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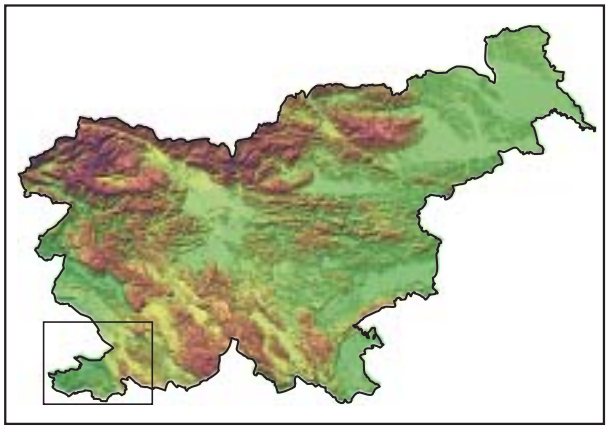
THE SPATIAL COGNITION OF MEDITERRANEAN IN SLOVENIA: (IN)CONSISTENCY BETWEEN PERCEPTION AND PHYSICAL DEFINITIONS

PROSTORSKO DOJEMANJE SREDOZEMLJA V SLOVENIJI: (NE)SKLADJE MED DOJEMANJEM IN FIZIČNIMI OPREDELITVAMI

Miha Staut, Gregor Kovačič, Darko Ogrin

MIHA STAUT

What actually is the Mediterranean, what factors determine it and who has the right to its production? Scientists, masses or is it determined by itself?
Kaj je pravzaprav Sredozemlje, kaj ga določa in kdo ima pravico do njegove produkcije? Znanstveniki, množice ali se morda opredeljuje kar samo?



The spatial cognition of Mediterranean in Slovenia: (In)consistency between perception and physical definitions

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ABSTRACT: On the basis of a previously tested method, the cognition of the spatial extent of the Mediterranean in Slovenia is presented. The Mediterranean may be determined on the basis of numerous and very diverse criteria. It is therefore a very subjectively determined notion, where geographical and non-geographical definitions can be treated as equivalent. The research made use of a questionnaire method, which revealed the opinions of the inhabitants living in the area, generally regarded as being Mediterranean. The determination of the Mediterranean was achieved with the aid of a special question. Respondents were asked to graphically delineate its border in Slovenia on a specially prepared general map included in the questionnaire on the basis of their subjective complex perception of the characteristics by them understood as Mediterranean. The questionnaire was spatially structured by the following regions: Slovene Istria, the Vipava Valley, the Vipava Hills, the Goriška ravan, the Brda Hills, the Kras, the Pivka Basin, the Reka Valley, the Brkini Hills and the Matarsko podolje and Ljubljana with its surroundings. By drawing on the fuzzy logic theory and helped by computer techniques all the answers were merged on a special map showing the extent and membership of the fuzzy set »Mediterranean« within the crisp set »Slovenia«. The border between the Mediterranean and non-Mediterranean part of Slovenia is in this way established as a continuous transition. The mean value of this transition goes from Šempeter, passes the eastern flank of Karst, beside Divača and ends on the eastern side of Slavnik. A more restrictive criterion of the membership function value of 0.95, includes in the Slovenian Mediterranean only the sea and its most immediate hinterland. Particularly interesting proved differences in the spatial cognition of the Mediterranean's borders in Slovenia between different survey regions.

KEYWORDS: geography, regional theory, behavioural geography, mental maps, Mediterranean, fuzzy sets

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1 Introduction

Defining the Mediterranean is not an easy task. It is a complex spatial formation, of which the idea and meaning are continuously evolving since from the pre-antiquity. It can not be determined only by the physical-geographical factors. Its definition is however probably best found in the specific evolution of physical factors to which its inhabitants knew how to adapt through centuries in order to form an ideographically unique macroregion, which has no match in the world. The physical factors are those, which are first experienced by the visitors to this region, when they feel the warmth of the sun rays and the scent of the ethereal aromatic plants. Thus, there is no uniform and simple criterion by which one could trace the line between the Mediterranean and non-Mediterranean. The majority of researchers, who in one way or another tried to determine the Mediterranean, laid their definitions upon some aspect, which reflected their cognition and understanding of the landscape reality, placed between three continents and their coasts and the areas washed by the Mediterranean Sea. However, very few of them asked themselves how do the inhabitants, as one of the most dynamic element of the transformation of the landscape, understand the environment they are living in. Which are those characteristics that make their places so special and different from the others and how far into land these characteristics are still recognized? The Mediterranean is the sea, the climate, the landscape, the people and their way of life, all together combined and more.

The aim of the article is to compare the selected physical determinations of the Mediterranean with the cognition of its contents and extent upon the way local people see their home region.

1.1 Most common physical geographical definitions of the Mediterranean

Many authors occupy themselves with the definitions of the Mediterranean in arbitrary, pragmatic and more or less successful way. Three among the fundamental geographic works about the Mediterranean determine its extent by the state borders of the countries, that share the coast of the Mediterranean sea and its margin seas (Branigan and Jarnett 1975; Robinson 1970; Walker 1965). From this perspective we can settle on that Slovenia is a Mediterranean country. Such a status is also institutionalized in the Barcelona Convention, which aims to protect the Mediterranean Sea from the pollution. However, many of these countries extend also in non-Mediterranean regions: France is also a part of the Atlantic Europe, a great portion of Algeria is also a part of the Sahara Desert and Croatia a part of the Pannonian Plain. The same holds true for Slovenia. Situated where the Alps, the Dinarides, the Panonian Plain and the Mediterranean (four major relief units) join. Some of the authors (Montanari, Cortese 1993) comprehend the Mediterranean in much wider terms, including Jordania, Romania, Bulgaria and Georgia.

The narrowest possible criterion for the definition of the Mediterranean is the limitation to the sea, which the region is named after. With the part of the Gulf of Trieste, which is the most remote northern part of the Adriatic Sea, also Slovenia belongs to the Mediterranean. The Mediterranean Sea is clearly the principal element, which simultaneously unites and divides the landscapes, lying around it. The obvious question, where to place the land which lies right next to the Mediterranean Sea rises as a logical consequence. These lands are usually more connected to the sea than to the interior lands. The linkage between the sea and land – basically two very different regions according to their characteristics – is the shore. The shore is a gravitational axis and so functionally links both parts into a homogeneous entirety (Radinja 1990). The transitional character of the land and the sea is proved by the continental character of the shallow Gulf of Trieste, which is deeply indented into the land. The gulf is weakly linked to the central water body of the Mediterranean Basin and is quite prone to the influences from the interior, such as short-term cool spells and intensive inflows of fresh water.

There are two kinds of definitions of Mediterranean regarding sea and its nearby land (Grenon, Batisse 1989). The first emphasizes the administrative definition, which was already discussed in the previous paragraph and includes either the definition on the state level or smaller administrative-territorial unit level. The second definition is based on hydrologic criterion and is therefore a limitation of the Mediterranean according to its sea basin (Mediterranean Basin). Such an extent is very suitable for the investigations of problems regarding water supply, water pollution and similar problems. It is evident, that some of the abovementioned problems have their origin in the non-Mediterranean parts. In Slovenia the watershed between the Adriatic and Black Sea basins is located in extensive karst regions. Because tracing

of underground water connections in such areas is an expensive and long procedure, the determination of accurate watersheds is a difficult task. Water in karst often runs from one point towards different springs and consequently watersheds are often overlapping. It is estimated that 19% of the Slovenian surface belongs to the Adriatic Sea basin – Figure 1 (Plut 2000).

Hydrological definition of the Mediterranean strongly depends on the topographic characteristics of the shore and its background. The Mediterranean however, does not end on the shores. According to the topographic criterion all the littoral parts, which are opened towards the Mediterranean Basin and are theoretically drained into it, are also considered parts of the Mediterranean. These areas are separated from the non-Mediterranean regions by the littoral hills and mountains. Without the extensive depression, which is today partly filled with water and sediments and is surrounded by young and still tectonically very active mountains, the Mediterranean would not be so typical and environmentally unique area (King, Proudfoot, Smith 1997). In Slovenia and its surroundings the littoral barrier around the Mediterranean Basin are the Alps and the Dinarides, precisely southern parts of the Julian Alps and the High Dinaric Karst plateaus. According to this criterion the entire southwestern Slovenia up to karst edge of High Dinaric plateaus, the Soča Valley up to the ridges of the Julian Alps could be considered as a part of the Mediterranean (Figure 1). This area extents approximately over 6% of the Slovenian territory.

Many people agree, that one of the principal environmental features discriminating the Mediterranean from other regions is its climate. In summer the Mediterranean climate is influenced by areas of subtropical high-pressure and by low-pressure in winter. For this type of climate hot and dry summers and mild and wet winters are characteristic. Taking into account the climate criterion, the extent of the Mediterranean in Slovenia is reduced fairly, since a great part of the topographically and hydrologically defined Mediterranean does not have the Mediterranean climate at all. On the other hand, several areas around the world with the Mediterranean climate exist and should be according to this criterion included in the Mediterranean. On the contrary, not even the littoral parts along the Gulf of Trieste satisfy all the necessary criteria for the Mediterranean climate. The precipitation regime significantly differs from the Mediterranean. However, relatively evident Mediterranean influences on the climate of the southwestern part of Slovenia exist. This is why Ogrin (1995) devised a detailed classification of climate types, which characterise the transition from the Mediterranean to moderate continental climate. He expanded the border of the sub-Mediterranean climate towards the temperature limit of 0 °C in the coldest month of the year and towards the value 0 of Mediterranean precipitation index. This border is also quite well expressed in the landscape. According to this definition, Mediterranean influences are evident on approximately 7% of the country's territory.

Probably most efficient definitions of Mediterranean result from the phytogeographic determinations. One of the reasons is that the idea of climate is a construct resulting from long-term weather observations and instrumental measurements. Those are much more difficult to comprehend than its consequences, which are more evident in the landscape (Allen 2001). Some authors think, that the Mediterranean is given its landscape specifics exactly from this element of physical landscape and its strong and long-term transformation as a result of social activity throughout the centuries. Plants in the Mediterranean adjusted to the summer dry weather period in a different ways: early or late vegetation period, succulent, glossy and in thorn-like leaves, leaves fall in the summer period, evolution of thicker underground parts of the plants, ethereal oils, etc. The most important climax element of the Mediterranean forests is *Quercus ilex* (Holm Oak). More indicative for the Mediterranean areas however, is *Olea europaea* (the Olive), which is well adapted to the summer dry period. As a tree, which can survive throughout centuries, the Olive became one of the symbols of the Mediterranean and the linking element of its culture and environment. Some say, »Olive is the Mediterranean.« Beside the two already mentioned plants several other vegetation species are known, which grow more or less exclusively in the Mediterranean environments. Despite Slovenia lacks typical Mediterranean plant communities of evergreen vegetation, in most warm microclimatic locations some vegetation species typical for the Mediterranean can be found. Among them *Quercus ilex* (Holm Oak), *Philyrea latifolia*, *Arbutus unedo* (Strawberry Tree) or *Asparagus acutifolia* (Wraber 1993). On the contrary to the typical Mediterranean plants, south and southwest from the High Dinaric plateaus so-called sub-Mediterranean deciduous communities are widespread. The influences of the sea on the vegetation are recognizable approximately on 12% of the country's surface (Figure 1).

In some of the Slovenian littoral landscapes the Mediterranean character is recognized by the occurrence of the Olive. In Slovenia this typical Mediterranean cultural plant grows approximately on 2% of

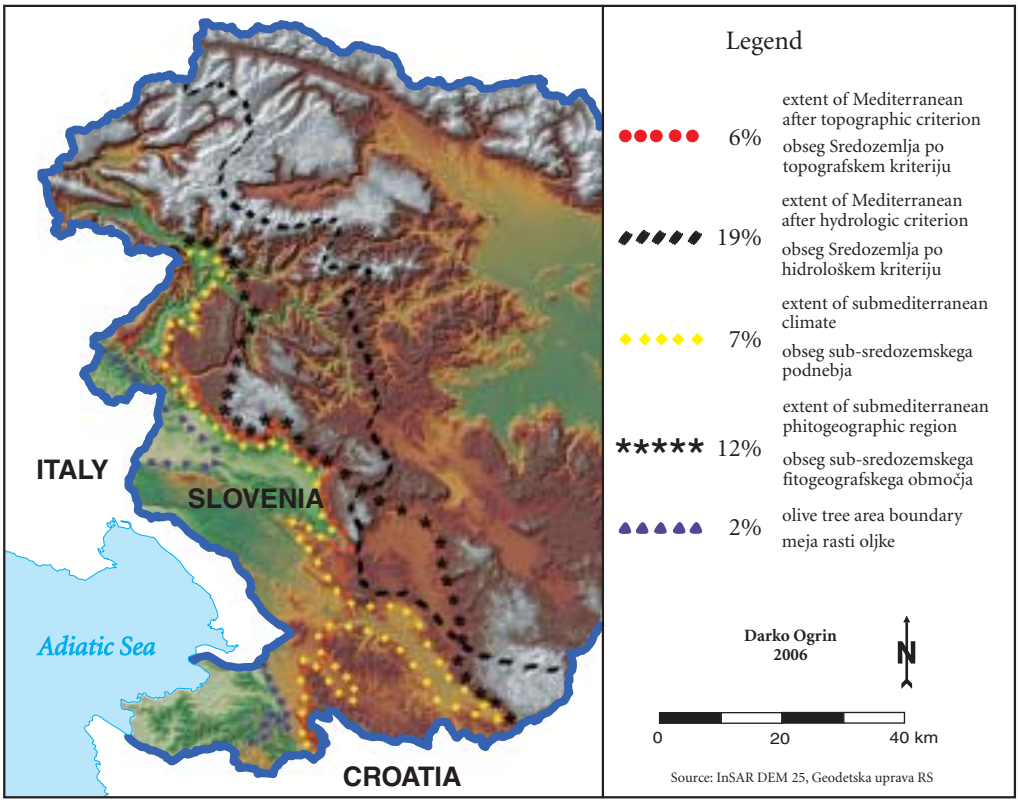


Figure 1: The extent of selected physical geographic determinations of the Mediterranean in Slovenia.

its surface and has in regions of the Slovene Istria, the Brda Hills and the Vipava Hills one of its northernmost growing areas (Figure 1).

Due to the openness of the relief of the southwestern Slovenia towards the Mediterranean Basin and its position along one of Mediterranean's margin seas, Slovenia is also a Mediterranean country. However, physical characteristics of the water in the northern Adriatic, still more the climate and vegetation characteristics of this part of Slovenia show, that the Mediterranean features are rather moderate and are combining together with the neighbouring mountainous and continental influences. From the perspective of physical geography it is therefore more accurate to talk about the sub-Mediterranean in Slovenia and about sub-Mediterranean Slovenia.

2 Theoretical bases and used methodologies

Probably much of the theoretical and methodological confusion present in today's geography is due to the lack of apprehension, that there are simply many fundamentally different worlds and hence many different geographies. The embarrassment arising from this confusion, is the result of the uncertainty in the selection of the type of reality to deal with. But the moment we opt for one, we run the risk of becoming dogmatic by trying to force all the plethora of different worlds into one very limited format and in doing so neglecting the others (Golledge 1981).

2.1 Behavioural geography and cognitive maps

In the sphere of geographical sciences behavioural geography started to evolve in the sixties as a revolt in geography, but also in other disciplines, to the all-prevailing influence of positivism (Ley 2003). The main

ground for disillusion with spatial science was a growing realisation that many of the models being propounded and tested provided poor descriptions of reality. Geography based on behavioural and cognitive standpoints strived towards a search for models, which were alternatives to those of normative location theory and parametrical analysis of official statistics that saw the world as a flat landscape in which all the residents thought only about maximising their benefits defined by the researcher on a priori basis (Golledge, Timmermans 1990).

Given the philosophy that emphasized human thinking and behaviour, than one would assume that, the main purpose of exploration is the understanding of the interaction between the external flux of events and a mass of sensate beings trying to impose structure on the chaotic stream of messages bombarding them on a day by day basis. The challenge is to discover the nature of any similarity between the flux of external reality and the realities constructed in the minds of these sensate beings (Golledge 2006). The constructions are not independently invented based on a *tabula rasa* principle, but are derived from the concepts handed down to us in form of language, literature, image, gesture, and behaviour. When speaking about a child's process of learning the environment we might state that language determines (constrains) him as much as experience. An adult, having learned the language and other modes of information processing and communication, lives and behaves in a world of concepts, that relate both to real objects (which can be directly perceived) as well as hypothetical constructs that can be identified and comprehended (e. g. the concept of a cognitive map). Spatial reality for a grown up is in that way composed of experienced, perceived and remembered features of objects, events and behaviours to which he/she was exposed. For the purpose of researching people's objective environments one has to recognize that individuals place themselves and others in a common external world and that objects from this world exist rather independently from the human awareness. In this system, perception is the process linking the external environment with the perceived, mental environment of an individual. The activity of a person is therefore exclusively the result of the reaction to the mental image created in his head and cognition of the environment establishes as the key mediator between the environment and the persons action (Johnston, Sidaway 2004; Polič 2002).

One of the fundamental recognitions of researchers of perception and understanding of space states that human activity and its reflection in space is more a result of the reactions to the image of the outer world than to the objective environment as it really is (Lynch 1974). *Cognitive map* (Other terms have been used to describe cognitive maps such as *mental maps*, *environmental images*, *cognitive representations* etc. The term used in this text however will stick to the original word used by Tolman in 1948.) is a part of this image and represents the mental transcription of the organisation of the outer world into individual's mind (Golledge 2006). This statement is supported by copious evidence about the fact that individual's behaviour is more influenced by the *perception of the environment* than by the objective environmental conditions (Kates 1972). Cognitive maps contain information about position (where) and content (what) of phenomena. Attitude towards specific places, added to these information, is usually an integral part of a cognitive map and is socio-culturally constrained. Values and space are thus not divided but are stored simultaneously and bound together in a single system (Kitchin, Blades 2002). Cognitive maps are therefore a sort of tool helping individuals to orientate in their environment and hence to operate normally in every day life. This means they have an important role in individual's behaviour (spatial behaviour in particular) and attitudes towards specific places. It depends on the cognitive maps how a person will react to stimuli coming from the environment.

For the recognition and understanding of individual's cognitive maps researchers recur to the analysis of sketches of the environment a person drew (Kitchin et al. 2002). Therefore cognitive or mental maps (as the name states) are what people carry in their minds while sketches are only a mean of communicating it (Polič 2002). With such analysis one can quickly discover cognitive maps are rather generalized, information in them is often missing and distances and directions do not coincide with reality. Besides the information existing in the objective world, individuals often add some information to the cognitive maps associated with the attitude towards the phenomenon in concern (e. g. places connected to a pleasant or unpleasant event).

There are not many Slovenian geographer explicitly involved with either behavioural geography or cognitive maps, being within this theoretical line quite a distinctive method. In the year 1984 Vrišer wrote an overview in the Geographical bulletin of the content and evolution of behavioural geography. Quite peculiarly he did not attempt to translate the root of the word behavioural from English language but left

it unchanged (Vrišer 1984). Sadly the article has not found much support among Slovenian geographers until the initiative of professor Saarinen to map geographical knowledge in high schools around the world by employing concepts of cognitive mapping. Gams, Resnik-Planinc and Saarinen published the report from the Slovenian part of the project in the year 1993 in the journal Geografija v šoli (Gams et al. 1993). The results of the largest research based on behavioural standpoints with the collaboration of geographers so far done in Slovenia was published in the book *Spoznavni zemljevid Slovenije* in the year 2002. The main purpose of the monograph was to make an overview of the theory of spatial cognition, cognitive maps and behavioural geography and its application in Slovenia. Marijan M. Klemenčič wrote a chapter on the mental image of the landscapes (Klemenčič 2002), while Karel Natek described the results of a research about most prominent Slovenian landscape marks in the cognitive maps of Slovenians (Natek 2002a) and described local attitudes towards the questions of home place, otherness and differentiation (Natek 2002b). Natek also used cognitive maps as a tool for the assessment of human vulnerability due to natural hazards (Natek 2002c). Smrekar tried to understand local knowledge about water protection zones by means of cognitive mapping (Smrekar 2006). Katja Poglajen made her undergraduate thesis on geographical recognisability of European union in residents of Slovenian border regions (Poglajen 2005).

2.2 Vagueness of geographical phenomena and fuzzy set theory

In a hypothetical landscape there is a mound elevated 1 metre above the surrounding ground. Would it be possible to call this mound a mountain? Probably not. What if we made the mound higher for 1 metre so that now stands 2 metres above the surrounding ground? It would probably still not qualify as a mountain but we could continue with the game of heightening it until we would be forced to admit the mound at some point qualified as a mountain. With a relative difference of 3000 metres we would have to admit the mound is actually a mountain. The just described game thus ends in a very well known paradox named the *Sorites paradox* (from the Greek word *soros*, meaning a heap or a mound) apparently conceived by Eubulides of Miletus, although arguments of the same kind can be dated earlier and even appear in the Bible (Fisher 2000). The conclusion in fact is paradoxical. We have an initial condition that is true; the elevation of 1 metre above the surrounding does not make a mound a mountain. We have a premise that is apparently true; heightening of the mound for 1 metre will not make it a mountain. At the end of a repeated application of the first and the second condition we have a false conclusion as the mound in our conceptual system sooner or later becomes a mountain (e. g. a mound elevating above the surroundings for 3000 metres).

The whole game might look quite hair-splitting but what we are really trying to show is the arbitrary nature of many thresholds widely used in science. Many geographical phenomena are not simple clear-cut entities. The patterns produced by these processes vary over many spatial and temporal scales and the ensemble entities are defined not by one but by many interacting attributes. Consequently, it is often a very difficult practical problem to partition the real world into unique, non-overlapping sets (Burrough et al. 1998). Within this view it is completely unacceptable that many expert and political decisions lie on such deterministically conceived criteria. A good example is the 10 kilometres border belt in Slovenia defining peripheral areas. Is the settlement distant from the border 10,001 metre really that much different from the settlement lying right on the other side of this threshold? The list of vague geographical concepts is very long and we can find them by testing with the *sorites paradox*. Another here less important question is whether vagueness is of semantic or epistemic nature. These kinds of bipolar, deterministic, value-laden definitions are trivial in nature and based on the just described example might be even noxious. Even Harvey, in his seminal book *Explanation in geography* (1969), seemed to suggest definitions of geographical concepts and objects should rely on setting thresholds. The difficulty of vaguely defined geographical concepts stems from the human natural way of communication (language) being inherently qualitative. It is much easier to give way instructions to visitors of our hometown in relative units (such as the number of crossroads) than in absolute measures (such as metres) or even geographical coordinates, despite they would probably be more accurate. This kind of qualitative, »inaccurate« reasoning has many advantages over the quantitative allowing solving of the problems in absence of perfect data (Egenhofer, Mark 1995).

Because formal thought processes in Western logic have traditionally emphasized the paradigm of truth versus falsehood, which is implemented in binary or Boolean logic, we have very little formal training in how to deal with overlapping concepts. A wider discussion on the ideas of multi-criteria logic began in the sixties when Lotfi Zadeh introduced the fuzzy logic (Zadeh 1965). The term *fuzzy* was for a long period

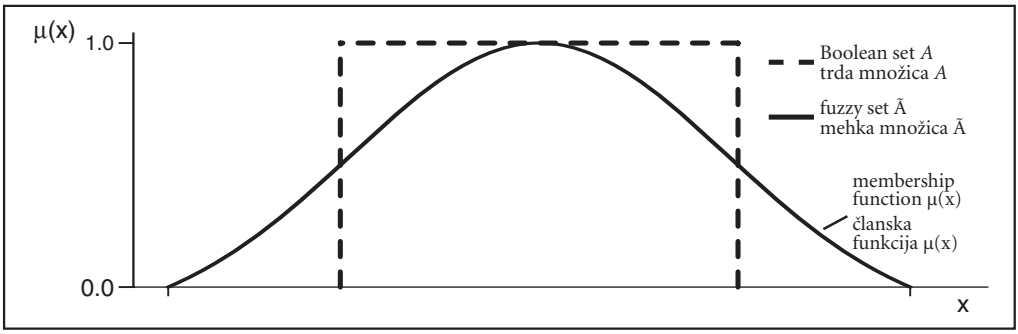


Figure 2: Comparison of a Boolean and a fuzzy set.

of time object of vigorous debate and rejection as it was said to be tenderly unstructured. In reality fuzzy logic is not any less precise than any other form of logic but it is an organized and mathematical method of handling inherently imprecise concepts.

Fuzzy logic is an extension of Boolean logic dealing with the concept of partial truth. Whereas classical logic holds that everything (statements) can be expressed in binary terms (true and false, black and white, yes and no, 1 and 0), fuzzy logic replaces Boolean truth and falsehood with degrees of truth. A fuzzy set is like a *crisp set* composed of elements. The distinction is that elements of a fuzzy set can be to different extent members of one or more sets. *Degrees of truth* or *degrees of membership* are expressed with the *membership function* (Figure 2). If an element within the Boolean theory can be a member of a set (true = 1) or not be a member of a set (false = 0), the proposition in fuzzy logic may be any real number between 1 and 0, inclusive (Klir, Folger 1988). In that way there is a continuous transition between truth and falsehood.

Fuzzy logic and degrees of membership must not be mixed with probability as the two are conceptually distinct. The probability theory deals with problems related to lack of data, while fuzzy set theory deals with lack of definition.

At the Department of geography, Faculty of Arts, University of Ljubljana basics fuzzy logic is taught at the undergraduate level especially in connection with GIS and decision support. Explicitely fuzzy logic within Slovenian geography was employed only by Kokalj (2004) for the purpose of land-use classification of sattelite images and Staut et al. (2005) in the preceding article to this one.

2.3 The questionnaire

A good way of acquiring a large number of qualitative opinions is a questionnaire (Kitchin and Tate 2000). All students attending the module Mediterranean on the Faculty of Humanities, University of Primorska in the year 2006, were included in the questionnaire as surveyors, as well as their colleagues from the Department of Geography, Faculty of Arts, University of Ljubljana. We most sincerely thank them for their help. A special thank goes to Matej Ogrin, assistant at the Department of Geography in Ljubljana, who led the process of surveying at the later institution. From the region of the Slovene Istria (Staut et al. 2005) the survey was expanded to the whole area of Primorska. In order to perform a control survey to supervise and compare with the actual data, less detailed questionnaire was performed in the area of central Slovenia. Following the hypothesis that population in different areas will understand the extent of the Mediterranean differently, quota sampling was spatially structured in four separate areas (the Goriška, the Kras, the Brkini Hills with the Reka Valley and the Pivka Basin), which were defined and geographically limited on the basis of pre-knowledge. Surveyors were organized in five groups, each of them had to complete fifteen questionnaire forms. Each group had to cover the questionnaire area entirely. Approximately the same number of questionnaires had to be done in countryside as well as in bigger settlements. Residents younger than fifteen years of age were not included in the survey. At the beginning of the questionnaire respondents were asked about their basic demographic data (gender, age, education, profession, place of residence).

The total number of the respondents in the area of the sub-Mediterranean Slovenia summed up to 481, additionally 207 polls were filled in the control area of Ljubljana with the surroundings. In the Goriška area (the Goriška ravan, the Lower Soča Valley, the Vipava Hills and the Vipava Valley) 95 questionnaire forms were filled. On the Kras 72 questionnaire forms were filled. Questionnaires performed in the region of the Matarsko podolje were added up to the area of the Brkini Hills with the Reka Valley (61 polls). In the Pivka Basin, which is geographically divided to the Upper and Lower Pivka Valley, 60 forms were filled. In the area of the Slovene Istria the same questionnaire was performed in the previous year 2005 with the total number of 193. Results of this research were reported by Staut et al. (2005). Since questions in both questionnaires were identical, results from the survey performed in 2005 in the area of the Slovene Istria were included also in the present analysis. The permanent residences of the respondents are shown in Figure 3.

The first question in the questionnaire form was of special type. The respondents were asked to delineate the border between the Mediterranean and non-Mediterranean part of Slovenia (if it crosses Slovenia at all) on the beforehand prepared general map of Slovenia, where data of the state border, shaded relief, water bodies, traffic infrastructure and bigger settlements with belonging names were shown. In this way their complex understanding of this spatial phenomenon was acquired. At this stage of the survey we were not interested in the number and relative importance of the supposed multitude of different factors, which were more or less associated with the Mediterranean by each individual respondent. The lines they traced were actually cognitive maps (the externalised reflections of their complex understanding

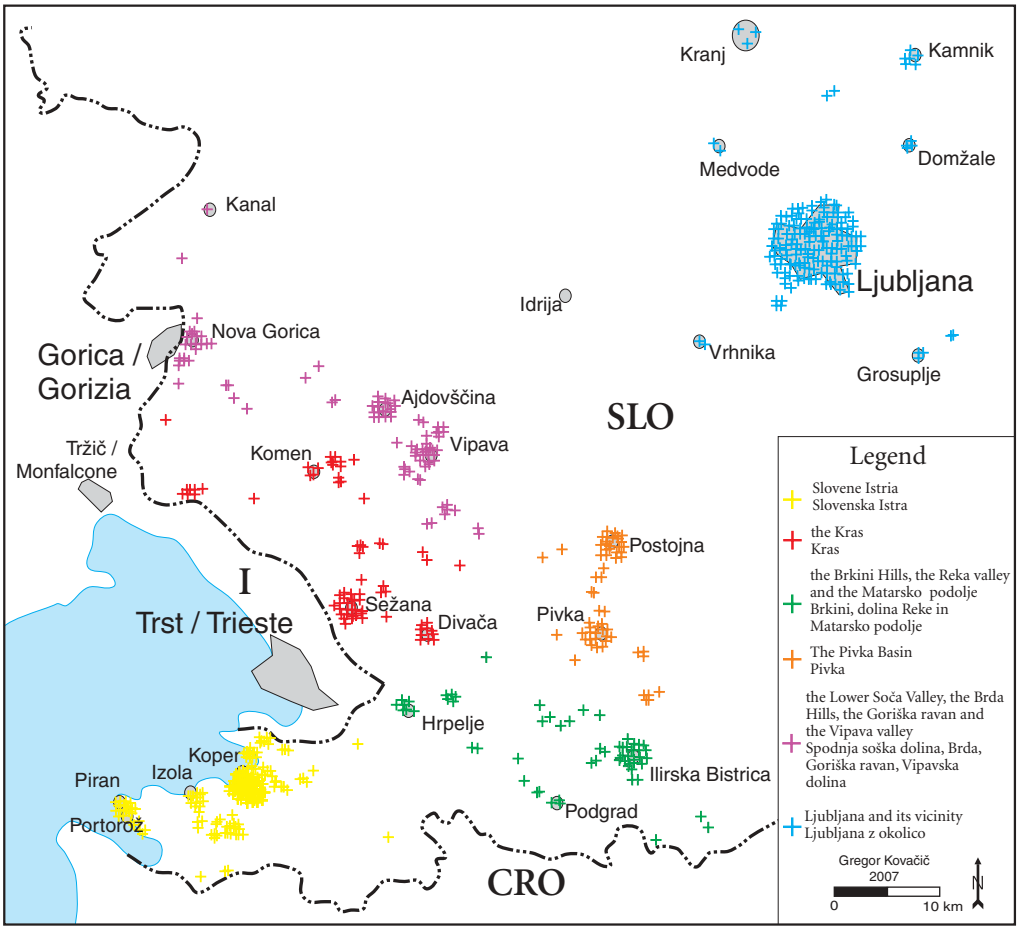


Figure 3: Permanent residence of the respondents.

of this spatial phenomenon). Graphical answers were later digitized and united on a single map (Figure 4). All of the answers were spatially averaged to create the fuzzy set Mediterranean in Slovenia (Figure 5). The same was done also for the four spatial structuration sub-samples (Figure 6).

Two following questions were trying to reveal some of the reasons for their tracing decision. First, the respondents were asked after which criteria they decided to delineate the abovementioned border. In this way we were trying to get some answers about which factors constitute their conceptions of the studied spatial phenomenon and how good is their understanding of this phenomenon. At the end, the respondents were asked to answer the simple question »Do you feel Mediterranean?« and to write down some reasons for affirmative and negative option.

3 Results

One of the central research hypotheses was that responses would only reflect the opinions of the local residents. This is why they were supposed to differ substantially among different spatial sampling units.

The first question was meant to acquire respondent's mental maps about the extents of the Mediterranean in Slovenia. Figure 4 is depicting, how individual responses for the whole sample were traced. At first glance two stripes of higher line density can be noticed. They correspond to two widely perceived borders of the Mediterranean in Slovenia. The shorter (western) stripe is virtually »clipping off« Slovene Istria from the rest of the country and is supposed to run parallel or along the edge of Karst and Čičarija. The longer (eastern) stripe runs along the well-expressed southwestern flanks of the high Dinaric Mountains and plateaus. The most »courageous« however, dragged the line over our highest mountains, the Cerkljansko region and Ljubljana towards Kočevje and Bela Krajina. All the surveyed persons on the other hand held the opinion the Slovenian part of the Gulf of Trieste and a part of the hilly seaside hinterland is part of the Mediterranean (Figure 4). We get the *fuzzy set Mediterranean in Slovenia* after spatially averaging all the shown lines (fuzzy set Mediterranean) and intersecting the result with the crisp set Slovenia

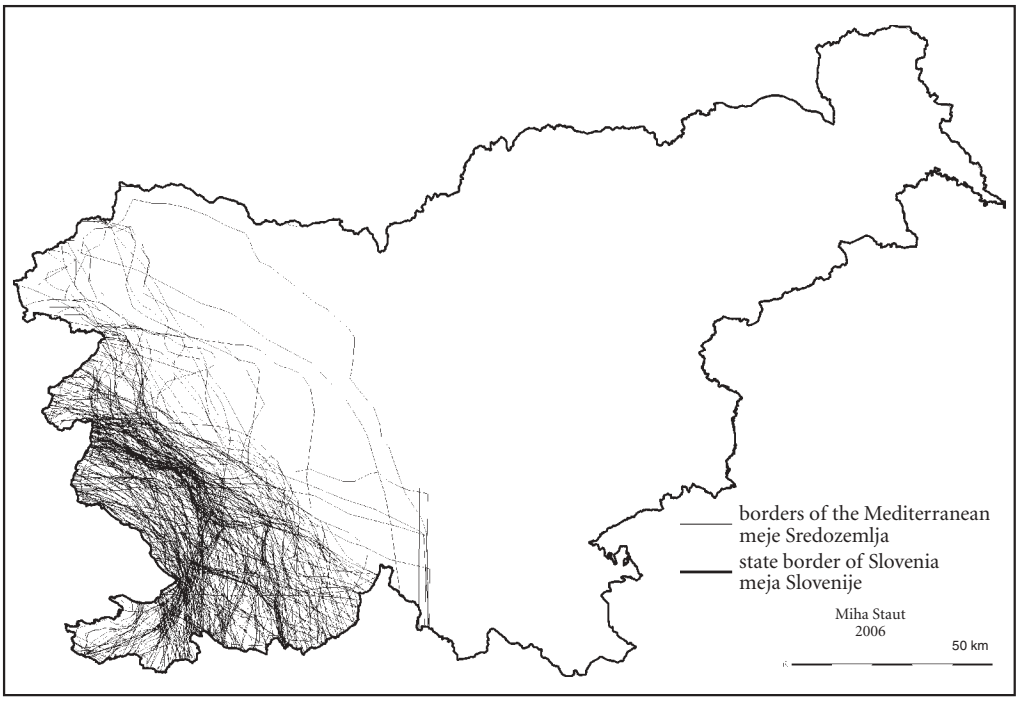


Figure 4: Borders between Mediterranean and non-Mediterranean part of Slovenia.

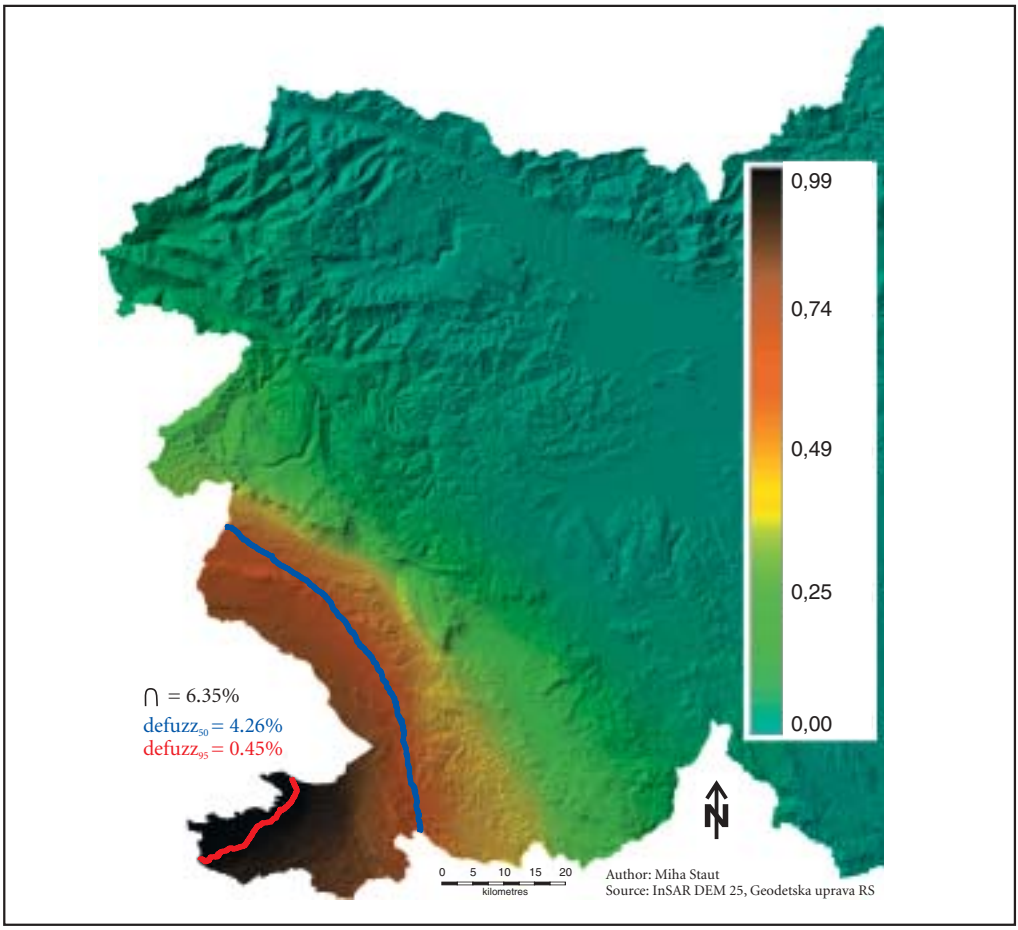


Figure 5: Fuzzy set Mediterranean in Slovenia.

defined by its state borders. Following this criterion Slovenia extends with 6.35% of its »volume« (membership) into the Mediterranean. The figure is calculated by dividing the »volume« of the just described intersection by the »volume« of the crisp set Slovenia.

Fuzzy set theory however, offers us a few other very useful methods. Among them is the back-transformation of the fuzzy set in a crisp set also called de-fuzzyfication. Criteria used during this operation are quite diverse the employed decision support is very elaborate (Klir, Folger 1988; Zimmermann 2001). It is not the intention of this report to delve into the mentioned methods. Suffices to say that two among the most basic and deterministic decision rules of 0.5 and 0.95 membership were used. The first and the second criterion are marked in Figures 5 and 6 by blue and red lines respectively. They actually mean that more than half and more than 95% of the respondents were of the opinion that areas lying southwestwards from the line pertain to the Mediterranean. In this way the Mediterranean in Slovenia shrinks to 2.4% with the 50% decision rule and only 0.7% (or 150 km^2) with the 95% decision rule of the total area. The 0.95 criterion is not meant to deflect your attention towards statistical concepts of probability but was chosen because of some very undefined borders. By taking into account this very restrictive criterion, only parts of the coastal hills with the very coast and the Slovenian part of the sea can be proclaimed Mediterranean.

Analogous to the just described procedure for all the answers unified in a single map can be done for each structuration sub-sample. In Figure 6 the intersections between fuzzy sets Mediterranean according to the opinions of respondents from each sub-sample respectively and the crisp set Slovenia are shown.

By visually comparing it with the locations of respondent's permanent addresses from Figure 2, a deflection of the fuzzy set towards the area of surveying can be noticed. This means respondents identified their home area as being more Mediterranean than judging by the average opinion. If respondents in Slovene Istria for instance, adopted an exclusivist relationship towards the Mediterranean, residents from Goriška or Pivka understood it in much broader terms.

Even better can these relationships be seen on the maps where results from each sub-sample are subtracted from the average map (Figure 6). Red shades depict surpluses and green shades deficits from the average. The first impression confirms the already stated. Residents from each single area understand their home region to be more Mediterranean compared to the opinion of the rest of the respondents. From the contextual and spatial aspect, two opposing views on the Slovenian Mediterranean at this point deserve some additional explanation. The first is the »far gaze« of the inlanders (the case of Ljubljana and surroundings). It is the only one characterizing Slovene Istria much below the average, reflecting a possible very special, attachment to the Kras and its particularities. In that respect they cognitively bring it closer to Slovene Istria attaching it to the Mediterranean perception cherished in their minds. The view on the Mediterranean from the opposite direction is expressed in the mentioned exclusivist attitudes of Istrians. Being the only ones attached to the sea, they see themselves as the only Slovenian legitimate successors of the Mediterranean tradition dating back to the times of the Venetian republic.

The second question asked the respondents according to which criteria (optional number) they decided to delineate the border between the Mediterranean an non-Mediterranean in Slovenia. Furthermore, we asked them to classify the factors according to their importance. After coding all the answers approximately 7 categories could be recognized (climate, vegetation, sea, geographical position, people's character, history, other). Despite the supposition that the delineation between the Mediterranean and non-Mediterranean part of Slovenia was a result of a multitude of various factors most respondents only named up to 3 factors. This fact was also considered in the analysis of the answers.

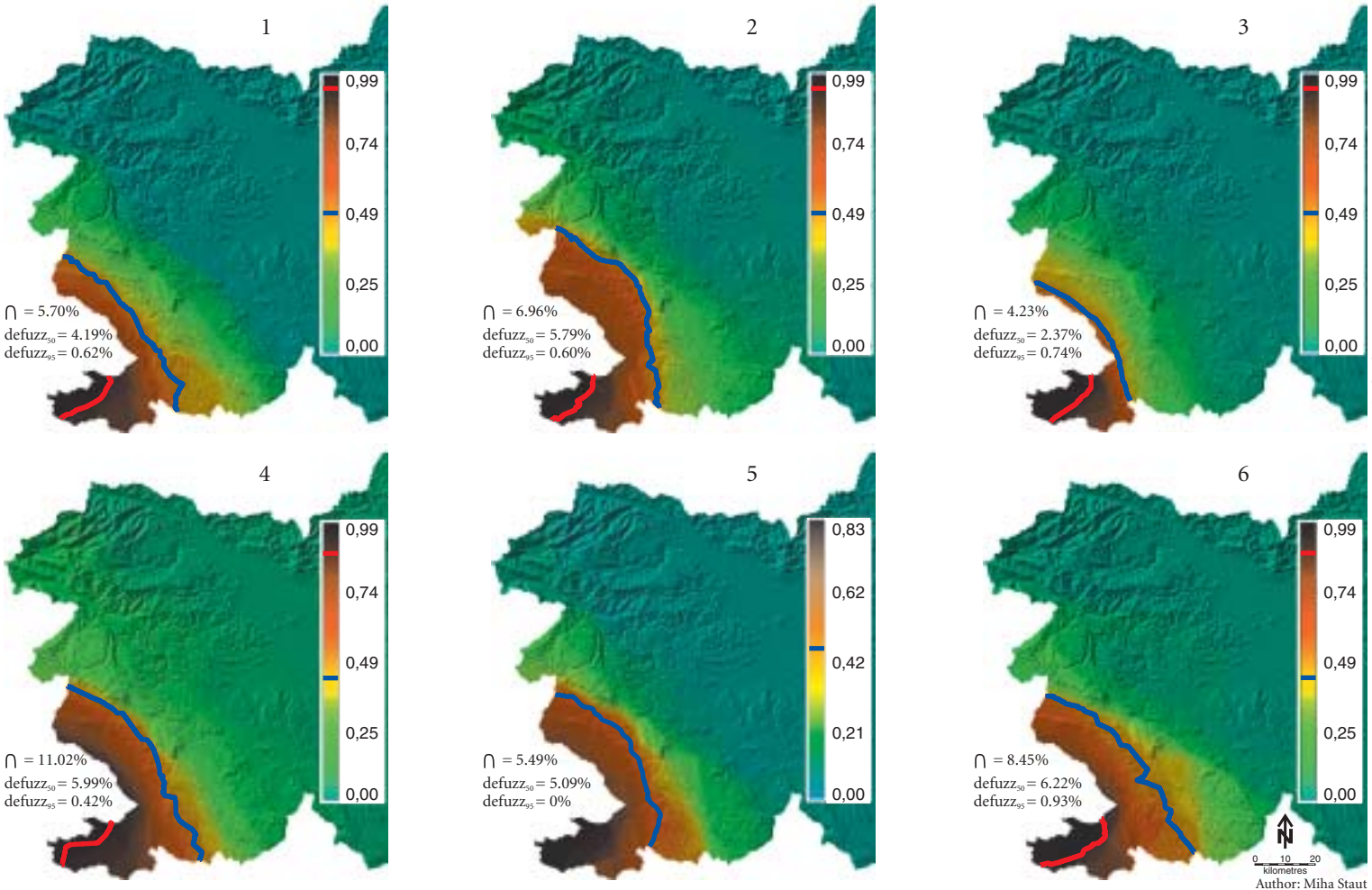
According to 27.6% of the respondents in the Slovene Istria the vegetation (natural and cultural) is being indicated as the most important factor for the determination of the border between Mediterranean and non-Mediterranean in Slovenia. Climate (22%), sea (12%), people's character (8.9%) and some less repeated answers, such as structure of the settlements, followed (Staut et al. 2005).

Similarly as it was for the Slovene Istria, also the respondents in the wider area of the sub-Mediterranean Slovenia mentioned climate as being the most important factor for the delineation of border between Mediterranean and non-Mediterranean in Slovenia. In all of the sub-regions of the survey individually and together *climate* exceeded 40% of all the answers. Being far the most important factor, it included a wide-ranging spectrum of the answers somehow logically attached to it (climate, Bora wind, temperature conditions, precipitation regime, etc.). The presence or the proximity to the *sea* was the next most important factor (sea, proximity to the sea, shore, sea impacts) with 18% and *vegetation* (natural and cultural vegetation, the Olive, the Olive habitat, the fig tree (*Ficus carica*), evergreen vegetation, etc.) with 14% scored third (Table 1). As the second most important factor for the delineation of the abovementioned border the climate is still prevailing (30%), but the answers united in the vegetation category lag behind just for a bit (27%) while in some of the sub-regions of the survey this factor exceeded 30%. People's character (peoples, cultures, way of life, habits, food, openness of the people, dialect, etc.) with 16% and a bit less answers regarding the category other (soil, relief barrier, landscape, etc.) follow (Table 1). As the third most important factor the respondents in average indicated people's character. Together in all of the sub-Mediterranean Slovenia it reached 29%, climate with 20% and vegetation with 17% followed (Table 1). From the results of the analysis we can deduce that the physical-geographical factors were key factors for the delineation of border between the Mediterranean and non-Mediterranean part of Slovenia.

Results from the sample taken in central Slovenia show, that the respondents indicated climate (55%) as being the most significant factor for the delineation of abovementioned border. If we exclude the answers of the category other, vegetation and sea, both with 10%, follow.

Figure 6: Cognition of the Mediterranean in Slovenia structured by sub-regions of the survey. 1 = the Brkini Hills, the Reka Valley and the Matarsko podolje, 2 = the Lower Soča Valley, the Brda Hills, the Goriška ravan and the Vipava Valley, 3 = Slovene Istria, 4 = the Kras, 5 = Ljubljana and its vicinity and 6 = The Pivka Basin. ►

Figure 7: Differences between mean response for each structural region of the survey and overall mean response. 1 = the Brkini Hills, the Reka Valley and the Matarsko podolje, 2 = the Lower Soča Valley, the Brda Hills, the Goriška ravan and the Vipava Valley, 3 = Slovene Istria, 4 = the Kras, 5 = Ljubljana and its vicinity and 6 = The Pivka Basin. ► str. 118



Author: Miha Staut
Source: InSAR DEM 25, Geodetska uprava RS

Author: Miha Staut
Source; InSAR DEM 25, Geodetska uprava RS

We assume that especially with rather complex questions such as the just mentioned poor performance of the questionnaire methods could reveal. Nevertheless, it is the only way, which allows bulk gathering of a wide spectrum of different opinions. Many times it was proven that with such methodology, where the respondents have little time to think over the questions and are not encouraged to develop their own opinions through longer and more in-depth conversations, usually result only in answers reflecting the knowledge considered to be »true«. Thus, inconsistency between people's statements and their actual beliefs exists (Bernard 2000; Helman 2000).

Table 1: The summary of the answers about the factors for determination of border between the Mediterranean and non-Mediterranean part of Slovenia (in %).

	First ranked factor						
Sub-regions of the survey	Climate	Vegetation	Sea	Geographical position	Peoples' character	History	Other
The Goriška	45.26	23.16	6.32	5.26	10.53	0.00	9.47
The Kras	43.75	6.25	17.19	0.00	14.06	0.00	18.75
The Pivka Basin	40.98	6.56	29.51	0.00	6.56	0.00	16.39
The Brkini Hills and the Reka Valley	40.35	14.04	24.56	0.00	5.26	3.51	12.28
SUM (N = 481)	42.96	13.72	17.69	1.81	9.39	0.72	13.72
	Second ranked factor						
The Goriška	31.25	31.25	7.50	2.50	10.00	5.00	12.50
The Kras	26.19	19.05	9.52	0.00	23.81	0.00	21.43
The Pivka Basin	35.42	33.33	8.33	0.00	12.50	2.08	8.33
The Brkini Hills and the Reka Valley	26.19	19.05	9.52	0.00	23.81	0.00	21.43
SUM (N = 481)	30.19	26.89	8.49	0.94	16.04	2.36	15.09
	Third ranked factor						
The Goriška	23.21	19.64	10.71	0.00	19.64	1.79	25.00
The Kras	16.67	8.33	16.67	4.17	45.83	4.17	4.17
The Pivka Basin	22.22	18.52	14.81	0.00	37.04	0.00	7.41
The Brkini Hills and the Reka Valley	14.29	23.81	4.76	0.00	23.81	0.00	33.33
SUM (N = 481)	20.31	17.97	11.72	0.78	28.91	1.56	18.75

In the last question the respondents were asked to answer to the simple question »Do you feel Mediterranean?« In average, the respondents within the area of the sub-Mediterranean Slovenia declared as Mediterraneans with 56%. Nevertheless, significant differences between different sub-regions of the survey exist (Table 2). The residents of the Goriška and the Kras declared with more than 60% as Mediterraneans, while in the Pivka Basin and in the Brkini Hills with the Reka Valley the same rate reached 41% and 50% respectively. The rate of those, who declared as Mediterraneans in Slovene Istria (78%) was by far the highest. Rates for the sub-sample from central Slovenia understandably reached the lowest levels (18%).

Table 2: The summary of the answers to the question »Do you feel Mediterranean?«

Sub-regions of the survey	Yes in %	No in %
The Goriška	61.05	38.95
The Kras	65.33	34.67
The Pivka Basin	41.07	58.93
The Brkini Hills and the Reka Valley	50.88	49.12
sub-Mediterranean Slovenia SUM (N = 481)	56.18	43.82
Slovene Istria	78.41	21.59
Ljubljana with surroundings	17.96	82.04

4 Conclusion

The division of the landscape into more or less homogeneous territorial units is literally from the origins of geography its exclusive domain. Countless debates and scientific discourses were held on the theme of partitioning of the Earth's surface. Researchers often acknowledged the fact that elements constituting the

landscape vary over space continuously, without sharp borders. The »chains« of classical logical thought however did not let them comprehension of soft, from one into another continuously transiting spatial units. They always partitioned space, be it unique (regions) or more or less similar territorial units (landscape types), in a crisp fashion, often tessellating the area under scrutiny. The fuzzy set theory gives in that respect to the regional geography a big opportunity, as with the concept of partial membership dismisses the necessity of so unnatural sharp borders. Every researcher who will look over the landscape will soon acknowledge, that territorial units with few exceptions (e. g. administrative borders) pass one into another gradually.

Already Lowenthal (1961) in his widely cited paper about geographical experience and imagination argued that the world of each individual's experience is intensely parochial and covers but a small fraction of the total available. There are consensus views about many aspects of the world, but individuals will often mistakenly assume that their view is the consensus. We all live in personal worlds, which are both more and less inclusive than the common realm. Our perceptions of these worlds are personal too. They are not fantasies, being firmly rooted in reality, but because we elect to see certain aspects of the world and avoid to see others, behaviour based on such perceptions must have its unique elements. The image of the world is every time shaped and re-shaped for each individual by the refraction through personalized, cultural lenses. There exists an argument therefore, in the assertion that regions, in this context understood as areas with its partial content to which their inhabitants gradually evolved a special attitude, are a domain of the society or the individual living within them (Tuan 2003). Because feelings are very selective and knowledge is far from complete as regards mathematical logical cannons, regions are not necessarily contiguous and they do not tessellate the space in that moment wished to be partitioned by a researcher.

Environment is not just a »thing« but rather a whole with shape, cohesiveness and meaning added to it by the act of human perception. Once this meaning has been ascribed, it tends to be passed to later generations. Boal and Livingstone (1989) recognize two separate but not independent environments: the *phenomenal environment*, which is the totality of the Earth's surface and the *behavioural environment*, which is the perceived and interpreted portion of the phenomenal environment. Facts which exist in the phenomenal environment but do not enter the behavioural environment of a society have no relevance to spatial behaviour and consequently do not enter into problems of the *geographical environment*. Just as it is possible to state that the attitude towards the phenomenal environment and special meaning ascribed to some of its elements is not evenly distributed all-over the space it is possible to state that regions are not evenly »dense« all-over the space but their intensity varies.

The results so far acquired during this research show interesting spatial and contextual patterns of cognition of the Mediterranean in the southwestern part of Slovenia. They tried to explain resident's complex understanding of the landscape they are living in and how they associate it with the self. This was achieved by trying to understand their cognitive maps related to the Mediterranean. Questions about the main discriminating factors between the Mediterranean and non-Mediterranean were also asked. Residents in all the spatial sub-sampling areas declared their landscape and themselves to be more Mediterranean than was the average opinion of the same area. The employed method is not only useful for regionalisations where no sharp borders want to be established but could, altered a little bit, make the basis of (in)determination of geographical phenomena shown to be inherently vague.

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Prostorsko dojemanje Sredozemlja v Sloveniji: (Ne)skladje med dojemanjem in fizičnimi opredelitvami

UDK: 911.6:316.65(497.47)
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IZVLEČEK: V prispevku je na podlagi predhodno preizkušene metode predstavljeno razumevanje prostorskega obsega Sredozemlja v Sloveniji. Ker Sredozemlje lahko opredeljujemo na podlagi številnih zelo različnih kriterijev, je le to zelo subjektivno določljiv pojem, pri katerem so si geografske in ne-geografske opredelitve med seboj enakovredne. V raziskavi je uporabljena anketna metoda, ki je razkrila mnenja prebivalstva živečega na širšem območju, ki ga v splošnem uvrščamo v Sredozemlje. Določitev obsega Sredozemlja smo dosegli s pomočjo posebnega vprašanja, v katerem so anketiranci vrisovali mejo Sredozemlja v Sloveniji na vnaprej pripravljen zemljevid, glede na njihovo subjektivno kompleksno zaznavo značilnosti tega območja. Prostorsko strukturirana anketa je tako zaobsegla območja Slovenske Istre, Vipavske doline, Vipavskih brd, Goriške ravni, Goriških brd, Krasa, Pivke, doline Reke, Brkinov in Matarskega podolja ter Ljubljane z okolico. S pomočjo računalniških prijemov smo vse odgovore, na osnovi teorije mehkih množic, združili na skupni karti, ki prikazuje obseg in članstvo, ki ga mehka množica »Sredozemlje« predstavlja v trdi množici »Slovenija«. Meja med sredozemskim in nesredozemskim delom Slovenije, se na ta način vzpostavlja kot zvezen prehod. Srednja vrednost tega prehoda poteka od Šempetra, po vzhodnem robu Krasa mimo Divače in se zaključi vzhodno od Slavnika. Bolj restriktiven kriterij 0,95 pa v slovensko Sredozemlje vključuje le morje z obalnimi deli Šavrinskega gričevja. Posebej zanimive so se izkazale razlike v prostorskem dojemanju meja Sredozemlja med posameznimi anketnimi območji.

KLJUČNE BESEDE: geografija, regionalna teorija, vedenjska geografija, spoznavni zemljevidi, Sredozemlje, mehke množice

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Vsebina

1 Uvod

Definirati Sredozemlje ni enostavna naloga. Sredozemlje je kompleksna prostorska tvorba, katerega ideja in pomen se razvijata že iz predantike in še zdaleč ni opredeljivo zgolj s fizično geografske plati. Vendar pa je pečat, ki ga je temu delu sveta vtisnil svojstven razvoj fizičnih dejavnikov, kateremu so se njegovi prebivalci skozi tisočletja znali prilagoditi, tisti, ki ga obiskovalec te pokrajine najprej začuti, ko ga oblije toplina sončnih žarkov in se zrak prepoji z vonji eteričnih dišavnic. Enotnega in enostavnega kriterija, s katerim bi lahko na zemljevidu razmejili Sredozemlje od ne-Sredozemlja, ni. Večina raziskovalcev, ki so se ukvarjali s tovrstnimi opredelitvami, je svoje definicije naslonila na določen vidik, po katerem se je glede na njihovo razumevanje pokrajinske stvarnosti območje, ki ga obsega morje med tremi celinami in njegove obale, s katerimi je neločljivo povezan, značilno razlikovalo od sosednjih območij. Malokdo pa se je vprašal, kako njegovi prebivalci, ki so v pokrajini najbolj dinamični nosilci preobrazbe, razumejo prostor v katerem živijo. Katere so značilnosti, po katerih je njihova pokrajina tako svojstvena in do kod te značilnosti segajo? Sredozemlje je morje, podnebje, pokrajina, način življenja itd. Namen prispevka je soočiti izbrane fizičnogeografske opredelitve Sredozemlja v Sloveniji z razumevanjem njegove vsebine in obsega s strani laične javnosti.

1.1 Pogostejše fizičnogeografske opredelitve Sredozemlja

Številni avtorji so se ukvarjali z definicijami Sredozemlja na arbitraren, pragmatičen, bolj ali manj uspešen način. Tri izmed temeljnih geografskih del o Sredozemlju ga določajo z mejami držav, ki si delijo obalo Sredozemskega morja in njegova robna morja (Branigan, Jarrett 1975; Robinson 1970; Walker 1965). S tega vidika lahko Slovenijo štejemo med sredozemske države. Ta status je med drugim institucionaliziran v Barcelonski konvenciji, z osrednjim ciljem varovanja Sredozemskega morja pred onesnaževanjem. Toda številne izmed teh držav se raztezajo tudi v nesredozemske predele: Francija je tudi del atlantske Evrope, Alžirija z velikim delom pripada Sahari, Hrvaška Panonski nižini. Nenazadnje tudi Slovenija leži na stiku večjih pokrajinskih enot, to je Alp, Dinarskega gorstva, Panonske nižine in Sredozemlja. Nekateri Sredozemlje pojmujejo še širše in vanj vključujejo tudi Jordanijo, Romunijo, Bolgarijo in Gruzijo (Montanari, Cortese 1993).

Najožji možen kriterij opredeljevanja Sredozemlja je omejitev na morje, po katerem se imenuje. Z delom Tržaškega zaliva, ki je skrajni severni del Jadranskega morja, seže tudi Slovenija v Sredozemlje (Mediteran). Sredozemsko morje je nedvomno osnovni element, ki hkrati združuje in razdvaja pokrajine, ki ležijo ob njem. Na ta način opredeljeno Sredozemlje pa ne bi imelo večje smiselnosti, saj bi se bilo potemtakem potrebno vprašati, kam umestiti kopnino, ki je blizu morju. Slednja se namreč nanj navezuje mnogo tesneje kot na območja v celinski notranjosti, s katerimi ima lahko skupni zgolj kopni značaj. Povezava kopnega in morja, v temelju med seboj precej različnih območij, je obala, ki se vzpostavlja kot gravitacijska os ter na ta način funkcionalno veže oba dela v dokaj homogeno celoto (Radinja 1990). Da gre za prehodni značaj tako na kopnem kot tudi na morju dokazuje že precej kontinentalni značaj v kopno močno zajedenega in plitvega Tržaškega zaliva s slabo komunikacijo z osrednjim vodnim telesom sredozemskega bazena in precejšnjo podvrženostjo vplivom s kopna, kot so kratkotrajne intenzivne ohladitve ali močan dotok sladke vode.

Opredelitve, ki poudarjajo morje in njegovo bližino, nastopajo v dveh inačicah (Grenon, Batisse 1989). Prva poudarja administrativno opredeljevanje, ki je bilo zgoraj že omenjeno in vključuje bodisi državno raven bodisi kakšen nižji upravno-teritorialni nivo. V drugo pa sodi hidrološki kriterij, torej omejevanje Sredozemlja z njegovim povodjem (sredozemski bazen). Ta obseg je zelo primeren za študij problemov povezanih z vodno oskrbo, onesnaženjem voda in sorodno problematiko. Pri tem je jasno razvidno, da imajo nekateri problemi svoje poreklo v sosednjih, nesredozemskih predelih. V Sloveniji sodijo obsežna območja, po katerih poteka razvodje med jadranskim in črnomorskim povodjem, v kras. Zaradi tega je določanje ostrih meja pogosto težavna naloga, saj je sledenje vodnih povezav dolgotrajen in drag postopek, razen tega pa se vode v krasu zelo pogosto raztekajo na številne strani. Zaradi vsega navedenega sodijo, da spada v jadransko povodje okrog 19 % vsega slovenskega ozemlja – slika 1 (Plut 2000).

Hidrološka opredelitev je v veliki meri odvisna od topografskih značilnosti obale in njenega zaledja. Sredozemlje se ne konča na obalah, ampak po topografskih kriterijih k njemu štejemo še primorske predele, ki so odprti proti sredozemski kotanji in se v njo odmakajo. Od nesredozemskih pokrajin ga najpogosteje

ločijo obalna hribovja in gorovja. Brez obsežne depresije danes deloma zapolnjene z morsko vodo in usedlinami, ki jo obkrožajo in se vanjo zajedajo mlada še vedno aktivna gorstva, Sredozemlje ne bi bilo tako tipično in v pokrajinski podobi samosvoje območje (King, Proudfoot, Smith 1997). V Sloveniji in njeni okolici predstavljajo pregrado, ki zaokrožuje sredozemski bazen, Alpe in Dinaridi, natančneje južni robovi Julijskih Alp in visokih dinarskih planot. S tega vidika lahko vso jugozahodno Slovenijo do visokega kraškega roba in dolino Soče do grebenov Julijskih Alp štejemo za del Sredozemlja (Slika 1). Ta del Slovenije obsega približno 6 % njenega državnega ozemlja.

Veliko ljudi se strinja z mnenjem, da je ena bistvenih pokrajinskih potez, ki Sredozemlje loči od preostalih območij, njegovo podnebje, ki se poleti oblikuje pod vplivom območij subtropskega visokega zračnega pritiska in nizkega zračnega pritiska pozimi. Zanj so značilna vroča in suha poletja ter mile in vlažne zime. Upoštevajoč podnebni kriterij se obseg Sredozemlja močno skrči, saj velik del topografsko in hidrološko opredeljenega Sredozemlja sploh nima sredozemskega podnebja. Na drugi strani pa obstajajo številna območja po svetu, ki bi bila po tem kriteriju vanj vključena. V Sloveniji niti obalni predeli ob Tržaškem zalivu ne ustrezajo vsem merilom za sredozemsko podnebje. Bistveno odstopa predvsem padavinski režim. Zaradi kljub vsemu dokaj močnih sredozemskih vplivov na podnebje jugozahodnega dela Slovenije je Ogrin (1995) izdelal podrobnejšo klasifikacijo podnebnih tipov, ki označujejo prehod med sredozemskim in zmernim celinskim podnebjem. Submediteransko podnebje je razširil do temperaturne meje najhladnejšega meseca 0 °C, ki je tudi v reliefu dokaj dobro izražena, in indeksa sredozemskosti padavin 0. Glede na to definicijo se sredozemski vplivi čutijo na približno 7 % površine Slovenije (Slika 1).

Verjetno najučinkovitejše definicije Sredozemlja izhajajo iz fitogeografskih opredelitev, saj je podnebje zaradi dolgotrajnosti opazovanja in instrumentalne narave merjenja mnogo težje dojemati kot njegove posledice, ki so v pokrajini očitne (Allen 2001). Nekateri menijo, da mu prav ta element fizične pokrajine in njegova močna in dolgotrajna preoblikovanost, kot odraz družbenega delovanja skozi veke, daje tisto pokrajinsko specifiko, ki jo ljudje prepoznavajo kot sredozemsko. Rastline v Sredozemlju so se na poletno sušo prilagodile na različne načine. Med njimi so zgodnja ali poznejša vegetacijska doba, mesnati, povoščeni ali v trne preobraženi listi, odpadanje listov v poletni dobi, razvoj odebeljenih podzemnih delov, eterična olja itd. Glavni klimaksni element mediteranskih gozdov je zimzeleni hrast črnika (*Quercus ilex*). Vendar je bolj indikativna za mediteransko okolje oljka (*Olea europaea*), ki je na poletno sušo odlično prilagojena. Kot drevo, ki lahko preživi stoletja, je oljka postala eden od simbolov Sredozemlja in povezovalni člen njegove kulture in okolja. Nekateri pravijo: »Oljka je Sredozemlje.« Poleg omenjenih dveh poznamo še številne druge rastlinske vrste, ki rastejo bolj ali manj izključno v sredozemskih okoljih. Kljub temu da v Sloveniji ni pravih sredozemskih združb z zimzeleno vegetacijo, so po Wraberju (1993) v najtoplejših mikroklimatskih in talnih lokacijah tudi vrste, ki jih lahko štejemo med prave sredozemske rastline, kot na primer hrast črnika (*Quercus ilex*), zelenika (*Phillyrea latifolia*), jagodičnica (*Arbutus unedo*) ali ostrolistni beluš (*Asparagus acutifolia*). Južno in jugozahodno od visokih dinarskih planot pa je na široko zastopano t. i. submediteransko rastlinstvo, ki je za razliko od pravega sredozemskega listopadno. Vplivi morja se v rastju kažejo na približno 12 % slovenskega ozemlja (Slika 1).

Nekaterim slovenskim primorskim pokrajinam daje določen sredozemski pečat oljka, tipična sredozemska kultura, ki uspeva v Sloveniji na približno 2 % njene površine in ima v Slovenski Istri, Goriških in Vipavskih brdih eno svojih najsevernejših rastišč (Slika 1).

Slika 1: Obseg izbranih fizičnogeografskih opredelitev Sredozemlja v Sloveniji.
Glej angleški del prispevka.

Zaradi reliefne odprtosti jugozahodne Slovenije v sredozemski bazen in lege ob robnem morju, ki je sestavni del Sredozemskega morja, je Slovenija tudi sredozemska dežela. Toda že fizikalne lastnosti vode v severnem Jadranu, še bolj pa podnebne in rastlinske značilnosti tega dela Slovenije kažejo, da so sredozemske poteze precej omiljene in se prepletajo s sosednjimi, gorskimi in celinskimi, zato je v fizičnogeografskem smislu pravilneje govoriti o submediteranu v Sloveniji in submediteranski Sloveniji.

2 Teoretska izhodišča in uporabljene metode

Verjetno je za velik del teoretsko metodološke zmede, ki danes vlada v geografiji, zaslužno pomanjkanje zavedanja, da v svetu obstajajo številni zelo raznoliki svetovi in zato številne »geografije«. Zadrega, ki izha-

ja iz te zmede, je rezultat negotovosti pri izboru tipa geografije ter resničnosti, s katero se bomo ukvarjali. Opcija izbora nekega tipa pa ni nič boljša, saj z opredelitvijo za neko teoretsko izhodišče tvegamo siljenje omenjene plejade svetov v en sam, ponavadi zelo omejen format ter z zanemarjanjem alternativnih pogledov zahajanje v dogmatizem (Golledge 1981).

2.1 Vedenjska geografija in spoznavni zemljevidi

V sferi geografskih znanosti se je vedenjska oziroma behavioristična geografija začela razvijati v 60-ih letih kot upor v geografiji in tudi v drugih znanostih tedaj povsem prevladujočemu pozitivizmu (Ley 2003). Kritika je bila usmerjena predvsem na poenostavljeno razmerje do posameznikovega odločanja in vedenja. Stremela je k preseganju nerealističnih normativnih modelov in parametričnih analiz uradne statistike, v katerih je bil prostor povsem »ploščat« in so vsi posamezniki razmišljali le o maksimizaciji svojih koristi vnaprej določenih s strani raziskovalca (Golledge, Timmermans 1990).

Z izhodišči, ki poudarjajo mislečo naravo akterjev v pokrajini, je bistvo raziskovanja razumevanje interakcije med zunanjim tokom dogodkov in čutečimi bitji, ki se trudijo vnesti red v sporočila, ki jih iz zunanjega sveta neprestano bombardirajo. Izziv je prav v iskanju podobnosti med tokom zunanje resničnosti in resničnosti konstruirane v mislih ljudi (Golledge 2006). Teh konstrukcij ne izumljajo povsem neodvisno po principu *tabula rasa*, temveč izhajajo iz konceptov, ki prihajajo do njih v obliki jezika, literature, podob in vedenja. Ko torej govorimo o procesu otrokovega osvajanja okolja lahko trdimo, da ga jezik določa (omejuje) prav toliko kot izkustvo. Odrasla oseba, ki se je že dodobra naučila jezika in preostalih načinov obdelave informacij in komunikacije, živi v svetu konceptov, ki se navezujejo tako na stvarne objekte zunanjega sveta, ki jih lahko direktno zaznava, kot tudi na namišljene, hipotetične konstrukte, ki jih lahko identificira in razume (npr. koncept spoznavnega zemljevida). Prostorska resničnost je potemtakem za odraslo osebo sestavljena iz izkušenih, zaznanih in zapomnjenih značilnosti, objektov, dogodkov in vedenj, ki jim je bila podvržena. Za potrebe raziskovanja okolja, ki je sestavljeno iz objektivne resničnosti, je v tem smislu potrebno privzeti, da posamezniki sebe in ostale umeščajo v nek skupni zunanji svet ter da objekti zunanjega sveta obstajajo dokaj neodvisno od zavesti ljudi. Na drugi strani pa je percepcija dojemanje tisti proces, ki s pomočjo čutil in miselne predelave podatkov povezuje zunanje, dejansko okolje z zaznavnim, miselnim okoljem. Delovanje človeka je zatorej izključno rezultat reakcije na miselno podobo, ki si jo je ustvaril v svoji glavi, ne pa na dejansko. V tem se percepcija okolja kaže kot ključni posrednik med okoljem in družbeno (posameznikovo) akcijo (Johnston, Sidaway 2004; Polič 2002).

Ena osnovnih ugotovitev raziskovalcev dojemanja in učenja o prostoru pravi, da človeška dejavnost temelji prej na sliki zunanjega sveta kot na njegovi objektivni stvarnosti (Lynch 1974). Spoznavni zemljevid, ki je del te slike, predstavlja miselno preslikavo organizacije zunanjega sveta v posameznikovo zavest. To trditev podpirajo mnoge ugotovitve o tem, da je za ravnanje ljudi pogosto bolj pomembna njihova zaznava okolja kot pa stvarne razmere (Kates 1972). Spoznavni zemljevidi vsebujejo informacijo o položaju in o vsebini, tem podatkom pa je ponavadi dodan odnos do nekega prostora, ki je individualiziran in sociokulturno pogojen. Vrednote in prostor v takem sistemu nista ločena, temveč se skladiščita simultano in sta neločljivo povezana (Kitchin, Blades 2002). Poleg informacij, ki dejansko obstajajo v okolju, posamezniki med miselno preslikavo informacijam iz okolja torej dodajajo tudi lastni odnos do njih (npr. kraji povezani s prijetnim ali neprijetnim dogodkom). Spoznavni zemljevidi so v tem smislu nekakšen geografski sistem, ki posamezniku omogoča orientacijo in normalno delovanje v vsakdanjem okolju (kraju). To pomeni, da pomembno vplivajo na posameznikovo vedenje in odnos, ki ga je izoblikoval do posameznih krajev, saj je od njih odvisno, kako bo reagiral na dražljaje, ki prihajajo iz okolja, in tako ključno vplivajo na vedenje povezano s pokrajino.

Za prepoznavanje posameznikovih spoznavnih zemljevidov raziskovalci običajno preučujejo risbe njihove prostorske predstave okolja. Zaradi tega je spoznavni zemljevid, kar ima posameznik v glavi, risba pa je le način sporočanja prvega (Polič 2002). Ta pristop smo uporabili tudi v pričujoči raziskavi. Obseg in vsebino nekega specifičnega in za večino anketirancev posebnega kraja smo skušali oceniti na podlagi spoznavnih zemljevidov, ki so jih slednji risali. Ker smo si želeli primerjave s predhodno podobno raziskavo opravljeno na območju Slovenske Istre (Staut in ostali 2005), smo se držali podobne metodologije, kot je bila že uporabljena v omenjeni raziskavi.

Med slovenskimi geografi ni ravno veliko takih, ki bi se eksplicitno ukvarjali bodisi z vedenjsko geografijo bodisi s spoznavnimi zemljevidi, ki so v okviru te teoretske veje precej prepoznavna metoda. Vrišer

je leta 1984 v Geografskem vestniku podal pregled vsebine in razvoja *behavioristične geografije*, kakor jo je sam imenoval (Vrišer 1984). Članek pa je izzvenel v prazno, saj se do leta 1992, ko so na pobudo T. Saarinena izvedli raziskavo poznavanja držav sveta pri dijakih s pomočjo uporabe konceptov spoznavnih zemljevidov, v Sloveniji, na tem teoretskem področju ni zgodilo nič posebnega. O slovenskem delu slednje raziskave so Gams, Resnik-Planinčeva in Saarinen poročali leta 1993 v Geografiji v šoli (Gams in ostali 1993). Rezultati najobsežnejše raziskave, ki je bila do sedaj izvedena v Sloveniji in pri kateri so sodelovali tudi geografi, je bila objavljena v monografiji *Spoznavni zemljevid Slovenije* leta 2002. Monografija je bila načeloma namenjena pregledu teorije prostorske kognicije, spoznavnih zemljevidov in vedenjske geografije ter njene aplikacije v Sloveniji. Marijan M. Klemenčič je v njej napisal poglavje o *Miselni sliki pokrajin* (Klemenčič 2002). Karel Natek pa je podal v poglavjih *Risanje zemljevida Slovenije* (Natek 2002a) in *Odnos do domačega kraja (pokrajine) in njegovih (njenih) problemov* (Natek 2002b) rezultate raziskave o spoznavnih zemljevidih Slovencev navezujočih se na najprepoznavnejše elemente slovenske pokrajine ter vprašanja domačnosti, drugačnosti in razlikovanja. Natek je tudi uporabil spoznavne zemljevide kot orodje za oceno ogroženosti zaradi naravnih nesreč (Natek in ostali 2002c). Smrekar je uporabil spoznavne zemljevide pri spoznavanju vodovarstvenih pasov (Smrekar 2006). Tudi Katja Poglajen je v diplomskem delu *Geografska prepoznavnost Evropske unije pri slovenskem obmejnem prebivalstvu* uporabila ta teoretsko metodološki okvir (Poglajen 2005).

2.2 Nejasnost geografskih pojavov in teorija mehkih množic

V neki namišljeni pokrajini stoji vzpetina, ki se dviga 1 meter nad okolico. Ali bi tej vzpetini lahko rekli gora? Verjetno ne. Kaj pa če jo povišamo za 1 meter in je sedaj visoka 2 metra? Ali bi ji pri tej relativni višini že lahko rekli gora? Verjetno še vedno ne, vendar bi z igro lahko nadaljevali dokler sami sebi ne bi bili prisiljeni priznati, da je vzpetina pri navedeni relativni višini gora. Pri relativni višinski razliki 3000 metrov bi morali priznati, da je vzpetina gora. Pravkar opisana igra se torej izteče v enega bolj znanih paradoksov imenovanega *sorites paradoks* (iz grške besede *soros*, ki pomeni kup oziroma kopica), ki ga je zasnoval že Eubulides iz Mileta (Fisher 2000). Imamo začetno trditev, ki je pravilna (vzpetina z relativno višinsko razliko nad okolico 1 meter ni gora). Imamo trditev, ki se nam zdi pravilna (povišanje vzpetine za en meter je ne bo spremenilo v goro). Na koncu iteracije prvega in drugega pogoja pridemo do paradoksa, saj se vzpetina v našem pojmovnem sistemu slej ko prej spremeni v goro (vzpetina z relativno višinsko razliko 3000 metrov nad okolico je gora).

Celotna opisana igra se sliši precej pikolovsko, vendar je prav arbitrarno postavljanje meja bistvo, ki ga želimo izpostaviti. Pojavi, s katerimi se ukvarja geografija, so le redko ostro omejeni in se jih pogosto ne da opisati z nekaj jasno definiranimi atributi. Vzorci, ki jih rišejo pokrajinotvorni procesi, so prostorsko in časovno zelo različni, sestavljene entitete, ki ta kompleks tvorijo, pa so pogosto v značilnostih tako raznolike, da jih je mnogo lažje ločevati kot združevati. Zaradi vsega naštetega je deljenje pokrajine na edinstvene, neprekrivajoče enote izredno zahtevno. Zelo nesprejemljivo je, da kljub temu strokovne in politične odločitve pogosto slonijo na takšnih deterministično zasnovanih kriterijih. Primer je 10-kilometrski obmejni pas za obrobna območja, ki so upravičena do denarne pomoči. Ali je naselje, ki je od meje oddaljeno 10.001 meter res toliko drugačno od naselja, ki stoji takoj na drugi strani črte? Spisek nejasnih geografskih konceptov je zelo dolg in odkrijemo jih lahko prav s pomočjo testiranja s *sorites paradoksom.* Drugo, tukaj manj pomembno vprašanje je, ali je nejasnost semantične ali epistemološke narave. Tovrstne bipolarne, deterministične, vrednostne opredelitve so izrazito trivialne, glede na zgoraj opisani primer, pa so lahko tudi škodljive. Celo Harvey je v sloviti knjigi *Explanation in Geography* (1969) videl edini izhod za opredeljevanje pojavov v njihovem omejevanju s pomočjo pragov. Težava nejasno določenih geografskih pojmov izhaja iz našega načina sporazumevanja (jezika), ki je v svojem bistvu kvalitativno. Potovalna navodila obiskovalcem našega domačega kraja mnogo raje podajamo v relativnih enotah (npr. v številu križišč) kot v absolutnih merskih enotah ali celo z geografskimi koordinatami, čeprav bi bile natančnejše. Tovrstno kvalitativno razmišljanje pa ima veliko prednosti pred kvantitativnim, saj omogoča učinkovito reševanje težav tudi s pomočjo nepopolnih podatkov (Egenhofer, Mark 1995).

Težavo formalizacije v svojem bistvu nejasnih konceptov ali pojavov je moč učinkovito preseči s pomočjo odprave določene stopnje natančnosti. *Teorija mehkih množic* skuša presegati v »zahodni civilizaciji« tako trdno usidrane bipolarne koncepte aristotelske (klasične, Boolove) logike. Širšo obravnavo idej večvrednostne logike je prvi vpeljal Lotfi Zadeh (1965) kot formalizacijo upravljanja z neeksaktnostjo. Mehka

logika je neposredna vendar delna implementacija zgoraj opisanih konceptov nejasnosti in nam posledično omogoča uporabnejše razločevanje med njimi.

V osnovi so mehke množice generalizacija klasičnih, Boolovih množic, ki se nejasnih pojavov lotevajo z ohlapnejšo opredelitvijo njegovih meja. Tako kot vse množice so tudi mehke sestavljene iz elementov, za razliko od običajnih množic pa so ti elementi lahko do različne stopnje člani neke množice ali več množic. V klasični logiki lahko objekt množici pripada ali pa ji ne pripada, kar lahko na binaren način zakodiramo z 1 = resnično ali 0 = neresnično. V logiki mehkih množic pa lahko objekt do različne stopnje pripada množici. Vrednost članske funkcije se tako raztegne v množico realnih števil med 0 in 1 vključujoče – Slika 2 (Klir, Folger 1988). Med resničnostjo in neresničnostjo torej obstaja zvezen prehod. Nasprotno kot pri običajnih množicah se izključujoče mehke množice lahko deloma prekrivajo in elementi so lahko glede na članski funkciji do različne stopnje v obeh množicah hkrati (Burrough, McDonnel 1998).

Stopnje članstva ne smemo mešati z verjetnostjo, saj sta pojma konceptualno različna. Teorija verjetnosti se ukvarja s problemi pomanjkanja podatkov, medtem ko se teorija mehkih množic ukvarja s problemi pomanjkljivih definicij (Fisher 2000).

Slika 2: Primerjava klasične in mehke množice.
Glej angleški del prispevka.

V slovenski geografiji se na dodiplomski stopnji predavajo osnove mehke logike predvsem v povezavi z geografskimi informacijskimi sistemi in s podporo odločanju. Konkretno so teorijo mehkih množic med slovenskimi geografi uporabili le Kokalj (2004) za potrebe klasifikacije satelitskih posnetkov, ter Staut s sodelavci (Staut in ostali 2005) v študiji, ki je bila predhodnica te.

2.3 **Anketa**

Dober način širokega zajema kvalitativnih mnenj o neki temi je anketa (Kitchin, Tate 2000). Anketo smo v letu 2006 opravili s pomočjo študentov modula Sredozemlje Fakultete za humanistične študije Koper Univerze na Primorskem ter študentov Oddelka za geografijo Filozofske fakultete Univerze v Ljubljani in se jim za pomoč najlepše zahvaljujemo. Posebej se zahvaljujemo tudi asistentu Mateju Ogrinu, ki je na ljubljanski ustanovi vodil izvedbo anketiranja in predhodne analize. Raziskavo smo z območja Slovenske Istre (Staut in ostali 2005) razširili na širše submediteransko območje, opravili pa smo tudi kontrolno anketiranje z manj podrobnim vprašalnikom na območju Ljubljane z okolico. Ker smo želeli preveriti hipotezo, ali se odgovori med posameznimi regijami submediteranske Slovenije pomembno razlikujejo med seboj, smo anketo prostorsko strukturirali na štiri podobmočja (Goriška, Kras, Brkini z dolino Reke, Pivka), ki smo jih določili in geografsko omejili na osnovi predznanja. Anketarji so bili tako razporejeni v pet skupin, vsak od njih je naredil 15 anket. Uporabili smo tako imenovani kvotni vzorec, kjer so anketarji kraj anketiranja izbirali po lastni presoji, vendar pa je morala posamezna skupina določeno območje prostorsko zaobjeti v celoti ter opraviti približno enako število anket na podeželju in v večjih krajih. Mlajših od 15 let nismo anketirali. Po osnovnih demografskih podatkih (spol, starost, izobrazba, poklic, kraj bivanja) smo anketirance povprašali na začetku ankete.

Skupno število opravljenih anket na območju submediteranske Slovenije je bilo 481, k temu pa moramo dodati še 207 anket opravljenih na območju kontrolnega vzorca Ljubljane z okolico. Na Goriškem (Goriška ravan, Spodnja Soška dolina, Brda, Vipavska brda in Vipavska dolina) je bilo opravljenih 95 anket. Na planoti Kras je bilo opravljenih 72 anket. K območju Brkini z dolino Reke (61 anket) smo prišteli tudi ankete opravljene na Matarskem podolju. Na Pivki, ki geografsko zajema pokrajini Zgornjo in Spodnjo Pivko, je bilo opravljenih 60 anket. Na območju Slovenske Istre je bilo že leta 2005 opravljenih 193 anket o čemer so obširneje poročali Staut in ostali (2005). Ker so bila dotična vprašanja v obeh anketah povsem enaka, smo se za Slovensko Istro poslužili kar rezultatov raziskave iz leta 2005. Kraji stalnih prebivališč anketirancev so prikazani na sliki 3.

Slika 3: Stalni kraj bivanja anketiranca.
Glej angleški del prispevka.

Prvo vsebinsko vprašanje je bilo posebne vrste, saj je od anketirancev zahtevalo, da na vnaprej pripravljen splošni zemljevid Slovenije, ki je vseboval podatke o državni meji, reliefu, vodnih telesih ter mreži prometnic in večjih naselij s pripadajočimi imeni, zarišejo mejo med sredozemskim in nesredozemskim delom Slovenije (če ta sploh poteka po slovenskem ozemlju). Na ta način smo pravzaprav beležili njihovo kompleksno razumevanje tega prostorskega pojava s številnimi značilnostmi, ki so se v njihovem razumevanju tega pojava zlili v enotno sliko, ki jim je podala odgovor na zastavljeno nalogo. V tej prvi fazi nas kompleks in relativna teža domnevno številnih in raznorodnih dejavnikov, ki jih vsak posameznik povezuje s Sredozemljem oziroma ne-Sredozemljem in so ga pripeljali do njune diskriminacije, niso zanimali. Grafične odgovore smo kasneje digitalizirali, jih združili v enotno sliko (Slika 4) in jih povprečili tako, da je nastala karta mehke množice članstva v Sredozemlju (Slika 5). Enako smo storili tudi za posamezna območja, po katerih smo anketo strukturirali (Slika 6).

Sledili sta zgolj še vprašanji, ki sta skušali odkriti nekaj o vzrokih za njihovo odločitev. Anketirance smo vprašali, na podlagi katerih dejavnikov so se odločili začrtati mejo. S tem vprašanjem smo želeli pridobiti odgovore o tem, kaj vse vstopa v njihovo pojmovno polje preučevanega prostorskega pojava in kako globoko ga razumejo. Na koncu smo jih vprašali še, ali se čutijo Sredozemce in zakaj so se odločili za pritrdilni oziroma nikalni odgovor.

3 Rezultati

Prav zaradi domneve, da se odgovori navezujejo le na lokalno prebivalstvo in zaradi hipoteze, da se bodo odgovori med posameznimi območji pomembno razlikovali, je bila tokrat raziskava razširjena na širše submediteransko območje.

S pomočjo prvega vsebinskega vprašanja smo zajemali spoznavne zemljevide anketirancev o obsegu Sredozemlja v Sloveniji. Na sliki 4 so prikazani združeni odgovori za celotni anketni vzorec. V poteku meja sta lepo vidni predvsem dve zgoščini. Bolj zahodna poteka okvirno po severovzhodni meji Slovenske Istre, bolj vzhodna pa okvirno po jugozahodnem vznožju visokih dinarskih planot. »Najhrabrejši« anketiranci so mejo povlekli preko naših najvišjih gora, čez Cerkljansko in Ljubljansko barje proti Kočevju in Beli Krajini. Na sliki 5 je prikazan obseg Sredozemlja v Sloveniji. Prav vsi anketiranci pa so menili, da je slovenski del Tržaškega zaliva in obmorski pas Slovenske Istre z delom zalednega gričevja (nad Izolo in Piranom) del Sredozemlja (Slika 4). Mehko množico Sredozemlje v Sloveniji smo dobili s prostorskim povprečenjem vseh odgovorov in omejitvijo na prostor znotraj slovenskih meja. Matematično natančneje rečeno je prikazan presek mehke množice »Sredozemlje« s trdo množico »Slovenija« glede na povprečje vseh opravljenih anket. Po tem kriteriju se Slovenija s 6,35 % svojega članstva nahaja v Sredozemlju.

Slika 4: Meje med sredozemskim in nesredozemskim delom Slovenije.
Glej angleški del prispevka.

Teorija mehkih množic pa nam ponuja še nekaj zelo uporabnih metod. Ena takih je ponovna preobrazba mehke množice v trdo, klasično množico. Kriteriji, ki se pri tem uporabljajo, so številni in podpora odločanju optimalni izbiri je v okviru tega koncepta zelo razdelana (Klir, Folger 1988; Zimmermann 2001). V raziskavi smo uporabili najenostavnejše metode preprostega deterministčnega izbora kriterija, ki je določen z 0,5 in 0,95 članstva. Prvi kriterij, ki je na sliki 5 označen z modro črto pomeni, da je več kot polovica ljudi menila, da se območje jugozahodno od te črte, ki obsega del Krasa in Slovensko Istro, nahaja v Sredozemlju in obratno. Naj kriterij 0,95 članstva, ki je na sliki 5 označen z rdečo črto, ne zavede v razmišljanje o statističnih verjetnostnih konceptih, ki so domena teorije verjetnosti in z mehko logiko nimajo veliko skupnega. Ta kriterij je bil namreč izbran zaradi nekaterih zelo nejasno zarisanih meja. Upoštevajoč ta najbolj restriktiven kriterij sega Slovenija v Sredozemlje le še z okrog 0,5 % državnega ozemlja oziroma s površino okrog 100 km^2.

Slika 5: Mehka množica Sredozemlje v Sloveniji.
Glej angleški del prispevka.

Podobno analizo smo izdelali tudi za posamezna podobmočja anketiranja. Na sliki 6 so tako prikazane mehke množice Sredozemlja v Sloveniji glede na šest podobmočij anketiranja. Tudi tu sta z modro

in rdečo barvo dodani meji 0,5 in 0,95 članstva v Sredozemlju. Že na prvi pogled je opazno odklanjanje mehke množice v smer območja anketiranja, kar pomeni, da so anketiranci območje, v katerem živijo, v večji meri opredeljevali kot sredozemsko. Če je na primer za Slovensko Istro (ki se je vedno imela za nekaj posebnega) opazen ekskluzivistični odnos do Sredozemlja, so ga prebivalci Goriške ali Pivke razumeli veliko bolj širokogrudno.

Slika 6: Dojemanje Sredozemlja v Sloveniji strukturirano po podobmočjih. 1 – Brkini, dolina Reke in Matarsko podolje, 2 – Spodnja Soška dolina, Brda, Goriška ravan in Vipavska dolina, 3 – Slovenska Istra, 4 – Kras, 5 – Ljubljana z okolico, 6 – Pivka.
Glej angleški del prispevka.

Še bolje je to razvidno na zemljevidih, kjer so odgovori za posamezno območje odšteti od skupne karte. Rdeči odtenki na njih ponazarjajo presežke od povprečja, zeleni pa primanjkljaje. Zlahka opazimo, da v veliki večini anketiranci območje, v katerem živijo, razumejo bolj sredozemsko od povprečja. Tukaj bi izpostavili predvsem dva, v slovenskem okviru, v prostorskem in vsebinskem smislu nasprotujoča si pogleda na slovensko Sredozemlje. Prvi je »ljubljanski« pogled od daleč. V njem se jasno zrcali specifičen odnos prebivalcev prestolnice in okolice, ki ga gojijo do Krasa in njegovih posebnosti, saj edini opredeljuje Istro nižje od povprečja in ji na ta način miselno priključi Kras. Članska funkcija tudi v njihovem primeru proti morju narašča, vendar so vrednosti, ki jih dosega na Krasu, primerjalno zelo visoke. Na drugi strani stoji mnenje Istranov, ki vidijo v sebi edine prave Sredozemce, saj imajo edini morje in zares »pravo« sredozemsko kulturno izročilo, ki se vleče še iz časov Beneške republike.

Slika 7: Razlike med povprečjem odgovorov za vsako podobmočje anketiranja in skupnim povprečjem odgovorov. 1 = Brkini, dolina Reke in Matarsko podolje, 2 = Spodnja Soška dolina, Brda, Goriška ravan in Vipavska dolina, 3 = Slovenska Istra, 4 = Kras, 5 = Ljubljana z okolico, 6 = Pivka.
Glej angleški del prispevka.

V drugem vprašanju smo anketirance povprašali, na podlagi katerih dejavnikov (poljubno število) so se odločili za začrtanje omenjene meje. Prosili smo jih, naj naštete dejavnike rangirajo po pomembnosti. Zaradi lažje interpretacije smo široko paleto odgovorov smiselno združili v 7 kategorij (podnebje, rastje, morje, geografska lega, značaj ljudi, zgodovina, drugo). Čeprav je razmejitvena črta med sredozemskim in nesredozemskim delom Slovenije rezultat kompleksne prostorske zaznave najrazličnejših dejavnikov, ki jih vsak posameznik povezuje s Sredozemljem, je največ anketirancev navedlo zgolj tri dejavnike, kar smo tudi upoštevali pri analizi odgovorov.

Prebivalci Slovenske Istre so kot najpomembnejši dejavnik pri določanju meje med Sredozemljem in ne-Sredozemljem v Sloveniji navedli rastje, ki zajema tako naravno kot kulturno vegetacijo (omenilo ga je 27,6 % vprašanih), sledilo je podnebje (22 %), morje (12 %), značaj ljudi (8,9 %) in še nekaj manj zastopanih odgovorov, kot na primer podoba naselij (Staut in ostali 2005).

Podobno kot pri anketi opravljeni na območju Slovenske Istre se je kot najpomembnejši dejavnik za določitev meje med sredozemskim in nesredozemskim delom Slovenije tudi na območju širše submediteranske Slovenije izpostavilo podnebje. V vseh območjih anketiranja in tudi skupno je odgovor podnebje, ki zajema širok spekter odgovorov, ki se navezujejo na podnebne razlike med sredozemskim in nesredozemskim svetom (podnebje, burja, temperature, padavine itd.) presegel 40 %, sledita mu kategorija morje (morje, bližina morja, obala, vplivi morja, itd.) z 18 % in rastje (naravno rastje, kulturno rastje, figa, oljka, meja oljke, zimzeleno rastje itd.) z 14 %. Kot drugi najpomembnejši dejavnik za določitev omenjene meje je še vedno prevladovalo podnebje (30 %), vendar pa je rastje v deležu odgovorov zaostajalo zgolj za malenkost in doseglo v posameznih območjih anketiranja več kot 30 %, v povprečju pa 27 %. Kot tretji najpogostejši dejavnik se pojavlja značaj ljudi (ljudi, kultura, način življenja, navade, hrana, odprtost, narečje itd.) s 16 %, nekoliko manj odgovorov sodi v kategorijo drugo (prst, gorska pregrada, pokrajina itd.). Kot tretji najpomembnejši dejavnik so anketirani v povprečju najbolj izpostavili značaj ljudi, ki je skupno v submediteranskih regijah dosegel 29 %, sledila sta mu podnebje (20 %) in rastje (17 %). Iz rezultatov ankete sklepamo, da so pri določevanju meje med sredozemskim in nesredozemskim delom Slovenije fizičnogeografski dejavniki igrali ključno vlogo (Preglednica 1).

Rezultati odgovorov anket z območja Ljubljane z okolico kažejo, da so anketiranci kot najpomembnejši dejavnik razmejitve med sredozemskim in nesredozemskim delom Slovenije navedli podnebje (55 %). Če izvzamemo odgovore v kategoriji drugi, mu sledita rastje in morje s po deset odstotki.

Domnevamo, da se prav pri tako kompleksnih vprašanjih, kot je slednje, kažejo pomanjkljivosti anketnega pristopa, vendar je prav ta edini, ki dopušča možnost tako širokega zajema mnenj. Velikokrat je že bilo dokazano, da s tovrstnimi metodami, kjer izpraševancu nudimo le malo časa za razmislek in ga ne spodbujamo k razvijanju lastnega mnenja skozi daljši poglobljen pogovor, pridobimo pretežno odgovore, v katerih se zrcali naučeno znanje za katerega anketiranci menijo, da obstaja konsenz, da je »pravo«, v resnici pa pogosto ne mislijo tako. Obstaja torej neskladnost med tem, kar ljudje pravijo in tistim, kar zares mislijo (Bernard 2000; Helman 2000).

Preglednica 1: Analiza odgovorov o dejavnikih za določitev meje med sredozemskim in nesredozemskim delom Slovenije (v %).

	prvi najpomembnejši dejavnik						
območje anketiranja	podnebje	rastje	morje	geografska lega	značaj ljudi	zgodovina	drugo
Goriška	45,26	23,16	6,32	5,26	10,53	0,00	9,47
Kras	43,75	6,25	17,19	0,00	14,06	0,00	18,75
Pivka	40,98	6,56	29,51	0,00	6,56	0,00	16,39
Brkini z dolino Reke	40,35	14,04	24,56	0,00	5,26	3,51	12,28
skupaj (N = 481)	42,96	13,72	17,69	1,81	9,39	0,72	13,72
	drugi najpomembnejši dejavnik						
Goriška	31,25	31,25	7,50	2,50	10,00	5,00	12,50
Kras	26,19	19,05	9,52	0,00	23,81	0,00	21,43
Pivka	35,42	33,33	8,33	0,00	12,50	2,08	8,33
Brkini z dolino Reke	26,19	19,05	9,52	0,00	23,81	0,00	21,43
skupaj (N = 481)	30,19	26,89	8,49	0,94	16,04	2,36	15,09
	tretji najpomembnejši dejavnik						
Goriška	23,21	19,64	10,71	0,00	19,64	1,79	25,00
Kras	16,67	8,33	16,67	4,17	45,83	4,17	4,17
Pivka	22,22	18,52	14,81	0,00	37,04	0,00	7,41
Brkini z dolino Reke	14,29	23,81	4,76	0,00	23,81	0,00	33,33
skupaj (N = 481)	20,31	17,97	11,72	0,78	28,91	1,56	18,75

V zadnjem vprašanju smo anketirance povprašali, ali se počutijo Sredozemce. V povprečju so se anketiranci znotraj območja širše submediteranske Slovenije opredelili s 56 % za Sredozemce, vendar pa obstajajo pomembne razlike med posameznimi območji anketiranja (Preglednica 2). Prebivalstvo Goriške in Krasa se je z več kot 60 % opredelilo za Sredozemce, medtem kot je ta isti delež na Pivki dosegel komaj 41 %, prebivalci Brkinov z dolino Reke pa se za Sredozemce opredeljujejo polovično. Razumljivo je delež tistih, ki se opredeljujejo za Sredozemce, v Slovenski Istri daleč največji (78 %) ter v regiji Ljubljana z okolico najmanjši (18 %).

Preglednica 2: Analiza odgovorov na vprašanje »Ali se počutite Sredozemec-ka?.«

območje anketiranja	»da« v %	»ne« v %
Goriška	61,05	38,95
Kras	65,33	34,67
Pivka	41,07	58,93
Brkini z dolino Reke	50,88	49,12
skupaj submediteranke pokrajine (N = 481)	56,18	43,82
Slovenska Istra	78,41	21,59
Ljubljana z okolico	17,96	82,04

4 Sklep

Členjenje površja na bolj ali manj homogene teritorialne enote je že tako rekoč od začetkov geografije njena naloga »par excellence«. Preštevilne razprave in znanstveni diskurzi so se vodili na temo delitve površja.

Pri tem so se raziskovalci po večini zavedali dejstva, da pokrajinotvorni elementi v prostoru prehajajo zvezno. Vkovanost v modele klasične logike pa jim ni dopustila uvidenja in oblikovanja mehkih, iz ene v drugo zvezno prehajajočih teritorialnih enot, temveč so glede na obravnavane značilnosti med edinstvenimi ali pa med seboj bolj ali manj sorodnimi območji vedno vlekli ostre meje. Teorija mehkih množic ponuja v tem pogledu geografiji veliko priložnost, saj s pomočjo koncepta delnega članstva odpravlja nujo po ostri delitvi regij oziroma pokrajinskih tipov. Vsak raziskovalec, ki se zazre v pokrajino, opazi, da razen redkih izjem (npr. administrativne meje) teritorialne enote prehajajo zvezno ena v drugo.

Že Lowenthal (1961) je v izredno vplivnem članku o geografskem izkustvu in domišljiji argumentiral, da je svet vsakega posameznika, ki ga doživlja skozi razumevanje lastnih izkušenj, izrazito omejen in pokriva le zelo majhen delež celote. Čeprav obstajajo konsezualni pogledi na številne aspekte sveta, bodo posamezniki pogosto napačno predpostavljali, da se njihov pogled sklada s konsezom. Vsi živimo v sebi lastnih svetovih, ki nam prepuščajo bolj ali manj vključujoči pogled v naše skupno »kraljestvo«. Doumevanja teh svetov pa so prav tako osebna; niso fantazije, ki z zunanjim svetom nimajo ničesar skupnega, temveč so zaradi zanimanja zgolj za nekatere dele totalnosti pristranska in posledično »morajo« vsebovati elemente edinstvenosti. Podoba sveta se zatorej vsakič sproti preoblikuje za vsakega posameznika skozi lom personalizirianih, kulturnih, domišljijskih leč. Obstaja torej utemeljen razlog za trditev, da so regije, ki jih v tem primeru lahko razumemo kot območja s svojo parcialno vsebino, do katerih so njeni ustvarjalci razvili poseben odnos, posebej domena družbe in v njej živečega posameznika, ki se oblikuje skozi vzgojo in lastno razumevanje sveta (Tuan 2003). Ker je poznavanje okolja nepopolno in zelo daleč od matematičnih logičnih kanonov, regije niso nujno stične in ne obsegajo celotnega površja, ki si ga je raziskovalec v tistem trenutku zaželel razdeliti.

Okolje ni zgolj »stvar« ampak je celota z obliko, kohezivnostjo in pomenom, ki so ji podani skozi akt njegovega doumevanja. Ko mu je pomen enkrat podan, obstaja tendenca njegovega prenašanja in preoblikovanja skozi rodove. Boal in Linvingstone (1989) povzemata, da bi lahko delili totalnost okolja na okolje pojavov, ki je celota realnega sveta in vedenjsko okolje, ki je zaznani in interpretirani del okolja pojavov. Dejstva, ki obstajajo v okolju pojavov, vendar ne vstopajo v našo zavest, za vedenje nimajo pomena in posledično ne vstopajo v problematiko geografskega raziskovanja. Tako kot je moč trditi, da odnos, ki ga je človek razvil do okolja pojavov in specifičen pomen, ki ga pripisuje posameznim njegovim elementom, ni po celotnem prostoru enak, ampak odvisen od njegovega poznavanja, je moč trditi tudi, da regije niso povsod enakomerne ampak se njihova intenziteta prostorsko spreminja.

Z raziskavo smo prišli do zanimivih rezultatov o pojmovanju Sredozemlja na območju Slovenije, pri čemer smo se naslonili na kompleksno posameznikovo razumevanje posebnosti te pokrajine. To smo dosegli s pomočjo spoznavnega zemljevida, povprašali pa smo tudi po dejavnikih, ki po mnenju anketirancev ključno vplivajo na razliko v njihovem pojmovanju sredozemske in ne-sredozemske Slovenije. Sklepna ugotovitev je, da se prebivalstvo v submediteranski Sloveniji bolj opredeljuje za Sredozemce, kot bi jim sicer pripisali glede na njihov način življenja in pokrajino, v kateri živijo. Uporabljena metoda ne nakazuje le na možnost njene uporabe v regionalizacijah, kjer ne želimo postavljati ostrih ločnic, temveč lahko delno prirejena tvori osnovo opredeljevanja geografskih pojavov, ki so, kot je bilo pokazano, v svojem bistvu povečini nejasni.

5 Literatura

Glej angleški del prispevka.