

# DELIVERABLE D.T1.4.1

## TRAINING MATERIAL AND OUTCOMES OF SEMINARS ON ECOSYSTEM SERVICES AND CITIZENS INVOLVEMENT

Version 1  
10.2017

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REPUBLIKA SLOVENIJA  
MINISTRSTVO ZA OKOLJE IN PROSTOR



MESTNA OBČINA KRANJ



## A. Table of content

<b>A. Table of content</b>	<b>1</b>
<b>B. Context</b>	<b>2</b>
<b>C. Training Material on Ecosystem Services- Bratislava 20.03.2017</b>	<b>3</b>
<b>C.1 ADVICE TO THE TEACHER</b>	<b>3</b>
<b>C.2 TARGET GROUPS</b>	<b>3</b>
<b>C.3 TASKS FOR SELF-STUDY OF THE TRAINERS</b>	<b>4</b>
<b>C.4 METHODOLOGY OF THE TRAINING</b>	<b>5</b>
Training Objectives	5
Training Materials	5
Training Format	5
Training Methods	5
Logistics	5
Ecosystem services as the conceptual basis of sustainable FUAs` integrated environment management process	9
<b>D. Training Material on Interactive tool for citizen involvement – InVito - Torino 25.09.2017</b>	<b>14</b>
<b>D.1 ADVICE TO THE TEACHER</b>	<b>14</b>
<b>D.2 TARGET GROUPS</b>	<b>14</b>
<b>D.3 TASKS FOR SELF-STUDY OF THE TRAINERS</b>	<b>15</b>
<b>D.4 METHODOLOGY OF THE TRAINING</b>	<b>16</b>
Training Objectives	16
Main task of the training activity is the involvement of citizens and different target groups in the development of spatial reasoning and public awareness.	16
Training Materials	16
Training Format	16
Training Methods	16
Logistics	16
Concepts	17
<b>E. Bibliographic references</b>	<b>23</b>



## B. Context

In the current period training sessions on Ecosystem Services and Citizens involvement took place, during the project meeting in Bratislava 20.03.2017 and Torino 25.09.2017. The first training has been prepared by prof Maros Finka (STUBA), it was dedicated to the Ecosystem Services, the second one has been prepared by Elena Masala and Matteo Tabasso (SiTI). These two internal trainings for project partners were prepared in order to discuss the key issues of the topics as a basis for local trainings in the partner countries planned for professionals of environmental management and land use planning.

The aim of these internal trainings was to obtain the knowledge which is needed to prepare and organise local training sessions.

Based on the internal trainings the training material and outcomes of seminar will be produced. The training materials will be translated into 6 national languages (CZ, DE, IT, PL, SI, SK) and provided to the participants of the local trainings for professionals in the field of integrated environmental management.



## C.Training Material on Ecosystem Services- Bratislava 20.03.2017

### TEACHING MODULE 1 - ECOSYSTEM SERVICES

#### INTERACTIVE WORKSHOP

#### C.1 ADVICE TO THE TEACHER

This teaching/training activity proposal offers an alternative training mode suitable for highly skilled professionals, planners, decision makers. The goal is to improve their awareness and knowledge about the ecosystem services concept and possibility of its efficient use as one of the core concepts for comprehensive development management in FUAs.

Before you attempt to study or to deliver this module, please make sure that you understand the entire project LUMAT. For delivering this Module effectively and retaining your target groups' interest you need to include, where ever you can, local examples of good or bad practice. Use also your specific professional knowledge to illustrate the points and findings arising from these presentations. You can also contact the author of this module and ask for a consultation on [maros.finka@stuba.sk](mailto:maros.finka@stuba.sk)

#### C.2 TARGET GROUPS

This module is formulated to address the highly skilled planners, managers and representatives of the key stakeholders groups involved in the development of the Action plans supporting sustainable development of functional urban areas. The use of the teaching material for broader public requires its adaptation.

Target groups	Description of target groups
Local public authority	Representatives of municipalities and inter-municipal organisations in the selected FUA responsible for economic environmental and spatial development.
Regional public authority	Representatives of regional councils or planning bodies where the project functional urban areas are located and of other regions of similar problems.
Sectoral agency	Environment Agencies, Agriculture Agencies, Local Development Agencies.
Higher education and research	Representatives of urban planning and environmental protection departments in universities



Infrastructure and (public) service provider	Departments for traffic networks in FUA including bicycle and walking routes, waterways. Service providers from urban and landscape architecture.
SME	Local farmers, land owners, construction companies, local food co-operatives, leisure and tourism service provider.
Business support organisation	Chamber of Commerce and Agriculture, Technological and Industrial Parks, Revitalization Clusters.
General public	Inhabitants of functional urban areas, local community associations, future users of new peri-urban (green infrastructures).

## C.3 TASKS FOR SELF-STUDY OF THE TRAINERS

To improve the teachers` preparation it is recommended to complete the content with national specific issues and frame conditions.

For the self study we recommend the following:

- The LUMAT project`s deliverables especially the strategic materials
- The materials deepening the knowledge about the concept of ecosystem services
- The materials deepening the knowledge about multiactors decision making
- The materials dealing with the assessment of ecosystem services with special focus on urban ecosystems
- The materials dealing with urban landscape quality aspects and quality of life aspects
- Formal and informal instruments in respective planning culture used for optimization of ecosystem services performance
- National specific materials on ecosystem services

These are some other tasks we recommend you undertake:

- Discuss with others the awareness on ecosystem services issues within professional planners` community
- Discuss with others the context of ecosystem services concept`s issues under specific local conditions
- Discuss with others what are the main political and methodological approaches in the field of FUA management
- Survey the available books, WebPages, articles, concerning the best practice in the brownfield regeneration planning
- Discuss with others and write down the lessons what to do and what not to do that you learned while researching the case studies



## C.4 METHODOLOGY OF THE TRAINING

### Training Objectives

Improvement of the abilities of the target group to use the concept of ecosystem services as the leading concept in the environmental management of the FUAs.

### Training Materials

- The Powerpoint presentation with the main ideas to the topic
- The text Ecosystem services as the conceptual basis of sustainable FUAs` integrated environment management process

### Training Format



Interactive workshop

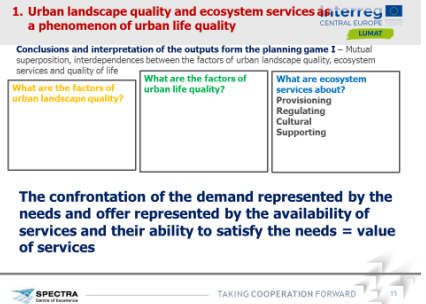
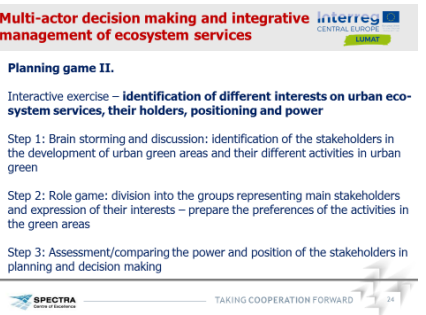
### Training Methods

- Reading written texts
- Brainstorming
- Silent decision making
- Critical discussion
- Team work on idea development
- Explanatory interpretation exercise

### Logistics

- Max capacity 21 trainees
- Trainers 1 leading + 2 assistants
- Room with min 3 tables and 25 chairs free movable
- Wall board
- Sheets of paper 5x5 cm colored 300 pcs, with glue
- With board or flipcharts, markers 3 colors
- Time slot 3 x 50 minutes

Activity	Basic content of the activity	Comment for the teacher
	 <p> <b>Topic: ECOSYSTEM SERVICES</b>            Coauthors: Maros Finka            Institutions: SPECTRA Centre of Excellence EU, STU Bratislava, Slovakia         </p>	<p>Introducing the project, the people involved and the trainer is the first step for including people in the project.</p> <p>This should be immediately followed by asking people to present him/herself providing a short description of the reason why he/she is present to the event.</p>
1.	Reading written texts	<p>The participants obtain the text, which they have to read. The text in national language is explanatory and provides basic information about the ecosystem serves as the leading concept for integrative FUA environmental management.</p> <p>The proposal for the text elaborated as a part of LUMAT project is as annex of this material, but the trainers can use another texts.</p>
2.	Discussing the written texts, explanation in reaction to the question	<p>The trainer starts the discussion with the understanding question and two/ three questions for all participants</p> <p>What do you think, can the knowledge about concept of ecosystem services influence your own work/ decision making</p> <p>What the ecosystem concept can improve the common approaches to the territorial development with</p> <p>Each participants have 5 minuts to write the answers to the sheets</p>
3	Summarisation	<p>The trainer in interaction with the trainees makes an overview about the answers structuralizing them into the groups of similar or linked answers</p>
4	Planning game 1. Urban landscape quality and ecosystem services as a phenomenon of urban life quality 	<p>The teacher has to prepare the planning game in advance. The colored small sheets of paper are necessary as well as markers for writing.</p> <p>The teacher has to divide auditorium into the groups and explain their tasks individually. The assistance of assistants would be welcomed in order to save time. After 10 minutes of writing the ideas the teacher stops the first phase. All sheets with the ideas are at the table and the second phase starts - silent decision making. The teacher explains to the whole auditorium the principles of silent decision making and technicalities of the procedure. After two runs inside of the group, the groups can change.</p>

5.	<p>Planning game 1. Urban landscape quality and ecosystem services as a phenomenon of urban life quality - outputs form the game</p> 	<p>The teacher is collecting the outputs form the groups incl. the defined priorities. The outputs are displayed at the table. The teacher demonstrates the comparison between the outputs form all 3 groups showing the overlapping and parallels.</p>
6.	<p>Planning game 2.</p> <p>Multi-actor decision making and integrative management of ecosystem services</p> 	<p>The teacher is using this game for showing different modes of actors` behaviour and possible harmonisation of the interests across the whole scale of stakeholders. The game supposes to distribute the roles in the auditorium with prepared description of the roles they have to play in the game. Each role is characterised with formulated positions and demands.</p> <p>The model situation for the decision making is described by a map and several sentences. The best model situation is linked to the city, all of participants know and a plan to invest on certain plot.</p> <p>The roles are e.g. journalist, owner of the plot, citizen, eco-activist, investor, representatives of the self-government, and representative of the opposition in the city parliament, representative of the sport and cyclist initiative, and planner. The role of planner is to moderate the discussion and to argue against not objective or extremistic requirements.</p> <p>After the game, the teacher is comparing the outputs form the game of different groups. Although the descriptions of the role are identic as well as the composition of the players, the results form interactive decision making are different from group to group as the personalities and personal abilities to argue are different.</p>
7	<p>Multi-actor decision making and integrative management of ecosystem services as the challenge for changes in/of planning systems</p>	<p>The teacher is interpreting and commenting the outputs form the planning game stressing the role of the planners in the process of the game.</p> <p>In the same time the teacher is addressing the territorial governance, mainly understood as “the manner in which territories of a national state are administered and policies implemented with particular reference to the distribution of roles and responsibilities among the different levels of government (supranational, national and sub-national) and</p>



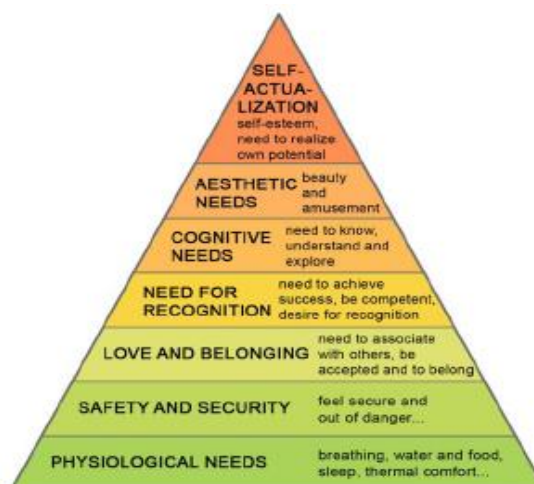
	<p><b>Multi-actor decision making and integrative management of ecosystem services as the challenge for the changes in planning systems</b></p> <p>CONCLUSIONS AND INTERPRETATION OF THE OUTPUTS FROM THE GAME II.</p> <p>NEW UNDERSTANDING OF PLANNING AND ROLE OF PLANNERS IN URBAN LANDSCAPE MANAGEMENT REFLECTING THE SPECIFICS OF COMMON GOODS' MANAGEMENT</p> <p>NEW PARADIGM IN PLANNING</p> <p>SUBSTANTIAL CHANGES IN PLANNING</p> <p>PROCESSUAL CHANGES IN PLANNING</p> <p> TAKING COOPERATION FORWARD </p>	<p>the underlying processes of negotiation and consensus building" (COM 2007).</p> <p>The practice of European spatial development management is experiencing the movement from traditional model of hierarchical territorial government, connected closely to the very sensitive issue of territorial sovereignty across different levels of territorial units (local, regional), to the system of governance where the power is shared and split among a variety of stakeholders creating overlapping vertical and horizontal co-operation patterns between governmental and non-governmental public and private structures across various levels of decision making. This natural process is driven by the development of new types of spatial structures not only overstepping the borders of administrative units like national states, counties or municipalities, but representing new qualities - increased permeability of territorial borders and openness for new spatial organization of human activities and the self-organizational mechanisms. The FUAs belong to such spatial structures including the territory of several municipalities but only seldom creating institutionalised territorial unit with adequate governmental or self-governmental bodies.</p> <p>This, together with other current challenges requires to look for new paradigm in planning bringing changes in the substantial and processual aspects of planning and of the role of planners.</p>
8	<p><b>Web references</b></p> <p><b>WEB REFERENCES</b></p> <ul style="list-style-type: none"> <li>■ The Economics of Ecosystems and Biodiversity (TEEB) <a href="http://www.teebweb.org">www.teebweb.org</a></li> <li>■ UK National Ecosystem Assessment <a href="http://www.uknea.unep-wcmc.org">www.uknea.unep-wcmc.org</a></li> </ul> <p>Reports</p> <ul style="list-style-type: none"> <li>■ 'An Introductory guide to valuing ecosystem services' <a href="http://www.defra.gov.uk">www.defra.gov.uk</a></li> <li>■ 'Delivering a healthy natural environment' <a href="http://www.defra.gov.uk">www.defra.gov.uk</a></li> <li>■ 'No charge? Valuing the natural environment' <a href="http://www.naturalengland.org.uk">www.naturalengland.org.uk</a></li> </ul> <p> TAKING COOPERATION FORWARD </p>	
9	<p></p> <p><b>THANK YOU, ENJOY THE DAY! YOU ARE WELCOMED TO JOIN US AT WWW.INTERREG-CENTRAL.EU/CONTENT.NODE/LUMAT.HTML FACEBOOK / LUMAT PROJECT INKED IN / LUMAT.INTERREG TWITTER / @LUMAT_PROJECT</b></p> <p> TAKING COOPERATION FORWARD </p>	<p>The teacher should change the final slide by</p> <ul style="list-style-type: none"> <li>- adding the link to national web of the project</li> <li>- replacing the picture by the picture from the model area</li> <li>- adding own logo to the logo of SPECTRA in the bottom of the slide</li> </ul>

## Ecosystem services as the conceptual basis of sustainable FUAs` integrated environment management process

The concept of ecosystem services is seen by the LUMAT project as the conceptual basis for integrated environmental management including the land and soil management. As an attempt to express the benefits from eco-systems for human wellbeing by economic means it offers a common denominator for the harmonization of different interests in the urban/peri-urban areas and threats based on the dichotomy between core and periphery as well as seeming dichotomy between economic and social on one hand and environmental development on the other hand. In the past, environmental dimension in the decision making in spatial development management was represented by issues as mitigating the impact of development activities or establishing areas to protect wildlife and cultural landscape.

**Ecosystems** are rather complex dynamic functional units consisting of all plants and animals (biodiversity) in an area, together with the non-living, physical components of the environment (water, soil and air) with which they interact. The cities and FUAs represent the socio-ecosystems as they include ecosystem and man as a social being.

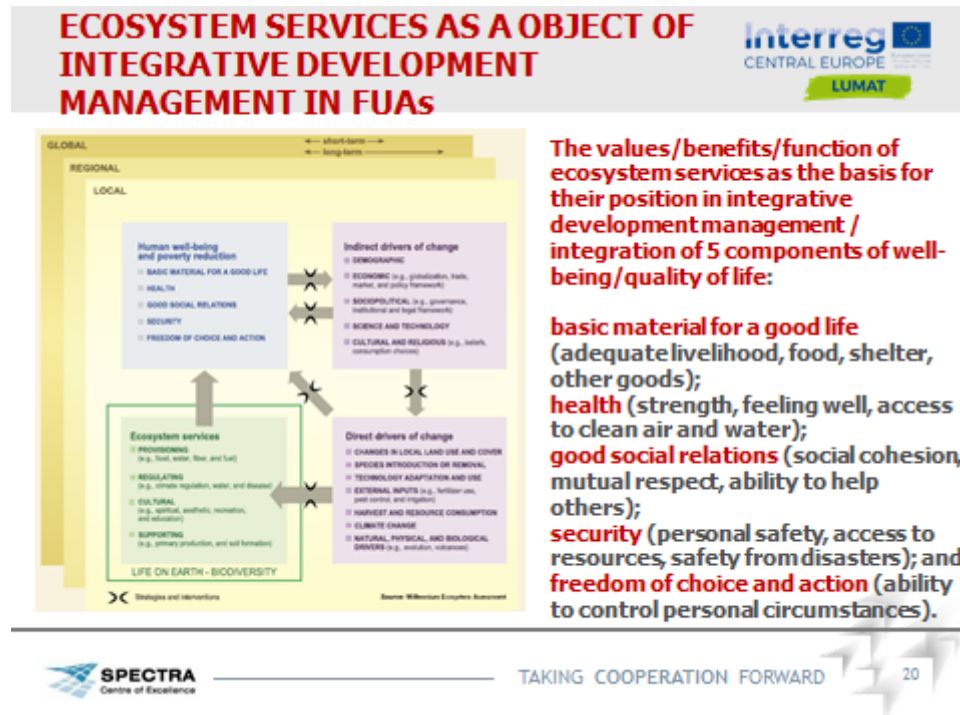
**ECOSYSTEM SERVICES** are the services provided by the natural environment which benefit people addressing their well-being, satisfying their needs **existential security, social and economic prosperity**.



Scheme: Satisfaction of human needs Source: Maslow, A. H. (1943). A Theory of Human Motivation. *Psychological Review*, 50(4), 370-96.

The confrontation of the demand represented by the needs and the offer represented by the availability of services and their ability to satisfy the needs represents the value of services.

We need to consider not only mitigation and protection within a broader approach, but the fact that the people in their daily lives depend on a range of services that ecosystems provide and our role is not only to protect but to develop them in parallel. These services are fundamental to attaining quality of life of the citizens as main integrative development goal. There is no single way to implement an Ecosystem Services Approach.



Scheme: Ecosystem services as an object of integrative FUA environment management Based on: *Millennium Ecosystem Assessment (2005). Ecosystems and human well-being: synthesis (PDF). Washington, DC: Island Press. ISBN 1-59726-040-1. Retrieved 7 August 2014.*

FUAs represent very complex, dynamic socio-ecological systems of biophysical and social factors defined at several spatial, temporal and organizational hierarchically linked scales. The biophysical factors are represented by ecosystems as rather complex dynamic functional units consisting of all plants and animals (biodiversity) in an area, together with the non-living, physical components of the environment (water, soil and air) with which they interact. The ecosystems are significant with different levels of self-organisational and adaptive abilities. The social factors are represented first of all by social units consisting of citizens, visitors, local economy players, and other subjects of social life in the FUA, their mutual interactions as well as interactions with the subjects of society they are imbedded in.

The main task of integrated FUA environment management is to safeguard that they regularly interact in a resilient, sustainable manner, especially in the context of the presence of critical resources whose flow and use is regulated in the interaction between natural and societal processes.

This concept of the cities and their peri-urban areas as socio-ecological systems is crucial in integrated concept of FUAs sustainable development management as it stress the fact that the delineation between social systems and ecological systems is artificial and arbitrary (Berkes, F., Colding, J., and Folke, C. (2001) Linking Social-Ecological Systems. Cambridge: Cambridge University Press), as they are linked through multi feedback mechanisms and that both display resilience and complexity. The most comprehensive theoretical background is created by Elinor Ostrom's Social-Ecological Systems framework, within which much of the still-evolving theory of common-pool resources and collective self-governance is located (see as well Cumming, G.S. (2011), Spatial Resilience in Social-Ecological Systems, Springer, London). It also draws heavily on systems ecology and complexity theory incorporating ideas from theories relating to the study of sustainability, vulnerability, resilience and robustness, which makes this theoretical framework much more relevant for the common FUAs integrated environment management in the context of challenges resulting from climate change and growing uncertainties in the development of FUAs among other reasons resulting from the growing role of multi-actors of FUAs development and their individual decisions.

For the LUMAT concept of the common FUAs integrated environment management is important the conceptualized knowledge resulting from the research of the teams around Elinor Ostrom that the management processes in such complex systems as cities and FUAs can be improved only by making them adaptive and flexible, able to deal with uncertainty and surprise, and by building capacity to adapt to change.

The object of the FUA integrated environment management are the processes in both - social systems and eco-systems and especially their mutual interaction where the biggest challenge represents the question of harmonisation of different demands of different elements of social systems as well as eco-systems in the confrontation with the limitation of the available resources and preferences in the access to them and function of sustainability.

There is a whole scale of different conceptual frameworks for addressing these tasks of harmonisation of social systems and eco-systems development (e.g. circular economy), but the complexity of the tasks of FUA integrated environment management is not every time properly covered by them, as they mostly use to focus on particular human activities and are not fitting to the complexity of FUA functioning and development processes.

As proper interface between social aspects and ecological aspects of this harmonisation can be understood the concept of the **ecosystem services** - services provided by the natural environment which benefit people. Understanding of the ecosystem services is 'challenging the misconception that we must choose between the natural environment and economic growth' (Natural Environment White Paper Consultation, Sept. 2010).

The ecosystem services reach from providing the products satisfying the basic needs of humans as biological elements - food, clean air, fuel, timber (provisioning ecosystem services) via creating a proper framework for their existence by influencing climate, floods etc. (regulating ecosystem services), safeguarding sustainability of the processes framing the existence of humans - water cycling, soil formation (supporting ecosystem services) up to human needs at the top of Masslow's pyramid - aesthetic and cognitive inputs, health, recreation and tourism (cultural ecosystem services).

The confrontation of the demands represented by the needs and the offer represented by the availability of services and their ability to satisfy the needs define the value of services. In regard to the common FUA integrated environment management the most important questions using the concept of ecosystem services are as follows:

- how much an ecosystem contributes to the society and its economy?
- what are the benefits and costs of an intervention that alters the ecosystem (conservation, restoration, development project, regulation or incentive)
- how are costs and benefits of a change in ecosystem distributed and how to secure justice in this distribution?
- how to compare ecosystem goods and services with other inputs into the economy and other societal processes (e.g. investments)
- how to internalise the ecosystem externalities of economic and non-economic activities
- how to balance the short and long term effects in economy and environment

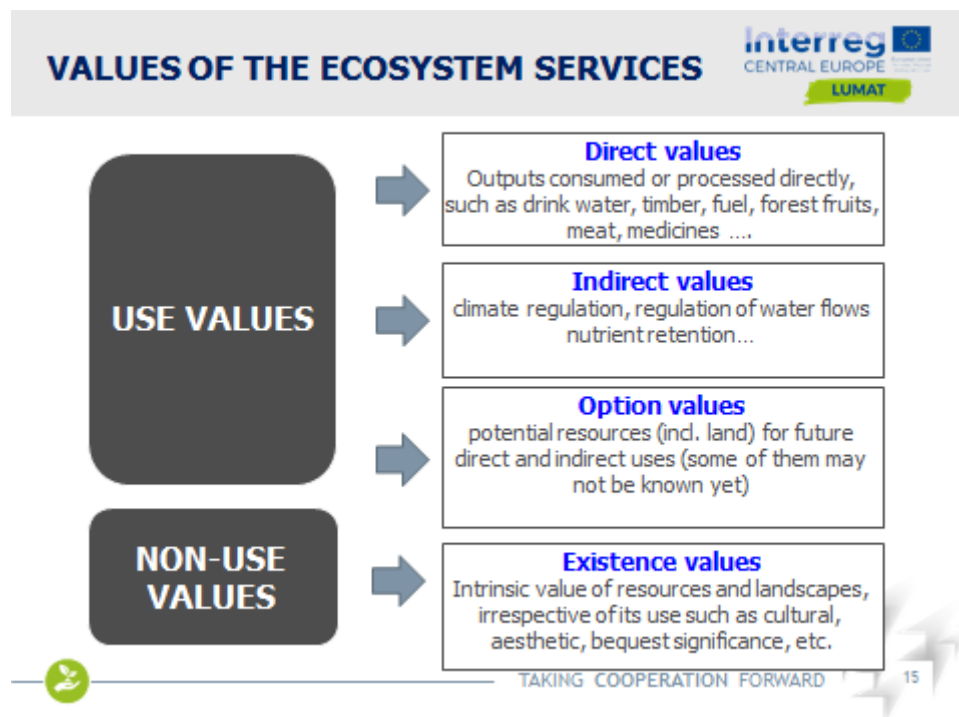
One of the crucial connected questions for FUAs` integrated environment management is the problem of multi-dimensional impacts of landscape fragmentation on ecosystem services which is one of main features especially in urban and peri-urban areas. At this scale one of the main challenges is how to optimise the allocation and management of different land uses and their sprawl and how to minimise the implications for ecosystem services (see Rodriguez, J. P., Beard, T. D., Bennet, E. M., Cumming, G. S., Cork, S. J., Agard, J., et al. (2006). Trade-offs across space, time and ecosystem services. *Ecology and Society*, 11).

In answering the questions above we have to be aware about the limits of the concepts of ecosystem services as it is not easy to put a cash value on nature. On the other hand the use of this concept can support wider understanding and rising awareness about the services provided by nature, their values and with this introduction of innovations in economic valuation addressing the value of ecosystem services.

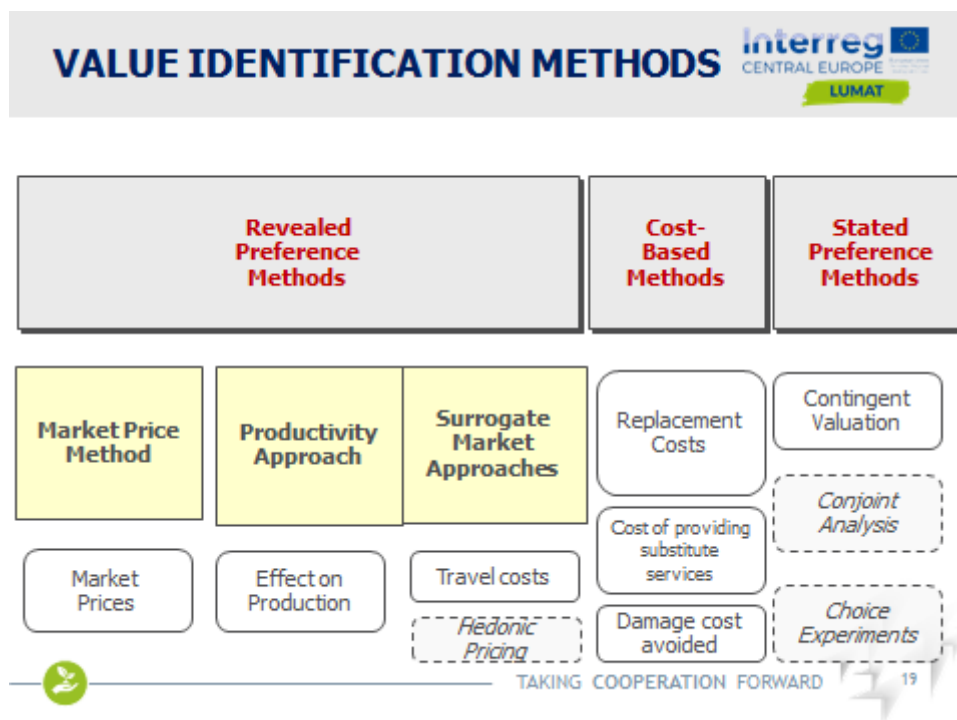
The incorporation of the ecosystem services in the concept of FUA integrated environment management allows to take the value of the natural environment into account in cost-benefit analysis and to solve the problem of the imbalance among beneficiaries and losers.

Understanding the value of the natural environment enables:

- decisions on the land use that do not compromise benefits to society, business and the economy
- decisions on the land use able to balance real costs and benefits and secure the justness of their distribution
- improved delivery of services through better use of the land and linked natural environment
- reduced business risk and increased business opportunity



Scheme: The values of ecosystem services and their identification. Source: Perrot-Maître, D. (2005) Valuing ecosystem services-advantages and disadvantages of existing methodologies and application to PES. Seminar on environmental services and financing for the protection and sustainable use of ecosystems, Geneva, 10-11 October 2005



Scheme: Value identification methods usable for integrated FUA environment management. Source: Perrot-Maître, D. (2005) Valuing ecosystem services-advantages and disadvantages of existing methodologies and application to PES. Seminar on environmental services and financing for the protection and sustainable use of ecosystems, Geneva, 10-11 October 2005





## D.Training Material on Interactive tool for citizen involvement - InVito - Torino 25.09.2017

### TEACHING MODULE 2 - CITIZENS INVOLVEMENT

#### INTERACTIVE WORKSHOP

##### D.1 ADVICE TO THE TEACHER

The training activity on citizens involvement aims at explaining how to use LUMAT interactive tool for involving people with no particular skills in planning or managing FUAs.

The goal is to enhance public discussions and reasoning in order to achieve a common vision of FUA of which every participants is aware.

The tool shown in this module is the Interactive Visualization Tool (InViTo), developed by SiTI under a Creative Commons license.

Before you attempt to study or to deliver this module, please make sure that you understand the entire LUMAT project. Use also your specific professional knowledge to illustrate the points and findings arising from this presentation. For further details, feel free to contact the author of this module by e-mailing to [elena.masala@polito.it](mailto:elena.masala@polito.it)

##### D.2 TARGET GROUPS

This module is formulated to address different target groups, which can include both experts and non-experts as illustrated in the following table (included also in D.C.4.1 and annex IV of the application manual).

Target groups	Description of target groups - see examples in annex IV of the application manual
Local public authority	Representatives of municipalities and inter-municipal organisations in the selected FUA responsible for economic environmental and spatial development.
Regional public authority	Representatives of regional councils or planning bodies where the project functional urban areas are located and of other regions of similar problems.
Sectoral agency	Environment Agencies, Agriculture Agencies, Local Development Agencies.



Higher education and research	Representatives of urban planning and environmental protection departments in universities
Infrastructure and (public) service provider	Departments for traffic networks in FUA including bicycle and walking routes, waterways. Service providers from urban and landscape architecture.
SME	Local farmers, land owners, construction companies, local food co-operatives, leisure and tourism service provider.
Business support organisation	Chamber of Commerce and Agriculture, Technological and Industrial Parks, Revitalization Clusters.
General public	Inhabitants of functional urban areas, local community associations, future users of new peri-urban (green infrastructures).

## D.3 TASKS FOR SELF-STUDY OF THE TRAINERS

In order to better involve citizens in the project, it is highly recommended that teachers have a preparatory activity for getting comfortable with the tool and its outcomes. In particular, trainers should use an InViTo project on local FUA so that involved people can develop reasoning on an already known area. Therefore, trainers are suggested to build an InViTo project on the local case study. This will allow to better know the tool and facilitate the recognition of places and territories by involved audiences.

For the self study we recommend the following:

- LUMAT project`s deliverables (<http://www.interreg-central.eu/Content.Node/LUMAT.html>).
- The InViTo tutorial (see <http://www.urbantoolbox.it/documentation/getting-started/>).

The bibliographic references section at the end of the module provide you some material to deepen knowledge on:

- the concept of citizen involvement;
- the use of visualisation as support to planning and decision-making;
- multi-criteria evaluations as support to decision-making;
- GIS visualisation / WebGIS interfaces.



## D.4 METHODOLOGY OF THE TRAINING

### Training Objectives

Main task of the training activity is the involvement of citizens and different target groups in the development of spatial reasoning and public awareness.

### Training Materials

- The PowerPoint presentation explaining the use of InViTo, the LUMAT tool for the involvement of citizens
- The InViTo tutorial which is also available on line at <http://www.urbantoolbox.it/documentation/getting-started/>
- The InViTo support kit

### Training Format

- Interactive workshop

### Training Methods

- Explanation of InViTo interface
- Explanatory interpretation exercise
- Displaying maps and filtering data
- Brainstorming
- Questioning on risks and opportunities of the area
- What if examples
- Critical discussion
- Team work on idea development
- Use not scientific language

### Logistics

- Capacity 10-20 trainees
- Trainers 1 leading + 2 assistants
- Room with tables and chairs or chairs with writing pad.
- PC and connected projector
- Red, yellow and green pencils
- Internet connection
- Recommended but not mandatory: one pc each trainee

It is highly recommended that teacher translates the presentation into local language so to ensure proper forms of communication.

## Concepts

The involvement of citizens is not a discipline to be studied and re-proposed as something that needs description and explanations, but it is a way to make people collaborate and reaching an objective by means of a pro-active attitude.

Citizens can be involved mainly in three ways:

- Through the personal skills of workshop/meeting moderator in involving people and enhancing the discussion.
- Through an Inter-municipal committee which promotes the initiatives of public involvement by means of official dissemination/communication channels.
- Through decision support tools such as InViTo.

About the individual skills of moderators, few things can be said because not depending on actions.

About the second point, official channels have specific protocols to be respected and depend on local procedures.

About support tools, a detailed description can be shown to illustrates the most suitable actions that can be done by means of tools.

The following slides explain how to illustrate the use of InViTo in order to make people participate in the discussions and achieve specific tasks.

Activity	Basic content of the activity	Comment for the teacher
1		<p>Introducing the project, the people involved and the trainer is the first step for including people in the project.</p> <p>This should be immediately followed by asking people to present him/herself providing a short description of the reason why he/she is present to the event.</p>
2		<p>It is important that the trainer has clear the importance of people awareness in decision-making processes. The involvement of people is a necessary step for making people discuss and produce different visions.</p> <p>The pro-active attitude of the trainer will be crucial in translating the different point of views into a common vision of the case study area.</p>

3	<p><b>TOOLS OF THE TEACHING UNIT</b></p> <p><b>TOOLS</b></p> <p>Inter-municipal structure A structure for the inter-municipal management of land-use issues</p> <p>Interactive Visualization Tool - InViTo WebGIS platform for data sharing and support to decision-making processes</p> <p>TAKING COOPERATION FORWARD</p>	<p>In order to involve people, the trainer has to remember that his/her attitude to be pro-active is essential for enhancing the interest and willingness to participate of people.</p> <p>Second, the trainer should invite inter-municipal committee to promote initiatives of public involvement by means of official dissemination and communication channels.</p> <p>Thirdly, the trainer will show the use of the Interactive Visualisation Tool (InViTo) as decision support tools.</p>
4	<p><b>InViTo</b></p> <p>TAKING COOPERATION FORWARD</p>	<p>The trainer presents InViTo as the tool that will be used to perform analysis and facilitate the discussion about the case study area.</p> <p>InViTo is a WebGIS tool developed by SiTI - Torino, oriented to facilitate the readability of technical data and make them more user-friendly.</p> <p>InViTo is the acronym of: Interactive Visualization Tool</p>
7	<p><b>Interactive</b></p> <p>InViTo does not provide solutions, but it aims at enhancing the dialogue</p> <p>TAKING COOPERATION FORWARD</p>	<p><b>Interactive</b></p> <p>As it is focused on the exchange of information between man and machine in order to allow users to explore data and build their own knowledge on territory.</p>
8	<p><b>Visualisation</b></p> <p>InViTo uses a visual language because easier to understand, also for non-experts</p> <p>TAKING COOPERATION FORWARD</p>	<p><b>Visualisation</b></p> <p>As it use a visual language to facilitate the communication through intuitive forms of information sharing. This makes easier the participation of non-experts people.</p>

9		<p><b>Tool</b></p> <p>As it does not aim at providing solutions but at supporting people in finding a shared vision.</p>
10		<p>Thus, InViTo can be seen as a dialogue facilitator, which shows available information and provides a common basis for the development of different reasoning.</p>
11		<p>At this point the trainer has to illustrate the functioning of InViTo in order to make it usable by people involved.</p> <p>This explanation can be done using the same power point slides or directly online using whatever project in InViTo: <a href="http://www.urbantoolbox.it/">http://www.urbantoolbox.it/</a></p>
12		<p>The trainer has to explain the user interface.</p> <p>On the top left, in order, there is:</p> <ul style="list-style-type: none"> <li>the project title and subtitle</li> <li>the project logo</li> <li>two sections: <ul style="list-style-type: none"> <li>the filtering section</li> <li>the weighting section</li> </ul> </li> </ul> <p>On the right side:</p> <ul style="list-style-type: none"> <li>The dynamic map</li> </ul>

13		<p>The filtering section allows to select and filter displayed data on the basis of specific parameters.</p> <p>The filtering section is composed by layers.</p> <p>Each layer refers to a project issue (such as residential areas, transport networks, waters, forests, industrial zones, etc).</p> <p>Each layer can be filtered on the basis of data it includes. For instance, if there is a public transport layer, this could be maybe filtered by bus, taxi, railways, etc.</p>
14		<p>The weighting section allows users to assign a weight to each considered issue on the basis of personal preferences.</p> <p>This weight will be summed with other weights so to provide a map on a traffic-light coloured-scale, where red highlights area without selected issues and green with higher presence of the issues.</p>
15		<p>The bar under the project logo has four menus.</p> <p><b>Filtering Icon:</b> where data can be filtered and selected and maps can be weighted.</p> <p><b>Gear Icon:</b> it contains a description of the project and the selection of background map (see next slide).</p> <p><b>Floppy icon:</b> here users can export data in .geojson, .csv and .png files. At the moment, import is not working.</p> <p><b>Baloon icon:</b> here logged-in users can leave feedback to the project</p>
16		<p>Clicking on the gear icon, users can choose a different background map between:</p> <p>Standard or custom maps based on Google maps</p> <p>Open Street Map (OSM) maps</p> <p>Flat colours</p>

17		<p>Next to filter names, there are two squares:</p> <p>Clicking on the white square, user enables the visualisation of line width according to specific range value.</p>
18		<p>Clicking on the black square, user enables a coloured map, where colours correspond to specific values as shown in the legenda.</p>
19		<p>The combined use of the two squares of two different layers, allows users to investigate the relations between different data.</p> <p>For example, if the project has two layers where the first illustrates the pollution of an area and the second shows the number of vegetable species living in the area, enabling the width icon of the first layer and the colour map icon of the second, user can identify the areas where are concentrated more risks for the vegetation.</p>
20		<p>The white and black circle allows the user to invert the data selection.</p>



21		<p>In order to enable the weighting grid, click on the microphone icon and wait for the grid becomes red.</p>
22		<p>The weighting map, colour the map according to the weights given by the user to each issue.</p> <p>The scale is from -10 to +10, where 0 is indifference for the issue.</p> <p>The red value shows negative effect or absence, while green show positive effect or the presence of the selected issue.</p>
22		<p>InViTo is under the Creative Commons licence.</p> <p>Users who would like to have an account in InViTo can make a request e-mailing to:</p> <p><b>elena.masala@polito.it</b></p>
23		

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