64,0	13,9	10,4	11,8	87,5	2,4	3,8	6,4	99,3	0,5	0,2		425	
	26-30	94,6	1,4	1,6	2,5	65,4	12,3	11,3	11,1	85,8	2,5	4,7	7,0	98,2	1,2	0,2	0,4	514	
	31-35	96,7	0,8	0,8	1,7	72,0	9,0	9,4	9,6	86,2	3,1	4,0	6,7	97,1	1,7	0,4	0,8	478	
	36-45	97,5	0,2	1,0	1,3	71,6	10,3	9,2	8,9	87,0	2,6	3,8	6,6	97,4	1,0	1,0	0,7	610	
	46-55	97,9		1,3	0,8	68,9	10,3	11,3	9,5	88,9	2,3	4,1	4,6	97,9	1,0	0,5	0,5	389	
	56-	98,6			1,4	72,8	10,7	9,0	7,6	87,9	1,7	4,1	6,2	98,3	1,0	0,7		290	
Sex	Male	93,5	1,2	2,5	2,8	71,5	11,1	9,3	8,1	88,5	1,9	3,7	6,0	96,7	1,6	0,9	0,7	971	
	Female	96,4	0,6	1,1	2,0	67,6	11,0	10,6	10,8	86,3	2,9	4,3	6,5	98,7	0,7	0,3	0,3	1737	
Total		95,3	0,8	1,6	2,3	69,0	11,0	10,1	9,8	87,1	2,5	4,1	6,3	98,0	1,1	0,5	0,4	2708	

		P10/ five (5) Properties that describe Dalmatia (5x)														
		Stone houses		Dry-stone walls		Smell of the sea		Pine woods		Chirring of cicadas		The beauty of bays and beaches		Sun-bathing		
		Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	N
		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count
Mode	Printed version	40,5	59,5	78,2	21,8	50,8	49,2	78,5	21,5	60,7	39,3	50,1	49,9	91,2	8,8	1014
	Online version	44,0	56,0	72,6	27,4	57,4	42,6	77,7	22,3	54,4	45,6	52,1	47,9	96,6	3,4	1694
Born in Dalmatia ?	Yes	37,4	62,6	70,5	29,5	55,8	44,2	84,5	15,5	59,5	40,5	53,1	46,9	95,3	4,7	1181
	No	46,8	53,2	78,0	22,0	54,2	45,8	73,0	27,0	54,6	45,4	49,9	50,1	94,0	6,0	1526
Where do you live?	In Dalmatia	37,1	62,9	70,0	30,0	54,4	45,6	84,7	15,3	60,1	39,9	52,9	47,1	94,8	5,2	1183
	In other Croatian region	49,3	50,7	75,5	24,5	54,2	45,8	73,8	26,2	52,2	47,8	51,2	48,8	94,9	5,1	992
	Abroad (not in Croatia)	42,7	57,3	83,6	16,4	57,3	42,7	71,2	28,8	57,8	42,2	48,0	52,0	93,6	6,4	531
How often do you visit Dalmatia ?	Several times a year	45,9	54,1	74,2	25,8	55,4	44,6	77,8	22,2	55,1	44,9	52,5	47,5	95,2	4,8	850
	One a year	44,5	55,5	81,0	19,0	53,5	46,5	71,6	28,4	53,5	46,5	47,7	52,3	94,0	6,0	447
	Occasionally/several times...	48,6	51,4	79,1	20,9	58,3	41,7	71,7	28,3	57,0	43,0	51,7	48,3	95,3	4,7	321
	Visiting for the first time	50,0	50,0	84,2	15,8	57,9	42,1	57,9	42,1	71,1	28,9	42,1	57,9	86,8	13,2	38
Education	Elementary school	31,3	68,8	56,3	43,8	62,5	37,5	81,3	18,8	87,5	12,5	56,3	43,8	93,8	6,3	16
	High school	44,1	55,9	76,1	23,9	51,9	48,1	79,1	20,9	60,2	39,8	52,5	47,5	91,2	8,8	724
	University / college	42,0	58,0	74,6	25,4	55,7	44,3	78,2	21,8	55,2	44,8	50,8	49,2	95,7	4,3	1644
	Mag. or Dr.	44,0	56,0	72,8	27,2	57,3	42,7	74,6	25,4	55,4	44,6	51,1	48,9	96,6	3,4	323
Age	18-25	47,3	52,7	83,3	16,7	52,5	47,5	81,4	18,6	66,8	33,2	52,7	47,3	88,2	11,8	425
	26-30	43,6	56,4	77,8	22,2	57,8	42,2	75,7	24,3	54,9	45,1	53,9	46,1	95,9	4,1	514
	31-35	44,1	55,9	73,4	26,6	55,0	45,0	74,7	25,3	49,0	51,0	54,0	46,0	95,2	4,8	478
	36-45	41,3	58,7	69,5	30,5	56,1	43,9	78,0	22,0	53,4	46,6	54,1	45,9	97,2	2,8	610
	46-55	40,4	59,6	75,6	24,4	52,2	47,8	79,7	20,3	58,1	41,9	44,2	55,8	95,4	4,6	389
	56-	37,9	62,1	68,3	31,7	54,8	45,2	80,3	19,7	63,1	36,9	44,5	55,5	93,8	6,2	290
Sex	Male	44,4	55,6	72,2	27,8	57,6	42,4	76,6	23,4	58,4	41,6	51,1	48,9	94,1	5,9	971
	Female	41,7	58,3	76,1	23,9	53,4	46,6	78,8	21,2	55,8	44,2	51,5	48,5	94,8	5,2	1737
Total		42,7	57,3	74,7	25,3	54,9	45,1	78,0	22,0	56,8	43,2	51,3	48,7	94,6	5,4	2708

		P10/ five (5) Properties that describe Dalmatia (5x)														
		Swimming in the sea		Scent of aromatic Dalmatian herbs		The sound of waves		Delicious food and good wine		Sweet smell of figs		Dalmatian folk songs (a cappella)		Pleasant wind from the sea (maestral)		
		Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	N
		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count Percent (%)		Count
Mode	Printed version	72,0	28,0	65,9	34,1	76,5	23,5	70,9	29,1	98,1	1,9	57,3	42,7	86,8	13,2	1014
	Online version	80,3	19,7	60,0	40,0	82,2	17,8	58,3	41,7	96,7	3,3	60,7	39,3	82,3	17,7	1694
Born in Dalmatia?	Yes	78,6	21,4	63,8	36,2	79,1	20,9	60,4	39,6	98,0	2,0	53,3	46,7	83,5	16,5	1181
	No	76,1	23,9	60,9	39,1	80,9	19,1	65,1	34,9	96,7	3,3	64,2	35,8	84,3	15,7	1526
Where do you live?	In Dalmatia	78,0	22,0	64,0	36,0	78,7	21,3	61,3	38,7	98,1	1,9	54,2	45,8	83,4	16,6	1183
	In other Croatian region	78,1	21,9	60,5	39,5	79,5	20,5	66,0	34,0	97,0	3,0	65,0	35,0	85,2	14,8	992
	Abroad (not in Croatia)	74,0	26,0	61,4	38,6	84,4	15,6	61,2	38,8	95,9	4,1	60,5	39,5	82,9	17,1	531
How often do you visit Dalmatia?	Several times a year	78,8	21,2	60,7	39,3	80,5	19,5	59,2	40,8	97,9	2,1	61,6	38,4	83,1	16,9	850
	One a year	76,3	23,7	64,2	35,8	80,3	19,7	65,8	34,2	96,4	3,6	66,2	33,8	85,0	15,0	447
	Occasionally/several times...	78,2	21,8	56,7	43,3	83,2	16,8	66,0	34,0	95,0	5,0	57,6	42,4	84,7	15,3	321
	Visiting for the first time	57,9	42,1	81,6	18,4	86,8	13,2	55,3	44,7	89,5	10,5	76,3	23,7	89,5	10,5	38
Education	Elementary school	62,5	37,5	50,0	50,0	75,0	25,0	68,8	31,3	93,8	6,3	75,0	25,0	81,3	18,8	16
	High school	76,0	24,0	66,7	33,3	77,6	22,4	65,1	34,9	96,7	3,3	57,3	42,7	84,7	15,3	724
	University / college	78,4	21,6	60,9	39,1	81,0	19,0	62,0	38,0	97,6	2,4	58,7	41,3	83,6	16,4	1644
	Mag. or Dr.	74,6	25,4	59,1	40,9	81,1	18,9	63,5	36,5	96,6	3,4	66,9	33,1	84,2	15,8	323
Age	18-25	71,8	28,2	68,2	31,8	80,7	19,3	60,2	39,8	97,6	2,4	48,5	51,5	86,4	13,6	425
	26-30	77,4	22,6	66,9	33,1	83,3	16,7	57,0	43,0	98,1	1,9	54,5	45,5	82,7	17,3	514
	31-35	78,7	21,3	65,9	34,1	81,2	18,8	62,6	37,4	97,3	2,7	62,8	37,2	81,4	18,6	478
	36-45	80,5	19,5	59,0	41,0	81,3	18,7	61,8	38,2	96,7	3,3	65,7	34,3	82,0	18,0	610
	46-55	75,8	24,2	54,5	45,5	76,1	23,9	69,4	30,6	96,7	3,3	58,9	41,1	86,1	13,9	389
	56-	77,2	22,8	55,9	44,1	75,2	24,8	73,1	26,9	96,9	3,1	65,9	34,1	88,3	11,7	290
Sex	Male	74,6	25,4	65,8	34,2	79,6	20,4	60,8	39,2	97,4	2,6	61,4	38,6	84,7	15,3	971
	Female	78,7	21,3	60,2	39,8	80,4	19,6	64,3	35,7	97,1	2,9	58,3	41,7	83,6	16,4	1737
Total		77,2	22,8	62,2	37,8	80,1	19,9	63,0	37,0	97,2	2,8	59,4	40,6	84,0	16,0	2708

		P10/ five (5) Properties that describe Dalmatia (5x)												
		Boats in sea-ports		Scent of pines and cypresses		Tolling of the church bell towers		The sound of the boats and ships		The smell of sunscreen		Seagulls' cries		
		Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	Not selected	Selected	N
		Count	Percent (%)	Count	Percent (%)	Count	Percent (%)	Count	Percent (%)	Count	Percent (%)	Count	Percent (%)	Count
Mode	Printed version	82,4%	17,6%	80,2%	19,8%	91,6%	8,4%	93,0%	7,0%	97,6%	2,4%	77,4%	22,6%	1014
	Online version	86,3%	13,7%	71,4%	28,6%	90,2%	9,8%	94,6%	5,4%	98,2%	1,8%	83,5%	16,5%	1694
Born in Dalmatia?	Yes	85,0%	15,0%	82,6%	17,4%	87,2%	12,8%	92,5%	7,5%	98,9%	1,1%	80,5%	19,5%	1181
	No	84,8%	15,2%	68,5%	31,5%	93,4%	6,6%	95,1%	4,9%	97,2%	2,8%	81,7%	18,3%	1526
Where do you live?	In Dalmatia	84,3%	15,7%	83,4%	16,6%	88,3%	11,7%	93,5%	6,5%	98,8%	1,2%	79,5%	20,5%	1183
	In other Croatian region	85,5%	14,5%	67,3%	32,7%	92,3%	7,7%	94,2%	5,8%	97,8%	2,2%	80,3%	19,7%	992
	Abroad (not in Croatia)	84,9%	15,1%	68,9%	31,1%	93,2%	6,8%	94,7%	5,3%	96,4%	3,6%	86,4%	13,6%	531
How often do you visit Dalmatia?	Several times a year	84,6%	15,4%	72,8%	27,2%	90,4%	9,6%	93,3%	6,7%	98,1%	1,9%	82,5%	17,5%	850
	One a year	87,9%	12,1%	63,8%	36,2%	93,7%	6,3%	95,3%	4,7%	98,0%	2,0%	81,4%	18,6%	447
	Occasionally/several times...	85,7%	14,3%	64,5%	35,5%	93,5%	6,5%	95,0%	5,0%	95,6%	4,4%	82,2%	17,8%	321
	Visiting for the first time	68,4%	31,6%	86,8%	13,2%	92,1%	7,9%	92,1%	7,9%	94,7%	5,3%	78,9%	21,1%	38
Education	Elementary school	68,8%	31,3%	100,0%		81,3%	18,8%	93,8%	6,3%	100,0%		81,3%	18,8%	16
	High school	85,2%	14,8%	76,8%	23,2%	92,7%	7,3%	92,5%	7,5%	97,1%	2,9%	76,1%	23,9%	724
	University / college	85,3%	14,7%	74,6%	25,4%	89,8%	10,2%	94,5%	5,5%	98,1%	1,9%	82,9%	17,1%	1644
	Mag. or Dr.	82,7%	17,3%	69,3%	30,7%	91,3%	8,7%	94,7%	5,3%	99,4%	0,6%	83,9%	16,1%	323
Age	18-25	80,9%	19,1%	80,0%	20,0%	93,9%	6,1%	91,5%	8,5%	95,8%	4,2%	72,9%	27,1%	425
	26-30	85,4%	14,6%	71,8%	28,2%	89,7%	10,3%	95,3%	4,7%	97,5%	2,5%	80,7%	19,3%	514
	31-35	87,9%	12,1%	73,0%	27,0%	92,5%	7,5%	91,8%	8,2%	96,7%	3,3%	82,6%	17,4%	478
	36-45	86,1%	13,9%	70,2%	29,8%	90,0%	10,0%	95,4%	4,6%	99,0%	1,0%	81,8%	18,2%	610
	46-55	87,7%	12,3%	79,4%	20,6%	90,0%	10,0%	93,6%	6,4%	100,0%		85,6%	14,4%	389
	56-	78,3%	21,7%	77,9%	22,1%	87,6%	12,4%	96,2%	3,8%	99,3%	0,7%	84,5%	15,5%	290
Sex	Male	81,8%	18,2%	76,6%	23,4%	89,5%	10,5%	93,8%	6,2%	98,0%	2,0%	81,4%	18,6%	971
	Female	86,6%	13,4%	73,6%	26,4%	91,4%	8,6%	94,1%	5,9%	97,9%	2,1%	81,1%	18,9%	1737
Total		84,9%	15,1%	74,7%	25,3%	90,7%	9,3%	94,0%	6,0%	98,0%	2,0%	81,2%	18,8%	2708

		P11/ Characteristics of Dalmatia in the winter (2x)					N
		BORA AND NORTHEASTERLY WIND WEATHER	MILD CLIMATE	WINTER ATMOSPHERE AND LIFESTYLE	WINTER LANDSCAPE EXPERIENCES	OTHER	
		Cases Percent (%)					Count
Mode	Printed version	58,0	18,3	39,4	7,1	1,5	972
	Online version	45,2	23,2	51,6	10,0	2,8	1356
Born in Dalmatia?	Yes	54,6	20,9	44,1	7,0	2,0	1165
	No	46,6	21,3	48,9	10,7	2,6	1162
Where do you live?	In Dalmatia	54,2	22,3	42,6	6,1	2,1	1165
	In other Croatian region	50,5	17,0	51,7	10,4	1,9	830
	Abroad (not in Croatia)	37,8	27,5	47,7	14,5	3,9	331
How often do you visit Dalmatia?	Several times a year	48,5	19,3	52,5	11,9	1,9	792
	One a year	46,5	20,1	48,6	8,8	2,7	329
	Occasionally/several times...	37,3	24,9	50,3	11,9	4,5	177
	Visiting for the first time	60,0	20,0	40,0			5
Education	Elementary school	50,0	28,6	21,4	7,1		14
	High school	52,8	18,3	43,5	7,1	1,4	644
	University / college	50,6	21,7	47,5	9,5	2,5	1412
	Mag. or Dr.	44,7	24,5	50,2	9,3	3,1	257
Age	18-25	54,6	17,2	43,0	7,1	2,9	379
	26-30	54,4	18,0	44,7	8,5	1,4	423
	31-35	51,4	18,3	51,4	8,4	2,5	393
	36-45	49,1	22,0	49,0	8,2	2,3	527
	46-55	45,6	26,8	46,2	12,6	1,5	340
	56-	46,6	27,3	42,8	8,3	3,4	264
Sex	Male	44,3	20,6	50,1	8,3	2,4	839
	Female	54,1	21,4	44,5	9,1	2,2	1489
Total		50,6	21,1	46,5	8,8	2,3	2328

		P12/ What your experience of Dalmatia would be, if you could not feel its smells, sounds and tactile sensations?				N
		A lot worse	Somewhat worse, but still good	The same, smells, sounds and tactile sensations do not mean a lot to me	Other	
		Count Percent				Count
Mode	Printed version	54,6	41,1	2,4	1,9	1012
	Online version	56,8	35,0	2,5	5,6	1694
Born in Dalmatia?	Yes	54,2	38,6	2,9	4,4	1180
	No	57,4	36,3	2,2	4,1	1525
Where do you live?	In Dalmatia	55,2	38,7	2,5	3,6	1182
	In other Croatian region	55,8	37,8	1,8	4,5	991
	Abroad (not in Croatia)	58,2	33,1	3,8	4,9	531
How often do you visit Dalmatia?	Several times a year	56,8	36,0	2,7	4,5	850
	One a year	55,6	38,8	1,1	4,5	446
	Occasionally/several times...	57,6	34,0	3,1	5,3	321
	Visiting for the first time	50,0	34,2	7,9	7,9	38
Education	Elementary school	62,5	31,3		6,3	16
	High school	54,1	40,2	3,3	2,4	723
	University / college	56,4	37,1	1,9	4,6	1643
	Mag. or Dr.	58,5	31,6	3,7	6,2	323
Age	18-25	45,5	46,5	4,0	4,0	424
	26-30	51,4	41,4	2,1	5,1	514
	31-35	58,5	34,0	2,9	4,6	477
	36-45	59,5	34,3	2,0	4,3	610
	46-55	62,7	31,9	2,6	2,8	389
	56-	59,0	35,9	1,0	4,1	290
Sex	Male	56,0	36,9	2,9	4,2	971
	Female	56,0	37,5	2,2	4,2	1735
Total		56,0	37,3	2,5	4,2	2706

ANNEX D

Code list (categories) for open-ended questions from the questionnaire

P 1. Specify the first five (5) terms that you think of when you think about Dalmatia?

10	SEA
20	MEDITERRANEAN CLIMATE
21	SUN AND WARMTH
22	OTHER CHARACTERISTICS OF THE CLIMATE
30	GASTRONOMY
31	DALMATIAN FOOD AND CUISINE
32	WINE
40	URBAN LANDSCAPE (TOWNS AND VILLAGES)
41	DALMATIAN TOWNS AND VILLAGES
42	ARCHITECTURE, HISTORICAL SITES AND URBAN OPEN SPACE
50	NATURAL AND CULTURAL LANDSCAPE
51	DALMATIAN KARST LANDSCAPE
52	OLIVE TREES AND GROVES
53	COASTAL LANDSCAPE
54	BOATS, SHIPS AND PORTS
55	OTHER LANDSCAPE FEATURES
60	AROMATIC VEGETATION AND OTHER OLFACTORY CHARACTERISTICS
61	AROMATIC PLANTS
62	PINES AND CYPRESSES
63	SMELLS OF DALMATIA
70	AUDITORY CHARACTERISTICS OF THE REGION
71	DALMATIAN MUSIC
72	SOUNDS OF NATURE
73	OTHER SOUNDS
80	SOCIOLOGICAL AND EMOTIONAL PERCEPTION OF THE REGION
81	LIFESTYLE, CULTURE, ATMOSPHERE AND PLACE ATTACHMENT
82	PERCEPTION OF LOCAL PEOPLE (MENTALITY)
90	SUMMER EXPERIENCES
91	SUMMER
92	ACTIVITIES BY THE SEA
93	REST AND RELAXATION
94	OTHER SUMMER EXPERIENCES
100	OTHER

P 2. Specify three (3) elements that are inevitable, in your opinion, of the typical Dalmatian atmosphere.

10 **SEA**

20 **MEDITERRANEAN CLIMATE**

30 **GASTRONOMY**

31 DALMATIAN FOOD AND CUISINE

32 WINE

40 **URBAN LANDSCAPE (TOWNS AND VILLAGES)**

41 STONE HOUSES

42 URBAN OPEN SPACE

43 OTHER ARCHITECTURAL AND URBAN ELEMENTS

50 **NATURAL AND CULTURAL LANDSCAPE**

51 DALMATIAN KARST LANDSCAPE

52 OLIVE TREES AND GROVES

53 COASTAL LANDSCAPE

54 BOATS, SHIPS AND PORTS

55 OTHER LANDSCAPE FEATURES

60 **AROMATIC VEGETATION AND OTHER OLFACTORY CHARACTERISTICS**

61 AROMATIC PLANTS

62 PINES AND CYPRESSES

63 SMELLS OF DALMATIA

70 **AUDITORY CHARACTERISTICS OF THE REGION**

71 DALMATIAN MUSIC

72 OTHER SOUNDS

80 **SPECIFIČNI ASPEKTI AMBIJENTA I KULTURE ŽIVLJENJA**

81 TRADITION AND DALMATIAN LIFESTYLE

82 TAVERNS

90 **OTHER**

P 4. During your visit(s) to Dalmatia, have you noticed any smells (scents) that you would describe as typical for Dalmatia? If yes, please provide some examples.

- 10** **SMELL OF THE SEA**
- 20** **SCENTS OF PINES AND CYPRESSES**
- 30** **SCENTS OF AROMATIC PLANTS**
- 31 SCENT OF LAVENDER
- 32 SCENT OF ROSEMARY
- 33 SCENT OF IMMORTELLE
- 34 SCENTS OF OTHER AROMATIC PLANTS
- 40** **SMELLS OF FOOD AND TAVERNS**
- 50** **OTHER SMELLS**

P 5. During your visit(s) to Dalmatia, have you noticed any sounds that you would describe as typical for Dalmatia? If yes, please provide some examples.

- 10** **SOUNDS OF THE SEA**
- 20** **SOUNDS OF CICADAS AND CRICKETS**
- 30** **SEAGULL CRIES**
- 40** **SOUNDS OF WIND**
- 50** **DALMATIAN MUSIC**
- 60** **SOUNDS OF BOATS AND SHIPS**
- 70** **SOUNDS OF LIFE IN SETTLEMENTS**
- 80** **OTHER SOUNDS**

P 11. What, in your opinion, characterises Dalmatia the most in the winter?

- 10** **BORA AND NORTHEASTERLY WIND WEATHER**
- 20** **MILD CLIMATE**
- 30** **WINTER ATMOSPHERE AND LIFESTYLE**
- 40** **WINTER LANDSCAPE EXPERIENCES**
- 50** **OTHER**

ANNEX E

Sensory walk template

Note: One filled form is given for the purpose of presentation

SENSORY ASSESSMENT OF PLACE

LOCATION..... Island Prvić
TIME (DATE, HOUR) 14.8.2010. 13h
YEAR OF BIRTH..... 1951
SEX..... Male
EDUCATION LEVEL..... College degree (Construction eng.)

Sensation/stimulus:	Assessment of typicality (1-5)*	Note/comment
Breeze from northeast	5	
A slight sound of waves	5	
A single cicada sizzling in the early evening	4	
Feel of the wind on the body	4	
Smell of the sea	5	
Single seagull flying	5	
Crackling sound of the rocky coast	5	A part of the coast that is not submerged by the sea at low tide is crackling because of the living organisms in it
A boat passing by	5	
Sound of a boat engine fading in the distance	5	
Music from the hotel terrace on the shore	3	
Ripe fig hanging on the tree	5	
Shimmering of the fish in the sea	5	
Pebbles and rocks rolling after a ship has passed by	5	Usually when bigger ships pass by
Dry stone walls by the sea in the sunset	5	

* The participants were given the form with the explanation of the task and the value system, where 1 means *not typical at all* and 5 *extremely typical* of Dalmatia

ANNEX F

Tables with results of the sensory walk method

Location 1: Vladimir Nazor Park and the Kolovare beach

Annex F1: Visual experiences on location 1

Priloga F1: Vizualna doživetja na lokaciji 1

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
rare, but existing puddles	joggers in the park	graffiti on walls	pedaloos at sea	pine needles on the ground
		well-tended green shrubs, planted flowers	bicycles locked to trees	shimmering of the sea
		the sun breaking through tree tops	diving board at the pool	waves
		tree (Wollemia nobilis)	cyclists	reflection of the sun in leaves
		people walking in the park		people in swimming suits
		green shrubs		islands in the distance
		people exercising in the park		pine trees
				dry leaves
				old wells
				ferryboat in the distance
				fig-tree
				swimmers diving into the sea
				beach volleyball
				the sea
				people sunbathing
				volleyball and football matches
				the view of the islands
				people taking a walk
				boats
				pine trees

Annex F2: Auditory experiences on location 1

Priloga F2: Avditorna doživetja na lokaciji 1

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
	sound of traffic in the distance	sound of traffic in the distance	sound of shingles	noise, murmur of people's voices
		sound of shingles under the feet	church bells	din of children
		traffic noise in the distance	church bells	sound of the sea
		sound of shingles	Birds chirping	cicadas
			pounding of a ball	sound of birds
			rustle of leaves caused by birds and cats	sound of boats
				conversation of strollers
				sound of shingles under joggers' feet
				laughter
				murmur of swimmers' voices
				shouts of children playing
				sound of automobiles
				conversation of strollers
				cicadas
				cicadas
				cicadas
				laughter
				murmur of the sea
				sound of a speedboat
				waves breaking against the shore

Annex F3: Olfactory experiences on location 1

Priloga F3: Olfaktorna doživetja na lokaciji 1

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
			scent of laurel	smell of sunscreen
				smell of the grass
				smell of pine trees
				smell of sunscreen
				smell of pine trees
				smell of the sea
				smell of the sea
				smell of sunscreen
				smell of pine trees

Annex F4: Tactile experiences on location 1

Priloga F4: Taktilna doživetja na lokaciji 1

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		mosquito bites	shade	heat
			gentle breeze	summer breeze
				warmth of the sun
				sun
				breeze
				mosquito bites
				shade
				heat
				heat, sultriness
				Biting mosquitoes

Location 2: Island Prvić

Annex F5: Visual experiences on location 2

Priloga F5: Vizualna doživetja na lokaciji 2

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
shooting-stars	fish in the sea	A sleeping cat	boats	the sea
beam from Hacijenda	red lights of windmills above Šibenik	trash on the beach (bags and other trash drifted ashore)	oleander in blossom	colour of the sea specific for certain parts of a day
		moonlight	stone houses	stone
		Iris	stone houses in need of repair	stone houses
		jujube	summer beach equipment (beach umbrella, deck chairs, children's cans)	the sea
		darkness	local inhabitant	seagull
			haze	stone houses
			view of the coast (houses surrounded by green shrubs)	boats at sea
			lights in the distance	reflection of lights in the dead calm sea
				stone drywalls
				seagull on the rock
				the blue (sea and sky)
				cypress
				small stone houses and courtyards
				wrecked drywalls
				church
				ripe fig on a tree
				small boats in the wharf
				fish glistening in the sea
				dry grass
				green window shutters
				Dry walls in the setting sun
				diverse plants (wild and cultivated)
				view of the sea
				pine forest
				blue sea
				fig-orchard (pleasantly green and thick)

- continued -

- continuation of Table 5 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				olive trees
				fresh light blue colour of the sea
				the greenness of plants (Australian laurel, fig-tree)
				boats in the wharf
				clarity of the sea
				Densely moored boats in the wharf
				turquoise sea
				Nicely fixed path, walls and drywalls
				violet plant (Lattice sea lavender)
				beautiful view of the sea
				red pelargonium
				seagull standing on the rock
				sailboats at sea
				sun shimmering on the sea
				Roadside bramble
				starry sky
				summer haze in the distance
				contrast between dark green plants and the colour of the sea
				violet flowers along the coast
				dry grass
				shimmering of little fish in the sea
				stone drywalls
				rocks along the coast
				wooden window shutters
				lights in the distance and reflection in the sea
				red pelargonium
				bocce court
				cat basking in the sun
				oleander
				wharf with boats
				old wooden boat tied to the pier
				glaring of the sun (eyes squinting)

* Hacienda is a well known night club in Vodice

Annex F6: Auditory experiences on location 2

Priloga F6: Avditorna doživetja na lokaciji 2

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
	rustling of the wind in reeds	music from a summer café terrace at the beach	sound of a speedboat	sound of a church bell
		music from café terraces on mainland	sounds of wind, waves, cicadas, seagulls	crickets
		music in the distance	single chirping of crickets	church bell
		sound of boats	sound of a tractor	song of folk singers
			sounds of people and boats, planes	cicada
			lapping waves	murmur of waves
			silence	traditional church chanting
			sounds of the sea (splashing of the fish)	murmur of the sea
			cawing of crows	cicadas
			distant sound of traffic on mainland	cicadas
				cicadas
				sound of fish wiggling in shallow water
				cicadas
				the shore crackling
				the vernacular
				sound of traditional a <i>klapa</i> 's singing
				murmur of the sea (low tide)
				sound of a ship engine in the distance
				sound of an old ship engine
				sound of a ship engine
				screeching of seagulls
				beach shingles slithering after a ship passes
				sound of a ship engine
				cicadas
				sound of a speedboat
				silence
				cicadas
				sound of waves
				sound of boats

- continued -

- continuation of Table 6 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				sound of an old boat
				clanging of dishes
				voices of people coming from the beach
				chirping of cicadas
				sound of a speedboat
				absence of sounds of automobiles and traffic
				murmur of waves
				crickets
				screeching of seagulls in the distance
				sound of a speedboat
				murmur of the wind in tree crowns
				murmur of waves
				sound of a speedboat
				murmur of waves
				cicadas
				crickets
				sound of tiny animals in the shallow water (low tide)
				clanging of a metal sling on the mast
				the sea is breathing (low tide)
				sound of music from summer café terraces on mainland

Annex F7: Olfactory experiences on location 2

Priloga F7: Olfaktorna doživetja na lokaciji 2

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
	exhaust gasses of a tractor	smell of the sea and medicinal herbs	smell of the low tide on the shore	smell of plants and the sea
		smell of the low tide and seaweed		smell of burnt grass
				smell of wet rocks (low tide)
				smell of the sea
				smell of dry pine needles
				smell of home-made soup
				scent of dry aromatic herbs
				smell of the sea
				scent of plants
				smell of a barbecue
				scent of aromatic herbs
				smell of pine trees
				smell of overripe grapes
				scent of dry herbs (plants)
				smell of a fig-tree
				scent of tamarisk
				smell of wooden boat taken out of the sea
				smell of shingles (seaweed) along the shore
				smell of wet rocks along the coast
				smell of warm stone
				scent of tamarisk
				scent of Mediterranean plants
				smell of overripe grapes
				smell of seaweed
				smell of parched grass
				smell of pine trees and dry pine needles

Annex F8: Tactile experiences on location 2

Priloga F8: Taktilna doživetja na lokaciji 2

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		sultriness	parched grass tickling the naked feet	the sun (moderate to strong)
			mosquito bites	breeze
				breeze
				wind
				breeze
				light mistral (western wind)
				streaming of hot air
				humid weather (sultriness)
				warmth of the sun
				burning sensation on the skin at the back of the head
				breeze (cools down pleasantly on a hot day)
				cold stone
				sun, heat
				burning of the sun
				soft layer of pine needles under the feet
				heat
				sun, heat
				warmth of the stone
				high temperature
				breeze
				tickling of salt on the skin
				sun heat
				strong sun
				unpleasant burning of the skin
				scorching sensation on the skin
				sun blazes down
				warm air
				mistral
				fresh wind from mainland

Annex F9: Compound experiences on location 2

Priloga F9: Sestavljena doživetja na lokaciji 2

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		speedboats near the shore	buzzing and bites of mosquitoes	tranquillity and silence
			insects (wasps, flies...)	boat passing by
			butterflies, insects, lizards (and other animals), birds	dead calm
			dead calm	siesta
			scooter at sea	midday desolation
				low tide
				dead calm
				sense of width of space
				beach activities (swimming)
				wasps and butterflies flying on the grapes
				wasps flying

Location 3: Zadar – Vitrenjak bay

Annex F10: Visual experiences on location 3

Priloga F10: Vizualna doživetja na lokaciji 3

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
old rusty boat	Parasailer (parasailing)	well-tended promenade	palm trees	rolling boats
metal bridge in the marina		palm trees	stone breakwater	the sea
		speedboats in dry dock	tarmac	the sea is calming down
		palm trees	sail boats	sea, boats, sun, benches
		dry dock	palm trees	boats
		stone paving	Fig tree	tourists
		sailing ship	beautifully tended promenade	old sunken boat
		children's playground	shipyard	trawler at dusk
		sailing club storage shed		tourists
		hangar (sailing club storage shed)		view of the church tower
		forklift truck		tourists
				seagulls
				boats
				pine trees along the promenade
				seaweed
				cyclist
				the view of the islands
				blue colour
				restaurant
				ship ropes
				seagulls
				seagull
				reflection of the sun in the sea
				couple in love
				people fishing
				beach
				beautiful sailing ship
				beach
				vista of the city
				beautiful boats
				A fig tree
				reflection of the sun
				grey stone
				boats in the dock
				lighthouse

- continued -

- continuation of Table 10 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				boats swaying in the marina
				fish in the sea
				trawler
				boat crane
				speedboat towing a parasailer (parasailing)
				olive tree
				masts
				fish in the sea
				beautiful boat anchored at sea
				boats in the shipyard
				boat in the marina

Annex F11: Auditory experiences on location 3

Priloga F11: Avditorna doživetja na lokaciji 3

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
sound of traffic	sound of a forklift truck	sound of machines in the shipyard	murmur of people's voices	clanking of mast cables
sound of a bicycle bell	sound of automobiles	murmur from a café	sound of a grinder machine	sound of a ship engine
sound of a gush of water	sound of metal tools	music from a bar	sound of a motorcycle	murmur of swimmers' voices
	sound of a grinder machine	sound of a grinder machine		barking of a dog
	ringing of a cell phone	music		traffic noise
				murmur from a café
				sound of summer sandals
				shrieking of children in the sea
				foreign language
				sound of a boat engine
				conversation of swimmers
				sound of a grinder machine
				murmur from a café at the beach
				seagulls' screech
				clanking of mast cables
				sound of an outboard motor

- continued -

- continuation of Table 11 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				Swearing
				sound of sandals
				cicadas ceasing their chirping in the early evening
				shrieks of children swimming
				murmur of people's voices at the beach café
				music from beach facilities
				murmur of the wind

Annex F12: Olfactory experiences on location 3

Priloga F12: Olfaktorna doživetja na lokaciji 3

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
stench of waste		summer perfume-coconut, vanilla	smell of spoiled fish	scent of oleander
		smell of petroleum	smell of fuel oil	smell of the sea
		smell of coffee	smell of fuel oil and motor oil	smell of the sea
		stench of waste	summer perfume for women	smell of pine trees
				smell of a fish restaurant
				smell of pine trees
				smell of sunscreen
				scent of lavender
				smell of the sea

Annex F13: Tactile experiences on location 3

Priloga F13: Taktilna doživetja na lokaciji 3

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
			afternoon sun	warmth
				the sun
				wind
				breeze
				heat
				warmth of the sun
				mistral
				it is not hot

Annex F14: Compound experiences on location 3

Priloga F14: Sestavljena doživetja na lokaciji 3

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		walking on beach shingles	waste containers	two men fishing and talking
				man washing a boat
				<i>dolce far niente</i> (leisurely) walks (siesta)
				people listening to a transistor radio
				sea on the outer side of the breakwater

Location 4: Petrčane

Annex F15: Visual experiences on location 4

Priloga F15: Vizualna doživetja na lokaciji 4

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
well-lighted trees	barrels	light from a boat	beach in the darkness	church tower
pine trees decorated with lights		lamps under the pine trees	dimmed lighting in the park	lights on the shore
decorated pine trees outside a café		beach	advertising boards	lights at the waterfront
pine trees of a beach bar decorated with lights		plastic chairs at a restaurant's terrace	children's park at the beach	pine trees and cones
		volleyball net	empty beach bar	reflection of lights in the sea
		starry sky and half-moon	waterfront lights in the distance	reflection of lights in the sea
		planted saplings	tourist boat at the waterfront	boat tied to the coast
		the hotel pool can be seen through the window	thick tree crowns	pine trees
		beach volleyball	nightclub in the open (empty)	pedaloes
		hotel	hotel with a pool	pine forest
		beach bar with decorated pine trees	barrels on shingles in the park	boat tied to the wooden pier
		automobiles parked under pine trees	reflection of the moonlight in the sea	rusty bollard
			beach bar under pine trees	bocce court
			beach volleyball net	moonlight
			children's play equipment	pine forest
			automobiles parked along the road	signboard <i>rent-a-boat</i> on a stone wall
			vacation house	A stone pier
			old village in the distance	view of the sea (feeling of infinity)
			dimmed light in the park	old Dalmatian window shutters
			currently empty restaurant terrace	dark open sea in the distance
				view of the bay
				beach shower
				rock by the shore

- continued -

- continuation of Table 15 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				waterfront
				reflection of the moonlight in the sea
				beach
				an old little church
				light of a lighthouse
				reflection of the moonlight in the sea
				changing booths at the beach
				lights on the islands
				bench by the sea
				lighthouse
				lights of the island
				the moon swaying in the sea
				moon shining
				the clear sky and stars
				lighthouse
				waves shimmering in the moonlight
				reflection of the moon in the sea
				stone chapel
				stone chapel
				lights from the islands
				the moon
				pine tree crowns resembling a cathedral vault
				Zimmer frei sign
				old stone

Annex F16: Auditory experiences on location 4
Priloga F16: Avditorna doživetja na lokaciji 4

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
sound of pump for the children's castle	music from a restaurant	music	cicada	children's laughter near the sea
music from the café	music from a tavern	sound of an airplane	silently, murmur of children's voices in the distance	crickets
music	short noise of a scooter	music from the restaurant	Dalmatian song	cicada
female voice singing in the distance		night owl	silence	cicadas still chirping
music from a beach bar		night owl	sound of a small rowboat	cicada
salsa from the club		sound of an air conditioning unit	sound of shingles while walking	live music heard from the hotel – a female voice singing Dalmatian songs
			live music for tourists	cicada
			lounge music	music from a restaurant
			music from a hotel	gentle lapping of the sea
			pine needles crackling under the feet	music playing in a play-room
				sea crashing against the rocks
				church bell chiming 22 o'clock
				music from a hotel terrace
				murmur of waves
				murmur of waves on the beach
				tourists talking (in English)
				Dalmatian song
				sound of a small rowboat in the distance
				murmur of the sea
				bigger waves lapping after a boat passed by
				murmur - night conversations of people at the beach
				cricket
				little owl

- continued –

- continuation of Table 16 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				little owl
				murmur of the sea

Annex F17: Olfactory experiences on location 4

Priloga F17: Olfaktorna doživljaja na lokaciji 4

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		smell of food from the tavern	smell of meat	smell of the sea by early evening
			unpleasant smell near the hotel	smell of the sea
			smell of a scooter's gasoline	smell of food from a restaurant
			stench of a waste container	smell of fish from a restaurant
			perfume for women	smell of pine trees
			smell of the hotel's waste collector	smell of grilled fish from a restaurant
				smell of pedaloos taken out of the sea
				smell of pine trees
				scent of laurel
				smell of the hotel's waste collectors
				smell of the soil and plants in the fresh air
				smell of pine trees
				pleasant Mediterranean air (smell of pine trees)

Annex F18: Tactile experiences on location 4

Priloga F18: Taktilna doživljaja na lokaciji 4

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		pleasant air temperature	it is a little fresh, just as it should be	breeze
			walking over pine needles	the air is fresh
			Time for wearing warmer t-shirts is almost here	pine needles soft for walking
				fallen pine needles under the feet
				fresh air near the sea

Annex F19: Compound experiences on location 4

Priloga F19: Sestavljena doživetja na lokaciji 4

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
English women walking		calm sea	Stillness, serenity	dead calm
few people		light-heartedness	quiet atmosphere	lively atmosphere of the place
			summer rolling by	young people drinking at the beach (foreign language)
			silence and darkness	a group of youngsters at the beach
			uneven terrain with shingles	young people hanging out at the beach
			overwhelming stillness	quiet sea (dead calm)
			young people sitting and drinking at the beach	young people hanging out at the beach
			family atmosphere	fresh air
			romance	children from Zagreb
			pleasant walk	
			English female tourists	

Location 5: Biograd

Annex F20: Visual experiences on location 5

Priloga F20: Vizualna doživetja na lokaciji 5

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
thatched umbrella	food stands	promenade with stalls	pine forest	the sea
concrete hospitality facilities	concrete beach	the moon	beach shower	wooden ship in the distance
rustic lamps along the promenade	empty marina	luxurious hotel with well-tended lawn	dogs in a walk	dusk
stall	turtle dove feeding on remains at the beach	colourful shiny children's toys from a stall	beach toboggan	shingle beach, swimmers
illuminated bars' and restaurants' signboards		well-tended lawn in front of a hotel	beach deck chairs	beach café with thatched umbrellas
		wonderfully decorated green areas in the centre	entertainment facilities in the sea	sunset
			pine trees	boat renting
			lighting of the promenade	view of the islands
			view of the open sea	cocktail bars along the promenade
			reflection of the moonlight in the sea	strollers near the sea
			Morning Star	view of the islands
			old houses at the well-arranged beach	little boats at sea
			olive saplings	pine trees
			bare pine tree roots	boats at sea
			night swimmers	clear sea
			beautiful promenade	colours of the sunset
			well-lighted hotel	sunset
			the moon	benches along the promenade
				reflection of the moonlight in the sea
				dense holm-oak, pine and cypress forest
				clear sky
				rocks sticking out of the sea
				reflection of the street lighting in the sea
				rocky seabed

- continued -

- continuation of Table 20 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				the sea rippling at dusk
				ships at sea
				moon reflecting in the sea
				view of an island
				seagull
				pine tree roots
				rocks in the sea
				well-lighted church tower in the distance
				ships in the bay
				lights on islands
				star in the sky
				Morning Star
				stalls
				night is falling, beach cafés starting to light up
				ferryboat in the distance
				ships with well-lighted masts
				view of islands (in the vicinity and in the distance)
				moon in the night sky

Annex F21: Auditory experiences on location 5

Priloga F21: Avditorna doživetja na lokaciji 5

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
sound of a speedboat	music	sound of shingles while people are walking	sound of sandals	murmur of people's voices at the beach
music	music from a café	sound of pushchairs	Sliding of sandals over the ground	sound of summer footwear
sound from young days	loud music	twitter of birds in a pine tree top	sound of a volleyball ball	murmur of people's voices
buzzing of toy cars	music from a café	foreign languages	squeaking sound of swings	Birds twittering
	murmur of water at the hotel pool	murmur of people's voices at cafe terraces		murmur of waves
		sound of a familiar old song		murmur of waves
		laughter of children		birds' song
		sound of the hotel fountain		cicada
				cicada
				murmur of the sea
				sound of a ship in the distance
				murmur of people's voices
				foreign languages
				cicada
				murmur of waves
				murmur of waves
				sound of a speedboat
				cicada
				the sea crashing against the shore
				beach shingles slithering
				one cicada
				sound of the music in the distance
				church bell
				sound of a ship engine
				sound of a speedboat
				live music at a cafe terrace
				waves splashing against the rocks
				group of cicadas chirping silently
				children's laughter
				muffled sound of the ferryboat

- continued -

- continuation of Table 21 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				strong crashing of waves
				music (drums) from a near-by beach café
				music from beach bars

Annex F22: Olfactory experiences on location 5

Priloga F22: Olfaktorna doživetja na lokaciji 5

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
smell of bakery products	smell of pancakes	smell of boiled corn	smell of grilled meat	smell of ice cream from an ice cream machine
		stench of a waste container		smell of dry beach shingles
		smell of pancakes		smell of pancakes and corn
				smell of corn
				smell of the sea
				intensive smell of pine trees and cypresses
				smell of the sea
				smell of sunscreen
				smell of the sea
				smell of seaweed
				smell of lavender
				smell of damp
				smell of grilled fish
				smell of grilled fish from the restaurant
				smell of boats and ships at the waterfront
				smell of Autan (mosquito repellent)
				intensive smell of seaweed
				perfume for women
				numerous summer perfumes

Annex F23: Tactile experiences on location 5

Priloga F23: Taktilna doživetja na lokaciji 5

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
soft grass at the hotel		soft grass	pine needles under the feet	breeze from the sea
				mistral
				fresh mistral in the evening
				breeze
				fresh weather
				pine needles soft to walk on
				warm rock I am sitting on
				warm, humid air, sultriness

Annex F24: Compound experiences on location 5

Priloga F24: Sestavljena doživetja na lokaciji 5

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
	people dancing at the terrace	summer crowd at the waterfront		crowd
	tourist train	walk down the marina		crowd in narrow little streets
		little tourist train ringing and transporting people		laughter, children, crowd
				indescribable crowd
				big crowd
				crowded narrow streets
				crowded, loud and well-lighted streets

Location 6: Zadar Peninsula – Old city centre

Annex F25: Visual experiences on location 6

Priloga F25: Vizualna doživetja na lokaciji 6

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
Spiro Brusina statue	muddy sea in the harbour	dirty sea in the harbour	holm-oak alley	ferryboat in the distance
	buildings damaged in war	pedestrian zone full of obstacles	café near the sea	vista of the waterfront
	graffiti on walls	orderliness of certain areas	strollers with little children	trawlers in the harbour
	window display	oily sea in the harbour	people sitting on benches and looking at the sea	ships at sea
	banana tree	balconies with flowers	swimmers	sea at the waterfront
	ground lights	advertising posters on walls	window displays, cafés	trawlers with old nets
		swimmers	old sunblinds	seagull
		verdure at the waterfront	water in the street	view of islands
		red house surrounded by verdure - Foša	Foša restaurant	swimmer
		swimmers at the waterfront	court building	city walls and the verdure
		holm-oak trees	flowers on the balcony	tourists' groups
		faculty building	palm tree	stone-paved streets
		Spiro Brusina statue	holm-oak tree at the waterfront	numerous market stalls
		flowers on the city walls	clear sea	food at the market
			swimmers at the waterfront	old Mediterranean-style buildings
			Foša wharf	woman going for a swim
			murky sea in the wharf	colours of fruit and vegetables
			agave on the city walls	tourists' groups
				forest on the city walls
				old restaurant at the Foša wharf
				grey mullets in the sea
				flowers
				café terraces in narrow streets
				view of islands
				boats at sea

- continued -

- continuation of Table 25 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				boats in the Foša wharf
				verdure and flowers at the waterfront
				shop windows
				holm-oak alley on the city walls
				grey mullets in the sea
				sea
				boats
				clear sea
				old wooden trawler
				vista from the waterfront
				fruit and vegetables
				small rowboats in the sea
				yachts in the marina
				an old little church
				city walls
				palm trees
				the scene of automobiles disembarking from the ferryboat
				fisher catching fish with a fishing-line at the waterfront

Annex F26: Auditory experiences on location 6

Priloga F26: Avditorna doživetja na lokaciji 6

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
sound of automobiles		sound of shingles under the feet	sound of dishes coming from the restaurant	cicadas
banging of butcher's axe coming from the butcher's shop		Sliding of sandals (flip-flops) over the ground	noise of automobiles in the harbour (disembarkation)	the sea crashing against the waterfront
			sound of riding a bicycle over shingles	sound of boats
			sound of nylon bags at the market	sound of shingles
				chirp of birds
				sound of automobiles
				cicadas

- continued -

- continuation of Table 26 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				murmur of people's voices
				sound of a speedboat
				birds and cicadas
				splashing of the sea against boat flanks
				sound of ferryboat engine and embarkation of automobiles
				sound of a yacht in the distance
				laughter
				splashing of the sea against the rocks
				conversation of people on a ship
				noise caused by disembarkation from a ferryboat
				conversation of swimmers and chirping of cicadas
				murmur of waves and soft music from hotel Zagreb
				gurgling of the sea at the waterfront
				cicadas in the distance
				sound of a speedboat
				sound of ships
				crashing of the sea against tied boats
				sound of cicadas and conversation of swimmers
				sound of a ship engine
				cicadas
				sound of an automobile disembarking from the ferryboat
				cicadas
				cicadas
				murmur of people's voices

Annex F27: Olfactory experiences on location 6

Priloga F27: Olfaktorna doživetja na lokaciji 6

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
unpleasant smell of the harbour	smell of the sewer system	scent of marigolds	mixed smells of fish, sea and fuel oil	smells of wooden fishing boats
smell of kebab	stench of waste	smell of bread	smell of fuel oil	smell of the sea
	unpleasant smell of the sea in the harbour	smells from a fast-food diner and a bakery		unpleasant smell of the fish
		smell of cheese from a stand		smells of fish market
		smell of roasted meat		smell of vegetables at the market
		smells from a bakery		smells of fresh fruit and vegetables
		smell of cheese at a stall		smell of the sea and fuel oil
				scent of marigolds
				smell of vegetables at the market
				smell of the sea
				smell of the sea
				smell of the sea and fuel oil in the harbour
				smell of the sea at the waterfront
				smell of the fish market
				smell of food from a restaurant
				smell of fishing trawlers
				unpleasant smell of a waste container
				smell of peaches and watermelons
				smell of fish at a fish market
				smell of the market
				smell of coffee from a café

Annex F28: Tactile experiences on location 6

Priloga F28: Taktilna doživetja na lokaciji 6

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		wind through the city streets		breeze
				heat
				heat
				heat
				heat
				breeze
				deep shade in narrow streets
				shade
				heat
				the sun is burning (heat)
				shade and breeze

Annex F29: Compound experiences on location 6

Priloga F29: Sestavljena doživetja na lokaciji 6

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		shingles at the waterfront	still quite peaceful town (in the morning)	calm sea in the morning
			clean streets	ferry embarkation
			crowd at the market	crowd at a fish market
			crowd in the town, tourists	crowd at a fish market
				stillness at the waterfront
				dead calm
				rustle, crowd
				tranquillity in the Foša wharf
				elderly ladies offering their products
				complete impression of Foša
				crowd
				rustle of people around the town
				figs fallen from trees, got stuck

Location 7: Vodicë

Annex F30: Visual experiences on location 7

Priloga F30: Vizualna doživetja na lokaciji 7

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
full jewellery window displays	Concrete-paved shore (beach/promenade)	plastic boat taken out of the sea	stand selling postcards	boats
wire crucifix in front of the church	palm trees and flowers	unusual cloud formations	well-tended gardens	swimmers at the beach
pink façade	unsightly façades	empty restaurant	colourful flowers along the promenade	rocking of boats
	metal lighting fixtures	arranged children's playground	stand selling souvenirs	Concrete-paved coast (beach/promenade)
	medley of stalls	ill-fitting (ugly) hotel façades	palms	tamarisks
	medley of ice creams	cocktail bars	narrow streets with stands	ships in the harbour
	a stand in horse-drawn-cart forms, selling travarica and other domestic products	advertising signboards	stone pavement	ships rolling
	terraces in a narrow street	cultivated flower-beds	old man sitting on a bench	round rocks (shingles) in flower beds
	crucifix in front of the church	palm tree	stone benches	pine trees
	flags on yachts	children's playground	palm trees along the promenade	brown pine needles on the ground
	concrete-overbuilding on the coast	old building at the entrance to the town	stand selling dried figs	marina full of boats and ships
		ship crane	advertising billboards	view of nearby islands
		renovated old house	kitschy fences	an old man in an undershirt
		cyclists riding along the coast	tall palm trees	ship crane
		waste at the seabed	crates with fishing nets (on a boat)	tourists sunbathing
		shop window		marina full of boats and ships
		cookies in a window display		tanned girls
				swimmers in the sea
				olive tree
				speedboats in the distance
				narrow <i>kalas</i> with stone houses
				lonely seagull flying

- continued -

- continuation of Table 30 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				stone monument
				green grille
				ships and boats in dry dock
				a line of cafés
				newspaper stand
				an old woman with a headscarf in front of a house
				drying of figs
				olive trees
				fishing nets on boats
				stone-paved waterfront
				masts
				stone church
				green window shutters
				church bell-tower
				dried figs
				old stone wall
				narrow streets
				stand selling coral jewellery
				pigeon on the roof
				the sun is breaking through the clouds
				tourists returning from the beach
				<i>Zimmer frei</i> sign
				colourful fruit and vegetables at the market
				restaurant menu written on a chalk-board
				stone monument
				passer-by eating ice cream
				shop windows with ice cream
				speedboat towing a parasailer

Annex F31: Auditory experiences on location 7

Priloga F31: Avditorna doživetja na lokaciji 7

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
sound of automobiles	sound of pushchairs on the tarmac	music (song from the radio)	splashing of waves	murmur of swimmers' voices
music from an automobile			sound of a boat engine	Dalmatian songs from cafés
			sound of the wind in pine trees	waves splashing against the waterfront
			crow cawing	murmur of waves
			sound of a moped	splashing of waves
			bees buzzing near the water	old song about the sea
			pensioners chattering	splashing of waves
			Dalmatian song from a café	screeching of seagulls
				the sea gently splashing against boats and ships in the harbour
				ship engine
				foreign languages
				laughter of children
				the vernacular
				screaming of children
				song
				clanging of dishes from a restaurant

Annex F32: Olfactory experiences on location 7

Priloga F32: Olfaktorna doživetja na lokaciji 7

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
smell of peaches	smell of kebab	smell of food	smell of grilled meat and fish	smell of sunbathing lotion
		smell of pizzetta	smell of a santolina shrub	smell of the sea
		smell of a sweaty tourist		smell of pizza
				smell of the sea
				scent of sunscreen
				smell of ice cream
				smell of ships (ship oil, plastics, water in a ship)
				smell of pancakes
				smell of roasted lamb from a restaurant

- continued -

- continuation of Table 32 -

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				perfumes of passers-by
				smell of an ice-cream parlour
				smells from a fish restaurant
				smell of the sewer system

Annex F33: Tactile experiences on location 7

Priloga F33: Taktilna doživetja na lokaciji 7

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
				humidity resulting from sirocco, sultriness
				wind
				breeze from the sea
				shade of pine trees
				wind
				deep shade of pine trees
				sultry, hot (warmth of the sun breaking through clouds)
				timeworn stone-paved streets
				uneven stone pavement
				sun, heat
				smooth stone blocks
				warmth of the sun
				uneven old pavement

Annex F34: Compound experiences on location 7

Priloga F34: Sestavljena doživetja na lokaciji 7

Experiences/Assessment of typicality for Dalmatia				
1	2	3	4	5
		wind standstill	tamarisks in mistral	tourist crowd
		tourist train	pleasant walk	a jet ski riding along the shore
		girl dancing to <i>rap</i> music		drinking coffee at leisure
				narrowness of <i>kalas</i>
				café with local people