LIFEscape

IMPLEMENTING EUROPEAN LANDSCAPE CONVENTION IN THE SOUTH BALTIC REGION

Landscape Values and participation in four Baltic Sea countries

South Baltic PROGRAMME

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Part-financed by the European Union
(European Regional Development Fund)

LIFEscape (LIFEscape, www.lifescape.eu) is a project within the South Baltic Programme, aiming at implementing the ELC (European Landscape Convention) in the South Baltic Region. Through intensive cross-border professional exchange and capacity building, awareness-raising and stakeholder participation, tools and methods on how to not only inform (the statutory procedure) but also effectively involve stakeholders in the landscape planning process (in alignment with the ELC) are presented.

The project period was for three years (2011-2013) and the project partners were Sweden, Poland, Denmark and Lithuania. Four pilot areas (one in each country) acted as "landscape laboratories" in terms of testing project proposed methods during the actualization of the spatial/management plans of the areas. This report summarizes the results of an extensive survey made in all four countries on people's perceptions of their landscape and on their views on participative landscape planning.

Project Partners

- Lead partner: Elbląskie High-Plain Landscape Park
- Municipality of Tolkmicko, Poland,
- Žemaitija National Park, Lithuania,
- Klaipėda University, Lithuania
- Municipality of Lund, Sweden
- Municipality of Sjöbo, Sweden
- Linnaeus University, Sweden
- Municipality of Slagelse, Denmark

Associated Organizations

- General Directorate for Environmental Protection (GDOŚ), Poland
- Association of Lithuanian State Parks and Reserves
- Ministry of Environment, Lithuania
- Swedish National Heritage Board
- Swedish Forest Agency
- County Administrative Board of Scania, Sweden
- European Network of Local and Regional Authorities for the Implementation of the European Landscape Convention (RECEP-ENELC)
- Visions and Strategies Around the Baltic Sea 2010 (VASAB)

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Preface

This book summarizes the results of a comprehensive study on people's perceptions of their landscapes in Poland, Lithuania, Sweden and Denmark. The four pilot areas of this project has constituted the heart of this study and have given us new and vast perspectives and insights in people's thoughts and feelings when it comes to preservation, development and participation in the landscape planning context.

Whether you are a local politician, making decisions in the landscape planning process, or a civilian living inside one of the pilot areas, this book will provide you with specific information on the results of the LIFEscape study but also a more general understanding on the human-landscape relationship. You can choose to immerge into the results of a specific country or you can focus on the cross comparison made between the four pilot areas.

The book begins with an introductory chapter including a description of landscape as a concept and the scientific methodology in landscape research. The second part of the book summarizes the focus group interviews made in the early beginning of the study. The results of the focus groups studies were used for developing a questionnaire. The final part summarizes and illustrates most of the results of the questionnaire study.

The LIFEscape project is finished in April 2014 but the knowledge and experience exchange between northern and eastern European countries will carry on in the LIFEscape Forum for Participative Landscape Planning (www.lifescape.eu). Furthermore, the implementation of the European Landscape Convention (ELC) will hopefully proceed, which will require more research on human-landscape relationship. The transnational exchange of knowledge and experiences is of great importance!

LIFEscape pilot area: Tolkmicko, Poland. Photo: Marianne Henningsson

Landscapes and landscape values

A "landscape" is defined by the European Landscape Convention as: "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors"[1]. Landscapes are complex social-ecological systems that encompass a multitude of different issues, such as natural values, cultural heritage, identity, visual values and perceptions as well as economic considerations. It is important to develop a holistic view of the landscape, which includes a variety of tangible and intangible ("soft", non-specific) flows. Relations between such values and the processes for evaluation of landscapes are difficult to translate into practical solutions, but such translations are very much needed[2]. The European Landscape Convention underlines the importance of people identifying themselves with "their own landscape" and the convention aims at achieving an understanding of the relation between people and landscapes through perceptions and connections between natural and human factors.

Several studies are made on the human-landscape relationship within such disciplines as sociology, human geography and environmental psychology. Environmental psychology became a scientific field in the mid-sixties and during the eighties, landscape perception became a large research area. Focus was in the beginning on the visual aspects of landscape[3] – what was perceived as beautiful and not very beautiful. But in recent decades, there has been a shift in research towards more complex perspectives such as e.g. place attachment and identity (the way people identify themselves with their landscapes), childhood references (how landscapes early in the childhood affect adult preferences)[4] and the "ecological self" (the self-feeling empathy for the non-human environment)[5].

How humans perceive, or interpret, the landscape depends on a number of psychological factors. From an environmental psychological point of view some research concern landscape's affordances[6] , i.e. what the landscape has to offer in terms of functional properties. These affordances underlie people's perceptions and interpretations of a landscape, thus creating "soft" values such as feelings and memories, which are closely linked to identity and physical and mental wellbeing. The functional properties of a landscape and its influence on mental and physical well-being are also targeted in the research of Kaplan & Kaplan[7].

Their theory Attention Restoration Theory (ART) claims that human responses to landscapes are connected to cognitive mechanisms. When humans are exposed to intense doses of stimuli, stress occurs. Nature have a restorative effect on stress and the Kaplan's argue that it has to do with the fascination and soft stimuli that nature provides. People prefer natural areas (or landscapes) that have a restorative effect on well-being and this is in turn regulated through cognitive mechanisms. Kaplan & Kaplan[7] made extensive mappings of people's relationships to nature, focusing on perception and visual preferences. Their research also forms a basis for other studies made during the last decades.

Amongst others, Grahn, Stigsdotter & Berggren-Bärring[8] and Berggren-Bärring & Grahn[9] based their research partly on Kaplan & Kaplan's[7] theory. With the starting point of nature having restorative effects on humans (and that this is a determinant for landscape preferences and landscape perception), their research concludes that there are eight characters in the outdoor environment that are connected to basic needs (i.e. that are essential for humans). These eight characters are: 1) serene, 2) wild, 3) rich in species, 4) space, 5) the common, 6) the pleasure garden, 7) festive, 8) culture. Each character has its own values (or distinguished features), as shown in Table 1 ▾ below.

Table 1. *Characteristics of the eight Nature/Garden rooms.*

The eight Nature room characteristics	Characteristics of the Nature rooms
1. Serene	Peace, silence and care. Sounds of wind, water, birds and insects. No garbage, no weeds, no disturbing people
2. Wild	Fascination with wild nature. Plants seem self-sown. Lichen and moss-grown rocks, old paths.
3. Rich in species	A room offering a variety of species of animals and plants.
4. Space	A room offering a restful feeling of "entering another world," a coherent whole, like a beech forest.
5. The Common/Social	A green, open place with room for vistas and stays.
6. The Pleasure Garden	An enclosed, safe and secluded place, where you can relax and be yourself and also experiment and play.
7. Festive/Social	A meeting place for festivity and pleasure.
8. Culture	A historical place offering fascination with the course of time.

The Nature room characteristics were used in this study as inspiration for focus groups interviews and construction of the questionnaire, though issues on public participation and landscape development were added.

The human-landscape relationship varies over time and with different socio-cultural and socio-economic factors[10]. This has an impact on how different groups in society are using the landscape, but ultimately also for how the different administrative levels manage and plan landscapes. A sustainable landscape management and planning is related to the social aspects of integration and participation, and therefore an understanding of people's views on the landscape is necessary.

The European Landscape Convention (ELC) underlines the need for including different dimensions in protection, management and planning of landscapes. Even though methods for evaluation have increased over the last decade[11], there is still more to be done in order to find new and innovative methods for the purpose of making informed decisions in the landscape planning processes. Good and effective use and management of public participation strengthens both democratic legitimacy and the quality of decision-making processes[12].Several methods on how to involve people in the planning process of landscapes were presented in the LIFEscape "Handbook on participative landscape planning"[13].

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[1] Council of Europe 2000, chapter 1, article a
[2] Cosgrove 1998; Olwig 2002; Sporrong 1996
[3] see for example Kaplan & Kaplan 1982, 1989, Purcell & Lamb 1984, Herzog 1985, 1987
[4] Dovey 1985
[5] Adevi 2012, Naess 1989, Neisser, 1991
[6] Gibson, 1977
[7] Kaplan & Kaplan 1982 & 1989
[8] Grahn, Stigsdotter & Berggren-Bärring 2005
[9] Berggren-Bärring & Grahn 1995
[10] Bourassa 1990, Hartig 1993, Balling & Falk 1982, Lyons 1983, Zube et al 1983, Gonzalez-Bernáldez & Parra 1979, Yu 1995, van den Berg, 1998
[11] Buss, Stevens Redburn & Guo 2006
[12] Arciniegas and Janssen 2012, Arciniegas, Janssen and Rietveld 2013; Dietz & Stern 2008
[13] Can be downloaded on www.lifescape.eu

Measuring landscape values

The European Landscape Convention clearly points out that there are many different descriptions of the landscape and that the perception of the landscape can vary. Therefore, it is understandable that in research there are also a variety of perspectives on, and approaches to, quantifying/measuring landscape values. Already in the 1980s, Zube[14] could, using a literature review and an analysis of the main research directions, distinguished four approaches in landscape perception research. These four approaches are: 1) expert approach 2) psychophysical approach, 3) cognitive approach and 4) experiential approach. In the 90s another direction came with Uzzell's[15] research, namely the socio-cultural approach. Within these five approaches there are a number of different methods and tools used to identify the different landscape values and depending on which approach is used, the results vary.

Within the *expert approach*, either ecological or formal aesthetic criteria are used when a landscape is valued. The ecological criteria can be assessed through field studies (inventories), GIS (Geographical Information Systems) analysis or systematic evaluations of the biophysical landscape characters based on principles on ecology and biodiversity. These include methods/tools such as EIAs (Environmental Impact Assessments).

In the *psychophysical approach* (relation between measurable physical qualities and experiences) measurable relationships between people's preferences and objective distinguishing features of the landscape are sought for. This is often done with the help of images which are rated in terms of attractiveness and beauty.

Within *the cognitive approach* (thoughts, knowledge), it is common to combine different methods in order to understand the underlying psychological processes that determines how people perceive landscapes. Surveys that are based on psychological models are commonly used, often in combination with the rating of images (as in the psychophysical approach). Much research has been undertaken in this direction, including Kaplan & Kaplan[16] who describe why certain environments are perceived as more attractive than others. This research forms the basis of many other relevant studies.

The *socio-cultural approach* (the interaction and collaboration between people) was added later on to try to connect landscape perception with culture and politics. Much research in this approach assumes that landscape perception is socially and culturally conditioned. Qualitative methods (interviews, focus group interviews) are often used in combination with quantitative methods (surveys) where qualitative methods try to provide deeper understanding of the results.

Finally, we have the *experiential approach* which is based on individual interpretations and perceptions of landscape. This approach does not account for generalization and uses only qualitative methods such as in-depth interviews.

It is important to combine qualitative and quantitative methods to get as good picture as possible of how people perceive landscapes. It is not enough to only take into account general perceptions; there must also be an understanding of how individuals interpret their landscape. In a landscape planning context, methods from the so-called "expert approach" are often used when the landscape is valued, but in accordance with the European Landscape Convention's definition of landscape, a direction towards the socio-cultural and experiential approach is needed.

[14] Zube et al. 1983
[15] Uzzell 1991
[16] Kaplan & Kaplan 1985, 1989

Table 2. *Spectrum of research approaches (based on Zube[14]). The table shows how the different research approaches deal with the concepts of "landscape" and "human perspective".*

	Approach				
	Expert	Psychophysical	Cognitive	Socio-cultural	Experiential
Human perspective	Passive →				Active
Landscape	Dimensional →				Holistic

The LIFEscape study – How to make landscape research

Focus group interviews and a questionnaire were used as methods for the aims of this study, which were:

- to investigate landscape values in specific areas in the four participating countries
- to investigate the perception of participation in the four countries
- to investigate people's opinions on how to develop the chosen areas

The LIFEscape study was conducted through 3 steps:

Step 1: Stakeholder mapping: The most important stakeholder groups (4-5) were identified in each area in the four countries (e.g. politicians, landowners, officials, horse riders, walkers, tourists, organisations, public networks). The groups were contacted and invited to take part in focus group interviews (6-8 people in each group).

Step 2: Focus groups interviews: The interviews were recorded in agreement with the participants and later on transcribed and categorized. Each country made their categorization of perceived landscape values connected nature, culture and social aspects. Motives for preserving or protecting landscape values (i.e. egoistic, altruistic and biospheric motives) were also categorized.

Focus group interview, here with tourists in Poland. When conducting a focus group interview, 6-8 participants are optimal. The researchers take notes of the discussions within the group.

Step 3: Questionnaire development: The categorization of the result of the focus groups interviews were gathered and analysed by the method group within the LIFEscape project. The material was used for developing a questionnaire, suitable for all participating countries. The questionnaire included questions on: landscape values, participation and development. A total of 901 responses were received.

Four project areas:

Tolkmicko, Elblag High-Plain (Poland)

The Elbląg High-Plain is situated in the northern part of Poland. The region borders with Warmia Plain from the east and south, with the Żuławy depression from the west and with the Old-Prussian Coast and the Vistula Lagoon from the north. The high-plain was formed during the four Scandinavian glaciations (the latest was 10 000 - 12 000 years ago). It covers an area of 450 km^2 wavy moraine hills from drumlins occurring in the central part of the Upland. The drumlins are (not very high) elliptical asymmetrical hills, elongated in the direction of the glacier movement, arising under a glacier moraine material. Elevations reach a height of 198.7 m around Milejewo. The northern part, from Elblag to Frombork, is an old, dead abrasive cliff formed by erosion processes. The high-plain is cut by a network of numerous valleys radiating erosion, formed by flowing streams. There are wild and inaccessible "canyons" of 40 - 60 m depth. The most dynamic carving (deep gorges and ravines, picturesque streams) are found near the edge zone, especially in the area of Łęcze and Suchacz.

There is also a very rich vegetation cover with interesting mountain species. The wildlife of the park forests is also rich. You can, among others, meet: otter, dormice and raccoon, and sometimes even moose. In the backwoods lives the exotic sika deer (imported from Japan as a gift to Emperor Wilhelm II), and more recently also wolves.

The outstanding landscape and unique nature of the high-plain is protected by the Elbląg High-Plain Landscape Park. However, it is threatened by rapid and uncontrolled construction of residential housing. A new spatial development plan of the Tolkmicko municipality will be the goal of joint planning efforts in this area.

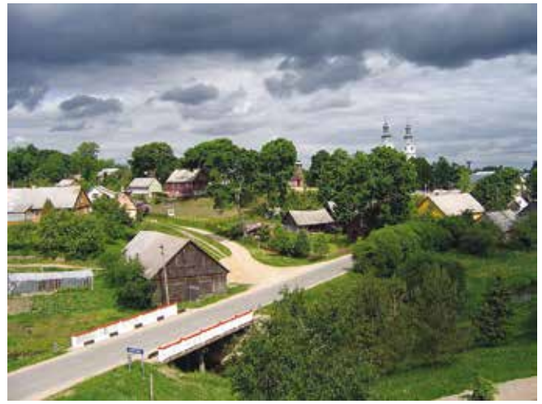
Pilot area, Tolkmicko, Poland.

Zemaitija National Park (Lithuania)

The wavy landscape of Žemaitija was molded 10 000 - 12 000 years ago by the glaciers. The highest point is 191,8 m above sea level. The lowest point is the ~ 50 m deep depression in the lake of Plateliai.

Žemaitija is famous for its rich cultural heritage from the Stone Age. There are more than 200 items of cultural values including castle hills, sacrifice hills, burial mounds and ancient settlements. The people of this area, the žemaičiai, have preserved their dialect, customs, characteristic traits, original buildings and vernacular architecture. The most significant architectural sights are the churches in Plateliai, Beržoras and Žemaičių Kalvarija, the Water Mill in Babrungėnai and some ancient farmsteads. More than 90 ancient artworks are preserved, mostly crosses, chapels, and poles with statuettes of a saint that have been built alongside roads or fixed on trees.

Different touristic activities are possible: hiking, cycling, angling, diving, canoeing, yachting, boating, windsurfing, camping and taking part in traditional festivals such as St. Johns night, Shrove Tuesday or church processions. There is a well-developed network of farmsteads which offer countryside tourist accomodations (bed & breakfast). Development of bicycle infrastructure is ongoing. Žemaitija National Park (ŽNP) was established in 1991 with the aim of preserving, managing and sustainably developing the area. It also encourages traditional farming methods and environmentally sensitive tourism. With its rich biodiversity, including more than 200 protected species such as black stork, honey-buzzard, lynx and otter, Žemaitija National Park is also protected by both Natura 2000 directives.



Pilot area, Zemaitija, Lithuania.

Vomb river valley (Sweden)

The wet meadows of Vomb are situated in Scania, in the south of Sweden, in the lower valley of river Klingavälsån, in Lund and Sjöbo municipalities. The river's length is about 37 km and has a catchment area of 240 square kilometers. Vomb river valley is relatively flat with extensive sand and gravel deposits. In the 1800s, the meandering river was straightened and an irrigation system was built to boost hay production. The regular flooding of meadows attract large number of waterbirds, e.g. white stork, black-tailed godwit, ruff, dunlin and corncrake were found breeding in the area and during migration large numbers of geese, ducks, waders and raptors used the meadows as a staging locality. In 1923, Vomb meadows was protected by law in order to the preserve the rich birdlife. During the years 1938-43 however, much of the biodiversity was lost due to draining of the marshes and even more so in the 1960's with the widespread use of chemicals in agriculture.

The reserve is now one of the largest in Scania. It has been designated both as a Ramsar-site and a Natura 2000 bird protection area. Between 1998 and 2003, Vomb meadows have been restored both in terms of flood irrigation systems and the natural meandering river bed. Besides the natural values, the area is high in recreational values with its appealing views. Hundreds of leisure homes have been built within the area. The area has been made accessible over the years and now it is frequently used by, amongst others, horseriders, bikeriders and dog owners for recreational activities.

Pilot area, Vombsänkan, Sweden.

Tude river valley (Denmark)

The delta area of the river Tude leads to the ancient Viking fortress of Trelleborg (built around 980 AD by the king Harald Blåtand). The river has originally been the water way to the fortress, flowing in a shallow valley through meadows, marshes and grasslands.

The river Tude is the main migrating route for a large portion of Zealand's trout population on their way to the spawning grounds. The wet meadows and marshes hold also a huge botanical and ornithological potential. In the 1960's however, they have been drained and are in intensive agricultural use and the river has been straightened to ensure draining of the arable land.

The inappropriate land use patterns have also transformed the landscape in Tude river valley. Trees and bushes have grown uncontrolled and covered many of the open spaces, including the view from the fortress to the sea. The ongoing wetland restoration project along Tude river will greatly influence and change the appearance and use of the landscape. It is very important to be able to value these changes, both the landscape aesthetic change and the down-to-earth economic change.

Pilot area, Tude Å, Denmark.

Focus group results

Focus group interviews were conducted in all four countries. In this chapter we summarize some of the results and exemplify through quotations some of some of what was said during the interviews.

Table 3. *Participants in the focus groups in the four participating countries*

Country	Group	Gender (m=men, w=women)	Age
Poland	Hunters and foresters	14 m	28-74
	Tourists	13 m 11 w	17-63
	Teachers and children	69 m 80 w	9-16 (children) 28-64 (teachers)
	Residents	76 m 74 w	14-69
	Decision makers	6 m 4 w	24-56
	Farmers	19 m 8 w	Mean=45
Lithuania	Employees Nature department and Directorate of Zemaitija	4 m 3 w	mean=48
	Businessmen tourism	3 m 4 w	mean=59
	Farmers (land owners)	3 m 3 w	mean=41
	Employees Architecture and Territorial Planning Dep. of Plunge	4 m 2 w	mean=39
Denmark	Advisory group Tude river	4 m 1 w	50-60
	Owners of holiday homes	3 m 2 w	50-60
	NGO	3 m 1 w	mean=56
	Land owners	3 m 2 w	51-72
	Decision makers	1 m 4 w	mean=43
	School children	10 boys	14-16
	School children	10 girls	14-16
Sweden	Land owners	3 m 4 w	mean=56
	Municipal employees	4 m 3 w	mean=59
	Politicians	4 m	mean=50
	Municipal officials	3 m 3 w	mean=40
	NGO Horse Organization	3 w	mean=43

Questions asked in the focus groups interviews were:

1. What is a landscape to you?
2. In what way do you get in contact with the landscape?
3. What kind of landscapes are important in the world (globally)?
4. Which values (cultural/social/natural) are important to protect in the pilot area in your country?
5. In what way (how) should the public be involved in landscape planning? When in the process?
6. How would you like to develop your (pilot) area?

Focus group results

1. What is a landscape to you?

The area surrounding us; A geographical area; The beautiful nature; Away from any radios or telephones; Wild nature and rocks; The word landscape gives me a good feeling in the stomach, but bad when we humans are interfering too much in the nature; Landscape is for me the green, the diversity, nature in real life, wide open spaces and dynamics; Landscapes that are very few; Landscapes that are unrepeatable; Landscapes that have not been changed for a long time; A landscape is what I see before me; It is a creation of people and nature; It is something of green color; It is a proportion of natural environment and human.

Quotations:

"It is a creation of people and nature"
"A landscape is what I see before me"

2. In what way do you get in contact with the landscape?

Quotations:

"When I open the door I am within the landscape"
"We live in the landscape"
"We are very present in the nature"

3. What kind of landscapes are important in the world (globally)?

The rain forest; The untouched nature; Old forests; The seas; Clean water; Clean air; The wilderness and the cultivated diversity; Savannah; Coastal areas; Natural lakes and rivers; Connections between the biotopes; Marshes and grasslands; Virgin landscapes; Nature reserves; All landscapes are important to preserve.

Quotations:

"All landscapes are important to preserve"

4. Which values (cultural/social/natural) are important to protect in the pilot area in your country?

Poland:
Large fertile deciduous forests; Arable land (unfenced); Patches of different character in the middle of the forest; Patches of different character between fields and meadows; Fertile deciduous forests; Forest animals; Open space animals; Extremely dynamic topography; Large mysterious fairy-tale forests; Topography; Biodiversity; Fresh air; Meadows and fields; Agricultural land; Historic buildings; Old system of village; Old lanes of trees; Views; Open spaces; Local products; Public space; Calmness; Contact with nature

Lithuania:
Plateliai lake; Big forests; Old big trees, Landscape reserve of Babrungas; Meadows; Marches; Forests; Upper reaches of the Bartuva; Old stones; Beautiful landscapes of Šarnelė; Forest meadow; Lake without buildings; Towns; Open space; Valleys of rivers; Lakes with forests; All animal life; Hills; Scenery landscapes; Open space; A mosaic landscape; Old farmsteads; Old cemeteries; Mounds; Ancient settlements

Sweden:
Lakes, Meadow; Birdlife; Lake, Forest, Sandy soil is important for the horses; Old oaks; The wild; Diverse flora and fauna; Wild boar; Deer; Water; Boundary zones; Variation in the landscape; The landscape of small farms; Milk farms; Grazing animals; Old mill; Ecoducts; Paddocks; Fields; Settlements; Old villages; Public access; Peacefulness and quietness; Outdoor living; Quiet area; Beautiful scenery

Denmark:
Local hills; Meadows; Breeding birds; Animals; Meadows and streams; The protected orchids; Rare frogs; The unknown history of Trelleborg; Pine Mölle; Grazing animals; Groves; Forest; Variations; The creek of "Valbygården"; Quiet areas; Accessibility in nature

5. In what way (how) should the public be involved in landscape planning? When in the process?

Quotations:

"First of all it must be explained to society what a landscape is and how individual activity affect landscapes"

"The public should be involved in landscape planning in the beginning"

"All people cannot express their wishes and needs. Consider all interest groups opinions"

"If you ask about people's opinions, then you have to be prepared to handle the frustration coming from the public and their complaints"

"There should be a permanent communication in all stages of planning proces."

"Both partners must be aware of the prerequisites for the dialogue – if there really is a dialogue"

6. How would you like to develop your (pilot) area?

Quotations:

"The National Park should cooperate more with local authorities and forest enterprises." (Lithuania)

"The citizens often have interesting ideas on how things should develop. Take care of those ideas..." (Sweden)

"Develop a public recreation area along with the entire the river valley so that the public, to a limited extent, will be able to access it" (Denmark)

The questionnaire

The questionnaire that was used in the study was distributed to stakeholders in all participating countries both digitally and manually. Stakeholder target groups were identified based on the focus group interviews (basically the same groups were targeted) but some differences between countries were taken under consideration due to the countries having different administrative organizations and different social and geographical compositions (number of local inhabitants, NGO's, political structures and so on).

The response rates differed between the countries (see Table 4 ▾).

Table 4. *Total reply frequences in the separate countries are shown (N=number of respondents)*

Country	N distributed	N replies	% replies
Poland	421	340	81
Lithuania	398	272	68
Sweden	511	174	34
Denmark	697	115	16
Total	2027	901	48

One of the first questions asked in the questionnaire was how close to the pilot area the respondent lived. This question was asked because distance to an area (or a landscape) may have an impact on how people perceive it (Table 5 ▸ on page 23).

A majority of the Polish respondents lived within the pilot area, while most of the respondents in Denmark and Sweden lived outside the pilot areas.

The questionnaire also included a question on gender, results are shown in Table 6 ▾.

Table 6. *Response frequency, gender identification. The result is showed in per cent. Missing = no answer.*

Country	Men	Women	Missing
	%	%	%
All countries together	46	51	3
Poland	37	60	3
Lithuania	41	55	4
Sweden	54	44	2
Denmark	73	24	3

The respondents were also asked to report their age. Different intervals were presented (Table 7 ▸).

Denmark had the highest number of people over 50 years while the respondents in Lithuania had the lowest mean age.

The questionnaire also included a question on education level. Reply alternatives were: Elementary school, Secondary school, University (higher education). (Table 8 ▸)

Statistical analysis of questionnaire results

The following chapters summarizes the results and result analysis of the questionnaire. Each chapter represents a question asked in the questionnaire.

Statistical analysis consisted of cross-comparisons between countries for each specific question and also comparisons between different groups (age, gender, education level etc.) both within each country but also in all countries combined. In this way we could find out differences in landscape perception and views on participation in the planning process, but also similarities.

Table 5. *Response frequency, distance to area. The responses are presented in percent. N=number of replies Missing = no answer.*

Country	I live within the area	Outside the area 0-10 km	Outside the area 11-20 km	Outside the area 21-30 km	Outside the area 31-40 km	41 km or more	Missing	N total
	%	%	%	%	%	%	%	
All countries together	50	18	9	5	2	6	10	820
Poland	87	2	1	1	0	1	8	317
Lithuania	36	23	7	6	4	12	12	240
Sweden	25	26	21	11	4	6	7	163
Denmark	10	42	20	6	2	7	13	100

Table 7. *Response frequency, age. The responses are shown in per cent. Missing = no answer, N = number of replies.*

Country	-20 years	21-30 years	31-40 years	41-50 years	51-60 years	61-70 years	71- years	Missing	N total
	%	%	%	%	%	%	%	%	
All countries	12	8	14	19	21	18	5	3	874
Poland	10	13	18	21	22	11	2	3	331
Lithuania	27	7	14	17	15	12	5	3	261
Sweden	1	6	9	22	23	27	9	3	169
Denmark	1	1	8	11	27	39	11	2	113

Further, a so called factor analysis was made. Factor analysis of variance is a statistical method used to show patterns or clusters in the data. Groups of values or statements (as were used in this questionnaire) are formed where there are strong correlations, i.e. those statements or values that are correlated forms so called factors.

Table 8. *Response frequency, education level. The responses are shown in per cent . Missing = no answer, N = number of replies.*

Country	Elem.	Sec.	Univ.	Missing	N total
	%	%	%	%	
All countries together	12	41	39	8	837
Poland	15	45	32	8	314
Lithuania	10	40	39	11	241
Sweden	8	23	63	6	168
Denmark	15	61	23	1	114

The area is important to me because...

In order to find out priorities in landscape values we asked respondents to relate to 19 statements including a variety of landscape values (see Table 9 ▾ below). The respondents replied on a five-grade scale; from Totally disagree to Totally agree. The most important values in all countries put together were: 1. It is beautiful, 2. It has open water, 3. There is a variation in the landscape, 4. It includes meadows, 5. The area includes flora/vegetation. The value "**It is beautiful**" was ranked top-five in all four countries.

Table 9. *"The area is important to me because...". All statements used in the question are shown. R =rank, Italic numbers = lowest rankings, bold numbers = top rankings. The rankings are based on mean values (1=Totally disagree, 5=Totally agree).*

Statements	R Total	M Total	R Pol	R Lit	R Swe	R Den
It is beautiful	1	4.57	**2**	**3**	**1**	**4**
It has open water	2	4.53	**3**	**1**	8	6
There is a variation in the landscape	3	4.52	**1**	**2**	8	9
It includes meadows	4	4.43	14	**4**	**3**	**3**
The area includes flora/vegetation	5	4.41	6	7	**4**	8
I feel good (relaxed and calm) when I visit the area	6	4.41	**3**	6	10	6
There is a birdlife	7	4.39	13	*10*	**2**	**1**
There are wild animals	8	4.34	12	*15*	7	**2**
It is quiet and peaceful	9	4.33	6	13	13	**5**
The area is good for human health	9	4.33	*15*	**5**	6	14
I have the possibility to visit the area with my friends	11	4.32	6	9	11	*15*
I can perform activities: fish, hunt, bicycle, make excursions etc.	11	4.32	10	7	*15*	13
It has old trees	13	4.26	6	12	12	*17*
I feel I am a part of nature when visiting the area	14	4.24	11	14	*18*	10
It is available for everyone	15	4.16	*15*	10	*17*	*16*
There are old buildings (e.g. wind mills and farm houses)	16	4.10	**5**	*18*	*16*	*19*
It includes fields	17	4.06	*18*	*16*	14	*18*
It has grazing animals	18	4.01	*19*	*17*	**5**	11
I have a personal connection to the area	19	3.93	*17*	*19*	*19*	11

Table 10*. Results of factor analysis. Three factors are presented (with included items/values).*

Factor 1. Social/Personal values	Factor 2. Natural/cultural values	Factor 3. Aesthetic values
• I feel I am a part of nature when visiting the area • I feel good (relaxed and calm) when I visit the area • I have a personal connection to the area • It is quiet and peaceful • I have the possibility to visit the area with my friends • The area is good for human health • There is a variation in the landscape • I can perform activities: fish, hunt, bicycle, make excursions etc.	• It has grazing animals • It includes fields • There are wild animals • There is a birdlife • It has old trees • The area includes flora/vegetation • There are old buildings (e.g. wind mills and farm houses)	• It is available for everyone • It is beautiful • It has open water • It includes meadows

Figure 1. *Shows how the countries relate to the factors. Numbers on y-axis = mean value (1=Totally disagree, 5=Totally agree). Aesthetic values are more important in all countries than Social/Personal values and Natural/Cultural values. However, all countries responded high on all factors (mean value = >4)*

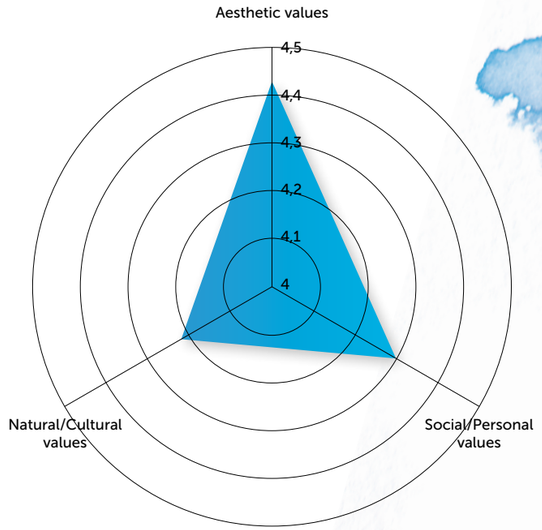
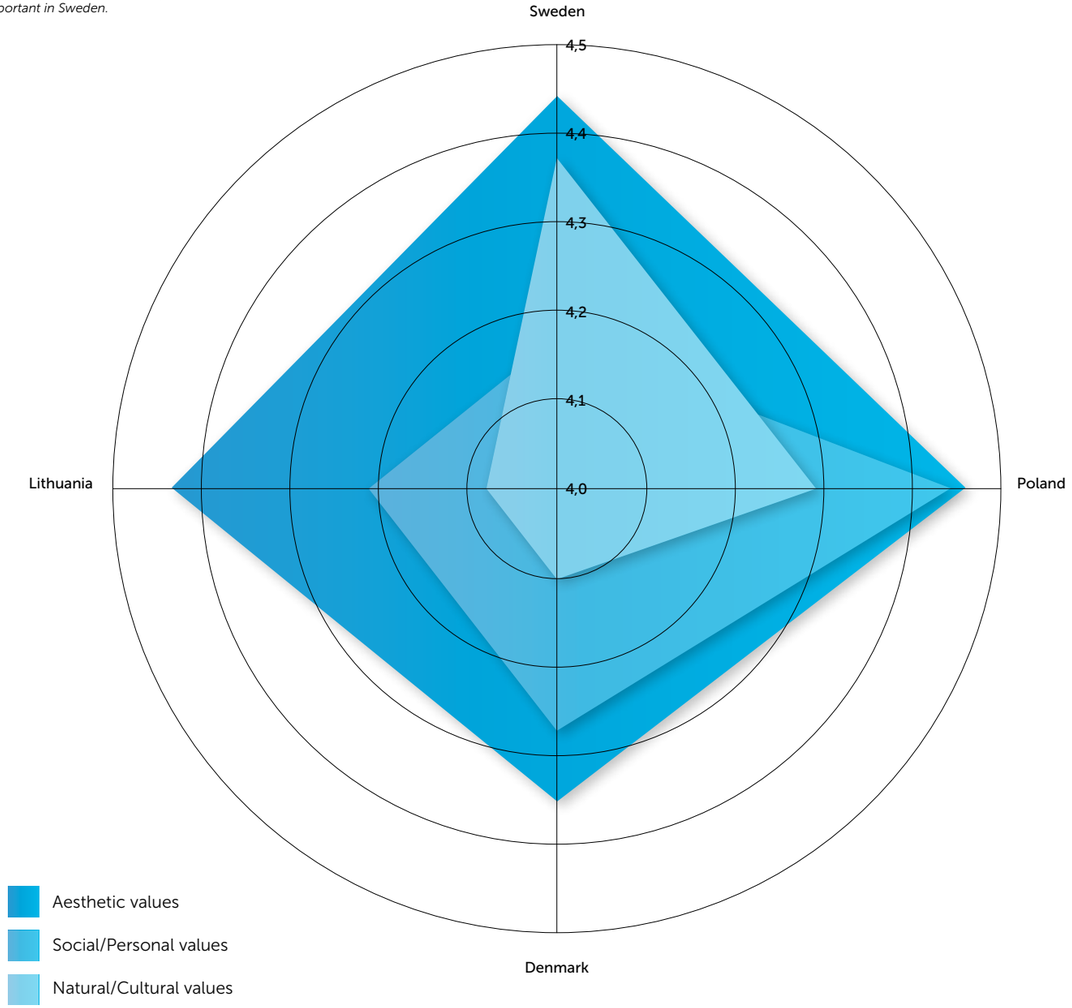


Figure 2. *Shows differences in prioritized values (factors). Y-axis = mean value (1=Totally disagree, 5=Totally agree). Aesthetic values were most important in all countries, Social/Personal values were more important in Poland and Natural/Cultural values were more important in Sweden.*



The following is important to preserve

Next, we asked respondents to relate to 15 statements regarding preservation in the area (see Table 11 ▾ below). The respondents replied on a five-grade scale; from Totally disagree (1) to Totally agree (5). The five most important things to preserve in all countries put together were: 1. Flora/vegetation, 2. Quietness and peacefulness, 3. Birdlife, 4. Wild animals, 5. Old trees and forest.

Table 11 ▾ below shows rankings in all four countries. There was no consensus in the top-five positions (all four countries had different priorities).

Table 12*. Results of factor analysis. Three factors are presented (with included items/values).*

Factor 1 Natural values	Factor 2 Cultural/social values	Factor 3 User values (cultivation)
• Birdlife • Wild animals • Wetlands • Flora/Vegetation • Fish • Bird watching places	• Old buildings • Paths and tracks • Public accessibility • Old trees and forest • Quietness and peacefulness • Places for public activities • Beautiful areas for recreation	• Grazing animals • Farming

Table 11. *"The following is important to preserve within the area". All statements used in the question are shown. R =rank, Italic numbers = lowest rankings, bold numbers = top rankings. The rankings are based on mean values.*

Statements – important to conserve:	R Total	M Total	R Pol	R Lit	R Swe	R Den
Flora/Vegetation	1	4.73	**2**	**1**	**3**	**3**
Quietness and peacefulness	2	4.68	**1**	6	6	**5**
Birdlife	3	4.64	*11*	**2**	2	*2*
Old trees and forest	4	4.60	**3**	**7**	8	*11*
Wild animals	4	4.60	*12*	**4**	7	**1**
Fish	6	4.58	10	**2**	10	**4**
Beautiful areas for recreation	6	4.58	6	10	9	7
Paths and tracks	8	4.55	**3**	9	*11*	10
Public accessibility	9	4,51	7	*11*	**4**	*12*
Bird watching places	10	4.48	9	7	*12*	9
The wetlands	11	4.43	*14*	*12*	**1**	**5**
Grazing animals	12	4.38	*15*	**5**	**5**	8
Old buildings	13	4.32	**3**	*13*	*14*	*15*
Places for public activities	14	4.26	7	*14*	*15*	*14*
Farming	15	4.09	*13*	*15*	*13*	*13*

Figure 3. *Shows how the countries relate to the factors. Y-axis = mean value (1=Totally disagree, 5=Totally agree). All countries responded high on all factors but Natural values and Cultural/Social values are more important than User values.*

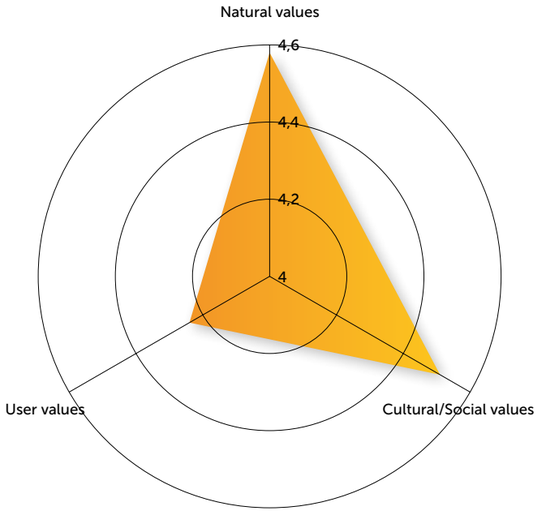
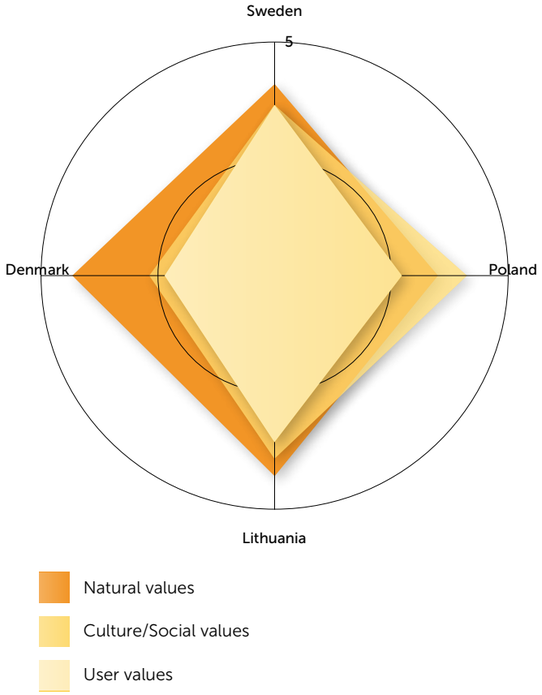


Figure 4. *Shows differences in prioritized values (factors). Y-axis = mean value (1=Totally disagree, 5=Totally agree). All countries responded high an all factors. Factor 1 is more important in Denmark, Lithuania and Sweden. Factor 2 is more important in Poland and Lithuania and Factor 3 is more important in Sweden and Lithuania than in the other countries.*

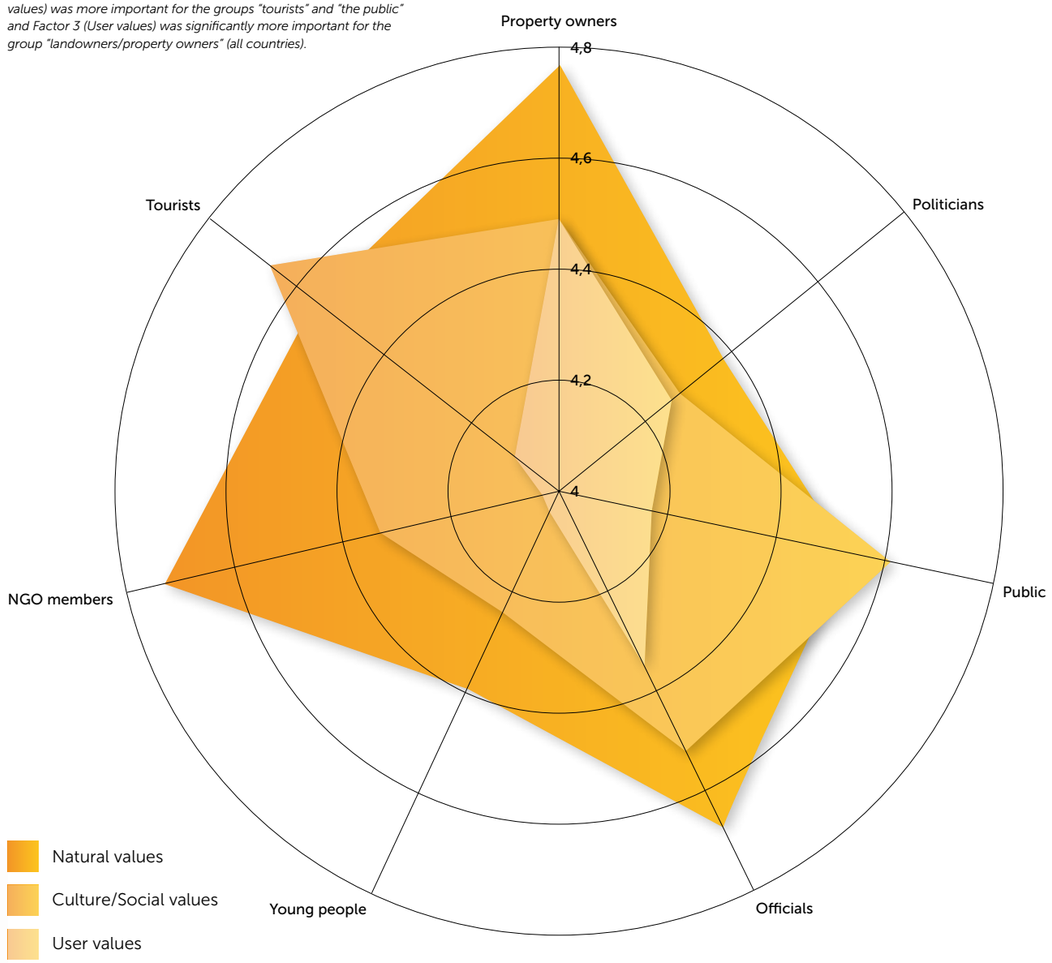


Factor 1 (Natural values) is more important in Denmark, Lithuania and Sweden. Factor 2 (Cultural/Social values) is more important in Poland and Lithuania and Factor 3 (User values) is more important in Sweden and Lithuania than in the other countries.

Factor 2 (Cultural/Social values) was more important for women (all countries) than men. There was no difference in gender in the other two factors.

Factor 1 (Natural values) was significantly more important for "property owners/landowners" and "organizations" and Factor 2 (Cultural/Social values) was more important for the groups "tourists" and "the public". Factor 3 (User values) was significantly more important for the group "landowners/property owners" (all countries).

Figure 5. *Shows differences in prioritized values (factors) among the different stakeholder groups. Y-axis = mean value (1=Totally disagree, 5=Totally agree). All stakeholder groups responded high to all factors. Factor 1 (Natural values) was significantly more important for "property owners/landowners" and "organizations". Factor 2 (Cultural/Social values) was more important for the groups "tourists" and "the public" and Factor 3 (User values) was significantly more important for the group "landowners/property owners" (all countries).*



I would like to see the following be developed

The questionnaire contained questions and statements regarding developmental issues in the different areas (see Table 13 ▾ below), i.e. what the respondents would like to see developed in the area. The respondents replied on a five-grade scale; from Totally disagree to Totally agree.

In the top-five rankings, there was consensus (i.e. all four countries agreed) regarding two developmental issues: Restoration of natural values (e.g. species, habitats) and More quiet areas. Almost every statement regarding development in the areas was significantly more important in Poland and Lithuania (Poland in particular) than in the other countries.

***Table 13**. "I would like to see the following be developed in the area" All statements used in the question are shown. R =rank, Italic numbers = lowest rankings, bold numbers = top rankings. The higher the statement is ranked, the more important it is to be developed, and vice versa.*

Statement	R Total	M total	R Pol	R Lit	R Swe	R Den
Restoration of natural values (e.g. species, habitats)	1	4.38	**5**	8	**2**	**3**
More nature conservation/preservation	2	4.35	9	15	**1**	**1**
More quiet areas	3	4.34	**4**	**4**	**3**	**4**
Clean up more/better	4	4.33	**1**	**3**	9	**7**
Better cooperation between stakeholders (authorities, municipalities, NGO´s and the public)	5	4.28	10	6	**5**	**5**
More facilities (e.g. toilets and shelters)	6	4.18	6	**2**	11	15
Better roads	7	4.15	**2**	**1**	*18*	*17*
More information signs in the area	8	4.12	16	12	8	10
Reconstruction of old buildings	8	4.12	**3**	7	13	16
Better involvement of the public in planning processes	10	4.10	*15*	12	12	8
More wild animals	10	4.10	*21*	*16*	**3**	**2**
Better accessibility for all people	12	4.08	16	10	7	10
More areas for relaxing	12	4.08	8	8	14	14
More activities such as guided tours	12	4.08	11	**5**	15	12
More compensation to landowners for nature conservation	15	4.06	*18*	11	10	9
More grazing animals/cattle	16	3.90	22	*20*	6	*6*
Possibilities to "green" rehabilitation (e.g. courses, activities, accommodation)	17	3.89	12	14	*16*	*20*
More areas for social activities	17	3.89	7	16	*20*	*18*
More visitors	19	3.84	14	*22*	17	13
More media coverage (e.g. newsletter, TV-program)	20	3.80	12	*18*	*22*	*19*
More paths for horse riding	21	3.64	*19*	*19*	*21*	*21*
Restaurant/Café	22	3.60	*20*	*21*	*19*	*22*

***Table 14**. Results of factor analysis. Three factors are presented (with included items/values).*

Factor 1 Development of individual user values	Factor 2 Development of general user values	Factor 3 Development for nature values
• Reconstruction of buildings • Better roads • More media coverage • Clean up more/better • More compensation to landowners for nature conservation • More paths for horse riding • Possibilities to "green" rehabilitation (e.g. courses, activities, accommodation) • Better involvement of the public in planning processes • Better cooperation between stakeholders (authorities, municipalities, NGO's and the public) • More areas for social activities	• More visitors • Better accessibility for all people • More information signs in the area • More facilities (e.g. toilets and shelters) • More activities such as guided tours • Restaurant/Café • More areas for relaxing	• More wild animals • More nature conservation/preservation • Restoration of natural values (e.g. species, habitats) • More grazing animals/cattle • More quiet areas

All three factors were more important in Poland.

Factor 2 (Development of general user values) and 1 (Development of individual user values) were more important for people with lower education than for people with higher education.

There were some differences due to gender as well (all countries put together). Women believed that factor 2 and 3 (Development for general user values and Development for nature) were more important than men did.

Participation

The aim of this study was not only to map and analyze people's perception of landscape values, but also to find out their views on participation in the landscape planning process. We therefore asked a number of questions related to this. The results of these questions are presented in the figures below. It was important to respondents in all countries that people living close to the area should be more involved in the planning process. All issues on participation were more important in Poland than in the other countries. Respondents in Poland and Lithuania reported that experts should decide about the use of the area and what to preserve, to a higher degree than Denmark and Sweden. Respondents in Poland also wanted to be involved in the planning process to a higher degree than respondents in the other countries. Respondents in Sweden had been less involved in the planning process than in the other countries and they reported to a lower degree than the other countries, that they would like to be involved in the planning process.

Figure 6. *Shows how respondents in the four countries replied to a statement on future involvement in the planning process. Numbers on x-axis are mean values. Respondents in Sweden were less interested in being involved than the rest of the countries; respondents in Poland were most interested.*

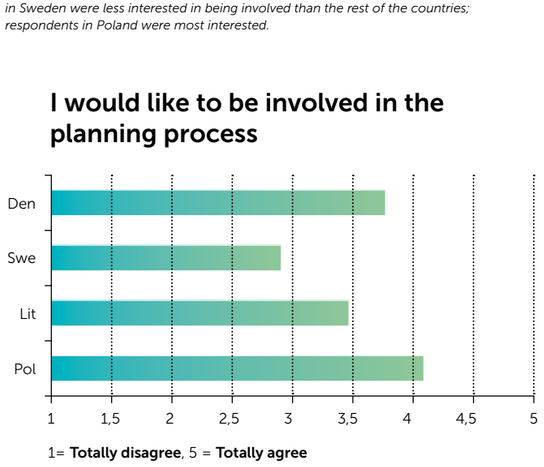


Figure 7. *Shows how respondents in the four countries replied to a statement on the importance of including local inhabitants in the decision making processes. Numbers on x-axis are mean values Respondents in Poland and Lithuania were more positive than respondents in Denmark in Sweden, although all countries were overall positive.*

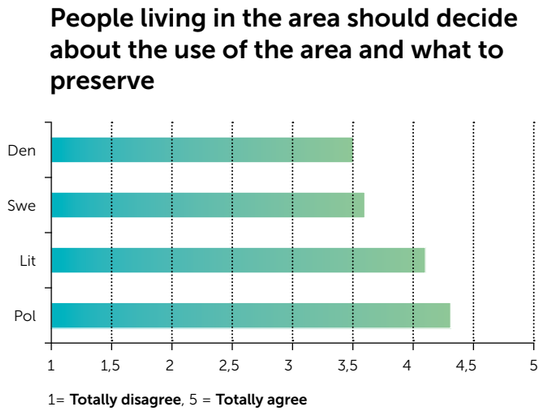


Figure 8. *Shows how respondents in the four countries replied to a statement on involving local inhabitants in the planning processes of the areas. Numbers on x-axis are mean values. This statement was almost equally important in all four countries (slightly more important in Poland and slightly less important in Sweden).*

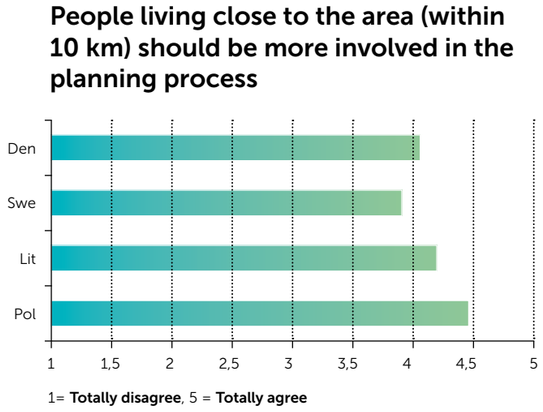


Figure 9. *"Participation increases if people can profit from it" was not agreed upon in all countries. Respondents in Poland and Lithuania were similarly positive whereas respondents in Denmark and Sweden (but Denmark in particular) were more negative. Numbers on x-axis are mean values.*

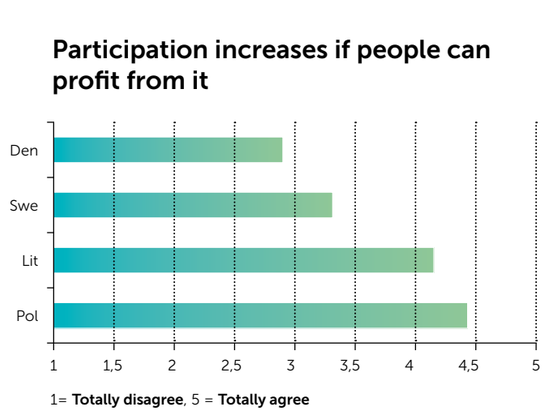


Figure 10. *Shows how respondents in the four countries replied to a statement on the "expert role" in the decision making process. Numbers on x-axis are mean values. Respondents in Denmark, Lithuania and Poland agreed that experts should decide about management and preservation in the areas. Sweden only agreed to some extent.*

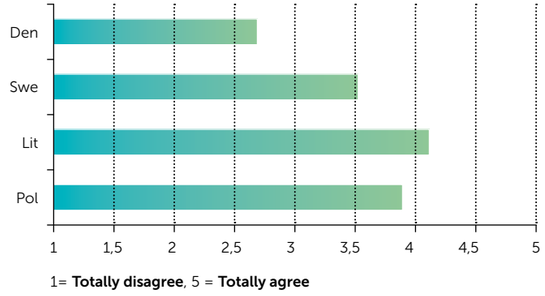
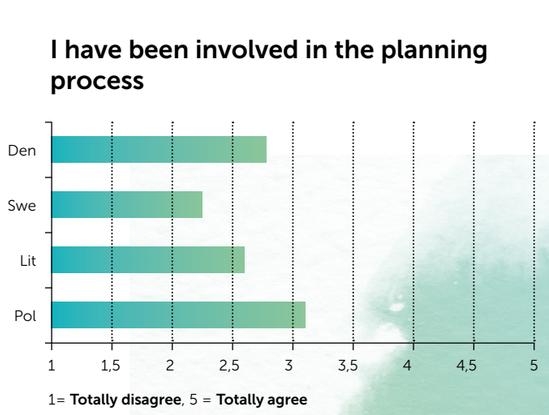


Figure 11w. *Shows level of involvement in the planning process in all four countries. Overall, respondents have not been very involved, least involved were respondents in Sweden. Numbers on x-axis are mean values.*



Women (in all countries combined) agreed to a higher degree than men that participation increases if people can profit from it. Women also agreed to a higher extent than men that experts should decide about the use of the area and what to preserve. People with elementary school and secondary school (in all countries combined) agreed to a higher extent than people with university education to the statement: People living in the area should decide about the use of the area and what to preserve. All the issues concerning participation in the planning process were more important to people living within the area than for those living outside the area (in all countries combined).

Strategies for public participation

As a complement to the question on participation, we asked which measures would increase public participation in the pilot areas. Respondents were asked to reply to 18 statements, see Table 15 ▾ below.

Poland and Lithuania agreed to a higher extent to all of the strategies mentioned in Table 15 ▾ than Sweden and Denmark. The countries agreed that Nature guidance in schools was a good strategy. Large informative meetings were less important compared to meetings in small groups (all countries combined). All countries also agreed to a high extent to education being an important strategy.

Factor analyses were made in order to find out which of the 18 statements on important actions for increasing public participation in the planning process that were connected. The factor analysis resulted in three factors (see Table 16 ▸).

Table 15. *"The following actions increase public participation in decision-making and planning". All statements used in the question are shown. R =rank, Italic numbers = lowest rankings, bold numbers = top rankings. M = mean value. Rankings are based on mean values.*

Statements	R Total	M Total	R Pol	R Lit	R Swe	R Den
Nature guidance in school	1	4.54	**2**	**3**	**1**	**3**
Information in schools about flowers and birds	2	4.51	**1**	9	**1**	**2**
Explanation on how different activities impact nature	3	4.50	**5**	**4**	**3**	**1**
Websites with information about the area	4	4.45	**3**	**2**	6	7
More cooperation with local people	5	4.45	8	6	**5**	**4**
More education about the area	6	4.44	**5**	**5**	**4**	8
Local press coverage	7	4.37	**4**	7	8	*14*
Communication through all stages of the planning process	8	4.35	10	13	7	**5**
Free excursions for local people /Guided tours	9	4.34	11	**1**	12	11
Information signs within the area	10	4.30	*14*	8	10	12
Local authorities could collect and document ideas among people	10	4.30	11	*14*	8	6
Information folders to the public	12	4.28	7	*15*	*14*	9
To be involved in the very beginning of the planning process	13	4.19	13	*18*	12	10
Information about the area on local TV	14	4.17	*16*	11	*16*	*14*
Meetings in small groups arranged by local authorities	15	4.14	8	*15*	11	*15*
An office to visit to get and/or give information	16	4.10	*15*	10	*17*	*18*
A working/activity day in the area	17	4.06	*18*	12	*15*	*16*
Large informative meetings arranged by local authorities	18	3.92	*17*	*17*	*18*	*17*

Table 16. *Results of factor analysis. Three factors are presented (with included items/values).*

Factor 1 Information	Factor 2 Dialogue	Factor 3 Education
• Local TV • Information signs • Web sites • Local press • Information brochures • Large information meetings • Explain how activities affect nature • An office to visit	• Meetings in small groups • Collecting ideas • Communication through the whole process • Activity day • Involved from the beginning	• Nature guidance at schools • Information in schools

Factor 3 (Education) was the most important factor in all four countries but significantly more important in Poland. Factor 1 (Information) and 2 (Dialogue) were considered more important for increasing public participation in decision making in Poland and Lithuania than in Sweden and Denmark.

Women agreed to a higher extent than men that factor 1 (Information) and 2 (Dialogue) were important strategies for increasing public participation in the planning process (all countries combined).

People with elementary school and secondary school education agreed that factor 1 (Information) was important for increasing public participation in the planning process to a higher extent than those with university education.

Nature guidance, Zemaitija, Lithuania.

Information sign, Vombs meadows, Sweden. Photo: Marianne Henningsson

Result discussion and concluding comments

The study began with focus group interviews in all four countries and the results of these interviews were used to construct the questionnaire items. The questionnaire included five main questions concerning landscape values, participation in the planning process and development of the pilot areas. The content of the questionnaire was developed by the researchers within the LIFEscape project. Response rates were higher in Poland and Lithuania than in Sweden and Denmark. This may be be explained by several reasons. One explanation could be that in Poland and Lithuania, the questionnaire was distributed personally ("face-to-face") and this tends to increase response rate compared to distributing the questionnaire digitally (via email) or via regular mail. Another reason could be differences in target groups and how they relate to the area. In Poland, most of the respondents were living within the area, perhaps having a more personal relationship to it. This can make people more inclined to answer questions regarding the area. In Sweden, many of the respondents were randomly selected, living mainly outside the area (which could mean that they had less direct or personal relationship to the area), and this may partially explain the low response rates. Small gifts or other forms of compensations to the respondents for participating. Could be valuable if the respondents feel that their replies are valued, they might also be more inspired to answer.

All countries agreed that the pilot areas were important because they were perceived as beautiful. Values like open water and meadows were also important to the respondents in all countries. This is in line with previous research on landscape preferences[17]. Social and personal values such as feelings of relaxation and calmness, feeling good, feelings of being a part of nature were higher prioritized in Poland than in the other countries, maybe because of the fact that almost all of the respondents in Poland lived within the pilot area and thus having a more intimate and "everyday" relationship to it. In Sweden, nature values were overall ranked higher than in the other countries and the reason for this could be that several of respondents were municipal

Embracing an old oak tree. Tolkmicko, Poland. Photo: Marianne Henningsson

officials and politicians (37 % together) working with planning and development of nature areas and therefore were highly aware of the importance of the natural values existing within the pilot area. Another explanation could be that several of the respondents, due to their identity as politicians and officials, had a more professional relationship to the area and therefore were more inclined to prioritize tangible values (i.e. natural values such as biodiversity), while intangible values (feelings of calmness, being part of nature and so on) are more connected to an emotional relationship to landscapes[18].

The countries had different views on which values were important to preserve and protect, though all countries ranked the protection of flora and vegetation very high, while Poland ranked protection of quietness and peacefulness highest. Sweden ranked protection of the wetlands highest and Denmark the preservation of wild animals. The protection of other social and cultural values such as old buildings and monuments were ranked higher in Poland and Lithuania than in Denmark and Sweden and this could be explained by the characteristics of the different pilot areas. In Poland and Lithuania, the pilot areas consist of many old

[17] See for example Kaplan & Kaplan 1985, 1989
[18] Kaplan & Kaplan 1985, 1989, Adevi 2012

Sheep grazing the fields of Trelleborg, Slagelse, Denmark. Photo: Marianne Henningsson

buildings and monuments and are more culturally characterized than the Danish and Swedish pilot areas that are more naturally characterized. When people are living in the pilot area (as many of the Polish respondents did), cultural aspects become more important[19]. Again, the characteristics and historical use of an area could influence which values are perceived as more important to protect and preserve and which values are perceived as less important to preserve. Also, when people have a personal relationship to an area, it is more likely that they want to protect or preserve more values than if they have a more professional, "non-emotional", relationship to an area (where you often have to make weigh-offs between different values). Property owners (in all countries combined) ranked the protection of natural values (e.g. wetlands, birdlife, wild animals) and user values (farming, grazing animals) higher than other groups.

The respondents replied to the question on what they would like to see be developed in the pilot areas. The four countries agreed that the development of more quiet areas and restoration of natural values (e.g. species, habitats) were very important, although respondents in Poland and Lithuania agreed to a higher extent. Respondents in Poland agreed to a higher degree than in the other countries that development for nature (such as more wild animals, more nature conservation, more quiet areas), development for general use (e.g. more visitors, better accessibility) and development cleaning up more for individual use (e.g. reconstruction of buildings, better roads, paths for riding) were important. An explanation to this could be that there is an immediate need for development of all above mentioned values in Poland compared to the other countries (i.e. more needs to be done).

[19] Hanley et al. 2009

People with lower education (in all countries combined) agreed to a higher degree than people with university education that the development cleaning up more for individual use (e.g. reconstruction of buildings, better roads, possibilities for recreation, better cooperation) and for general use (e.g. more visitors, accessibility) was important. People living inside the areas (in all countries combined) also prioritized development for individual use and for general use higher compared to people living outside the areas. People who live inside the areas use the landscape on a daily basis (the landscape is an "everyday landscape") and this maybe explain why development having a direct and concrete effect on the individual (such as e.g. reconstruction of buildings, better roads, paths for riding) was more important. Long-term, indirect development is perhaps more diffuse and thought of as less urgent.

Accessible landscapes. Field trip in Tude river valley, Denmark. Photo: Marianne Henningsson

When it comes to participation in the planning process of pilot areas, respondents in Poland reported to a higher extent the importance of involving people living in or close to the area. Most of the respondents in all countries had been relatively little involved in the process, but they would like to be more involved (however, respondents in Sweden ranked future involvement lower than the other countries). Participants from Poland responded positively to all of the participation statements (more than the other countries). One explanation could be that there is a need for a more clear structure on how to involve people in planning, compared to the other countries, but this is a quite complex matter which has to do with both social and cultural structures in the different countries and regions. Hierarchies in the planning and decision making processes, where "experts" are given an advantage and "non-experts" (e.g. local inhabitants, NGO-members) are marginalized, need to be diminished in accordance with the European Landscape Convention. This work has (due to different cultural and social traditions) been more or less successful in the four project countries and each country has its own obstacles to handle. It is therefore important to consider which actions the respondents thought were important for increasing public participation in decision making and planning. The countries agreed that educational measures were very important. All actions that were presented in the question (and that the respondents were asked to reply to) were perceived as more important in Poland and in Lithuania than in Sweden and Denmark and this could be explained by a larger need for actions.

People with lower education (in all countries combined) were more positive towards information actions (e.g. information signs, media coverage etc.) than people with higher education. Education and dialogue are strategies on long term while information could raise an interest and inspire people to learn more. In order to raise awareness and increase public participation, there is a need for information and education in an early stage of the planning process. Information could be adjusted and directed to different stakeholder groups. Finally, people living in the area (in all countries combined) were more positive to all suggested actions than people living outside the areas, probably due to a more personal connection to the area.

Concluding comments

The aim of this study was to identify important values to preserve and develop in the four pilot areas but also to find out how people in the four countries relate to public participation in general and in the specific pilot areas.

The results of the study were in agreement with previous research, showing that people do have general preferences in the landscape but the perception of landscapes is very much related to people's relationship to it. In this study we could see that people living in or close to the areas probably were more emotionally connected and thus prioritizing values that relates more to social and cultural aspects and to values that are intangible and difficult to point out (such as feelings of calmness and peacefulness, feelings of being one with nature and other recreational values). These values often represent peoples "everyday landscapes" and such values are not always recognized in the management and planning of landscapes (this is an aspect that is underlined in the ELC[20]). This study may help to pin point some of the perceived values among South Baltic inhabitants and perhaps give inspiration for future management and development in the four pilot areas but also in the South Baltic area.

Table 17. *Shows how this study falls within the different approaches in research on landscape perception. A combination of qualitative methods (focus group interviews) and quantitative (questionnaire) falls under the socio-cultural approach where landscape perception is explained not only by psychological aspects but also social and cultural aspects, such as cultural and social identity and political and administrative structures. Based on Zube et al.[20].*

	Approach				
	Expert (aesthetic or ecological)	Psychophysical	Cognitive	Socio-cultural	Experiental
Human perspective	Passive (looking at the landscape) →			←	Active (identity)
Landscape	Dimensional →			←	Holistic

The use of focus group interviews at an early stage in the study was important for two reasons: firstly, it provided us with key words and key terms that were later on used to construct the questionnaire questions. Secondly the focus groups helped to create an interest among people both for the survey but also for the LIFEscape project as a whole. Using combined qualitative and quantitative methods for mapping landscape values is in line with e.g. Zube's et al.[21] recommendations and conveys a more socio-cultural approach to landscape preferences.

All respondents in this study replied high to most of the questions on landscape values, development and public participation, i.e. there was an overall large interest in the pilot areas and in the ongoing management and planning work in the areas. This study shows that the differences in landscape perceptions between the four countries were not very large. All four countries valued the aesthetic values high in their pilot areas and they also agreed that restoration of natural values and more quiet areas were important for future development. Another similarity was their priority of education as an important strategy to raise awareness and to increase participation. The largest differences were found between Poland/Lithuania on the one hand and Sweden/Denmark on the other. More focus were put on social and cultural values in Poland and Lithuania than i Sweden and Denmark. However – the differences in culture both in terms of nature conservation and landscape management should be considered. The gap between "experts" and "non-experts" must be overlapped by making "ordinary people" aware of the importance of involving their opinions in the planning process. When people are given opportunities to affect or influence their landscapes they are also more motivated to participate[22].

Finally, working with landscapes is not an easy task with simple solutions. The ELC definition of a landscape points at a complexity and all work related to landscapes are equally complex. This study is only a piece of the puzzle in finding sustainable and concrete measures of landscape planning and management in the South Baltic region.

[20] Council of Europe 2000 chapter 1
[21] Zube et al 1983.
[22] Handbook on Participative Planning, LifeScape (www.lifescape.eu)

References

Adevi, A. 2012. *Supportive Nature and Stress – Wellbeing in connection to our inner and outer landscape.* Doctoral Thesis, Swedish University of Agricultural Sciences. SLU Repro, Alnarp.

Arciniegas, G., Janssen, R. 2012. "Spatial decision support for collaborative land use planning workshops". *Landscape and Urban Planning*, 107, 3:332-342.

Arciniegas, G., Janssen, R., Rietveld. 2013. "Effectiveness of collaborative map-based decision support tools: Results of an experiment". *Environmental Modelling and Software*, 39:159-175.

Balling, J.D. & Falk, J.H. 1982. "Development of visual preference for natural environments". *Environmental Behavior* 14:5-28.

Berggren-Bärring, A.M., Grahn, P. 1995. *Grönstrukturens betydelse för användningen*. Alnarp, Ultuna: Sveriges Lantbruksuniversitet, Institutionen för landskapsplanering, Rapport 95:3 (In Swedish).

Bourassa, S.C. 1990. "A paradigm for landscape aesthetics". *Environmental Behavior* 22:787-812.

Cosgrove, D. 1998. *Social Formation and the Symbolic Landscape, 2nd edition.* University of Wisconsin Press, Madison.

Council of Europe 2000. *European Landscape Convention Article 1. European Treaty Series, No 176.* http://www.conventions.coe.int, 2011-05-15.

Dietz, T., Stern, P. (eds.) 2008. *Public participation in environmental assessment and decision making / Panel on Public Participation in Environmental Assessment and Decision Making.* Committee on the Human Dimensions of Global Change, Division of Behavioral and Social Sciences and Education. The National Academies Press, Washington, DC.

Dovey, K. 1985. "The concept of home". In: I. Altman & C. Werner (eds.), *Home Environments. Human behavior and environment: Advances in theory and research*, 8: 115-137. Plenum Press, New York.

Gibson, J.J. 1977. "The Theory of Affordances" In: R.E. Shaw & J. Bransford (eds), *Perceiving, Acting and Knowing.* Lawrence Erlbaum Associations, Hillsdale, NJ.

Gonzalez-Bernandez, F., Parra, F. 1979. "Dimensions of landscape preferences from pairwise comparisons". In: Elsner, G.H., & Smardon, R.D. (red) *Our National Landscape.* General Technical Report PSW-35. USDA Forest Service, Berkeley, CA, USA.

Grahn, P. 2005. "Om trädgårdsterapi och terapeutiska trädgårdar". In: Johansson & M., Küller, M. (eds). *Svensk miljöpsykologi.* Studentlitteratur, Lund. (In Swedish).

Grahn, P., Stigsdotter U., A-M Berggren Bärring 2005. A planning tool for designing sustainable and healthy cities. The importance of experienced characteristics in urban green open spaces for people's health and well-being. In: *Quality and significance of green urban spaces.* Conference proceedings, April 14-15, 2005, 29-38. Van Hall Larenstein, Velp, The Netherlands.

Hanley, N., Ready, R., Colombo, S., Watson, F., Stewart, M., Bergmann, E.A. 2009. The impacts of knowledge of the past on preferences for future landscape change, *Journal of Environmental Management* 90:1404–1412.

Hartig, T. 1993. "Nature experience in transactional perspective" *Landscape and Urban Planning* 25:17-36.

Hertzog, T.R. 1985. "A cognitive analysis of preference for waterscapes". *Journal of Environmental Psychology* 5:225-241.

Hertzog, T.R. 1987. "A cognitive analysis of preference for natural environments: Mountains, canyons and deserts". *Landscape Journal* 6:140-152.

Kaplan, R., Kaplan, S. 1982. *Cognition and Environment: Functioning in an Uncertain World.* Praeger, New York.

Kaplan, R., Kaplan, S., 1989. *The Experience of Nature.* University Press, Cambridge.

Lyons, E. 1983. "Demographic correlates of landscape preference". *Environmental Behavior* 15:487-511.

Naess, A. 1989. *Ecology, community and lifestyle.* Cambridge University Press, Cambridge.

Neisser, U. 1991. "Two perceptually given aspects of the self and their environment". *Developmental Review*, 11, 3:197-209.

Olwig, K.R.2002. *Landscape, nature, and the body politic: from Britain's renaissance to America's new world.* University of Wisconsin Press, Madison.

Purcell, A.T., Lamb, R.J. 1984. "Landscape perception: an examination and empirical investigation of two central issues in the area". *Journal of Environmental Management* 19:31-63.

Sporrong, U. 1996. Studier till kultur-miljöprogram i Sverige. Riksantikvarieambetet, Stockholm. (In Swedish).

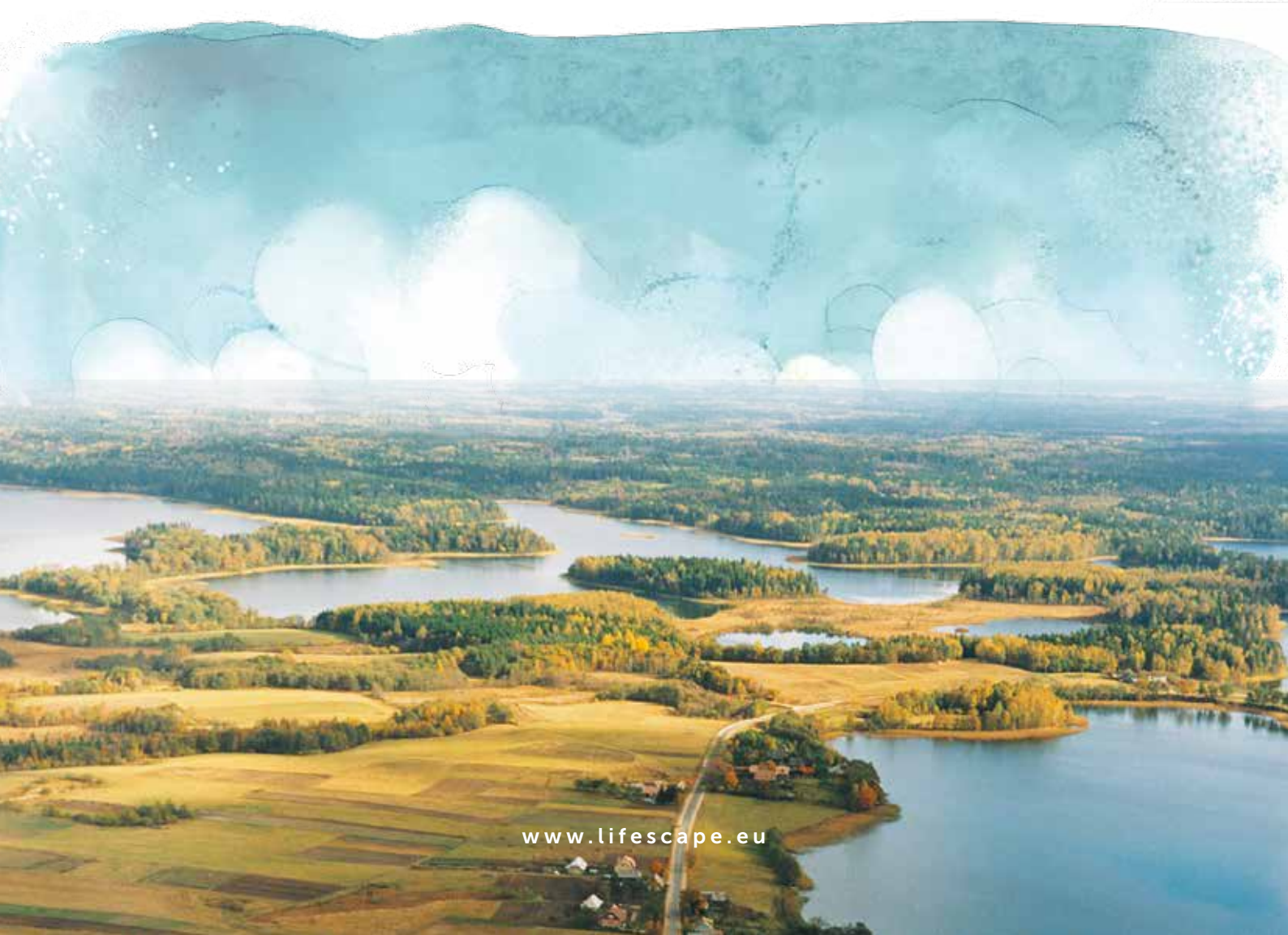
Uzzell, D. 1991. Environmental psychological perspectives on landscape. *Landscape Research* 16, 1:3-10.

Van den Berg, A.E., Vlek, C.A.J., Coeterier, J.F. 1998. "Group differences in the aesthetic evaluation of nature development plans: a multilevel approach". *Journal of Environmental Psychology* 18:141-157.

Yu, K. 1995. "Cultural variations in landscape preference: comparisons among Chinese sub-groups and Western design experts". *Landscape and Urban Planning* 32:107-126.

Zube, E.H., Pitt, D.G., Evans, G.W. 1983. "A lifespan developmental studie of landscape assessment". *Journal of Environmental Psychology* 3:115-128.

notes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