

Ecosystem services for sustainable development of cities



Educational project of the Sendzimir Foundation

Goals of the project:

- to increase awareness of policy makers and other stakeholders about the importance of ecosystem services in Polish cities;
- to identify institutional barriers for the use of ecosystem services for sustainable urban development;
- to develop methods to deal with these barriers;
- to popularize good practices of use of ecosystem services for sustainable urban development.

What are ecosystem services?

Ecosystem Services are the benefits that society and economy derive from the environment. The environment as a service provider becomes a more obvious partner for decision-makers at various levels, including at local level. With this change in perception of the environment, the necessity to protect it becomes clearer. The concept of ecosystem services has been gaining popularity rapidly in recent years worldwide.

What is the situation in Polish cities?

Problems of urban ecosystems in Poland show that authorities of Polish cities are not aware of their value. Meanwhile, in more developed countries the value of urban ecosystem services is increasingly often estimated and taken into account in decisions concerning urban development. This translates into higher quality of life in cities, as well as savings from not having to make some investments (the same functions can be successfully delivered

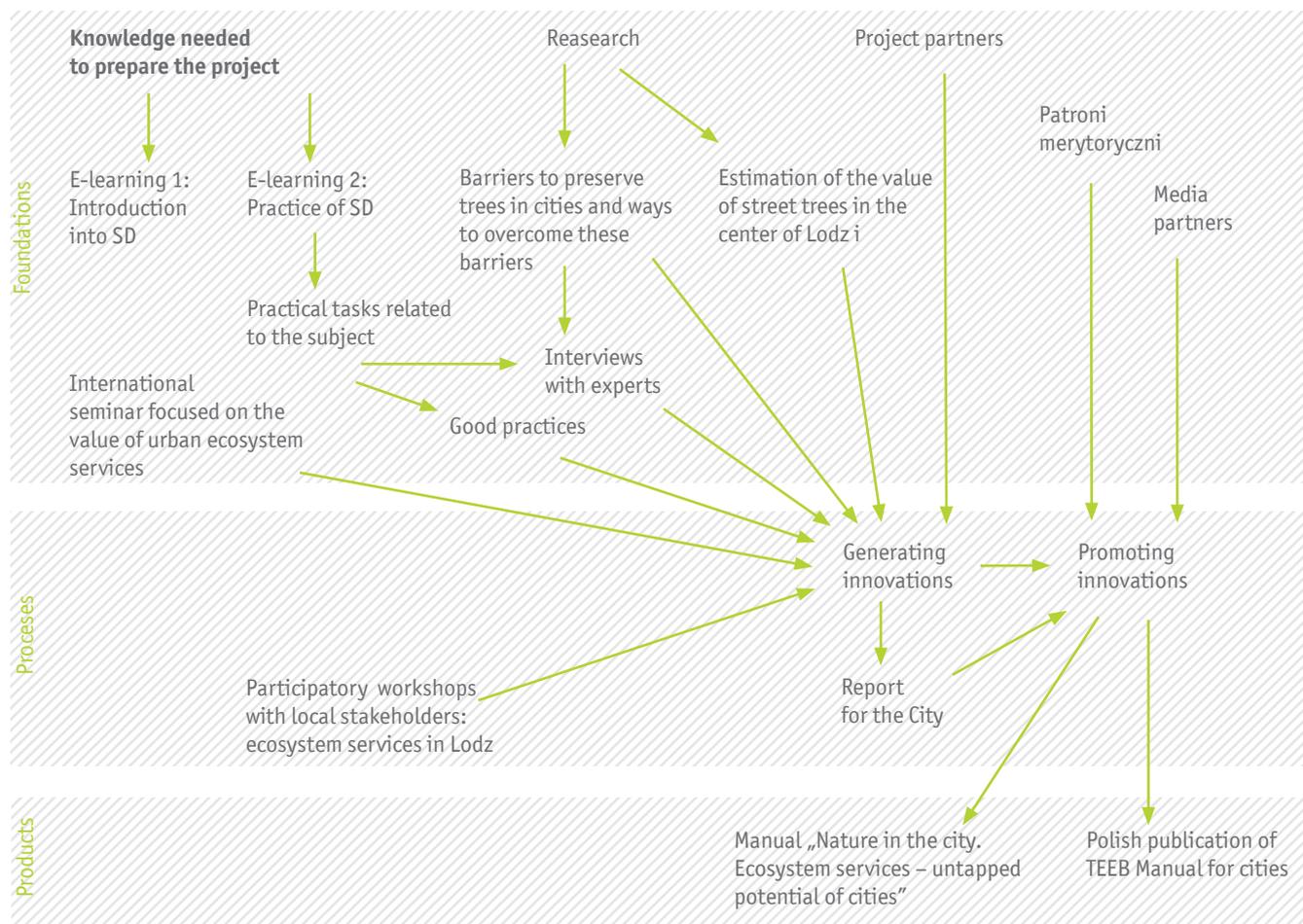
by well-functioning ecosystems). Some examples include: water retention and improved microclimate, reduced expenditures for wastewater treatment resulting from more water being retained within the green areas in the city, shadow, wind protection, recreation opportunities, improvement in work efficiency, substitute for expensive noise protection systems.

To whom Project activities are addressed?

First group of recipients of the project activities are young „professionals of sustainable development” – final year students, graduates and young employees who through their knowledge and skills will be able to take into account ecosystem services in their work for sustainable local development and business. The second group are local authorities and other decision makers involved in urban planning and management. Other stakeholders who can have more or less direct influence on decisions regarding ecosystem services and can benefit from this project’s outputs (those who can participate in public consultations, dialog, readers of various publications).

What do we do to improve the management of ecosystem services in Polish towns and cities?

The project consists of interrelated educational, research and practical activities.



The above diagram shows the relationships between the main activities of the Ecosystem Services for Sustainable Development of Cities project.

The foundations, on which the project is being built, are all activities that involve acquiring and organizing knowledge in the field of sustainable development and ecosystem services in urban areas. The main sources of information are: research carried out under the project, literature, discussions with leading experts in this area, knowledge input from the project partners. From a practical point of view, the most important elements of the project are **“processes”** which include generating and promoting the innovations designed to increase the degree of knowledge and sustainable use of ecosystem services in Polish cities. Promotion is greatly supported by **“Products”**: research report for Lodz city authorities and two guides presenting various topics on Ecosystem Services in the Cities and their values.

A series of courses „Challenges of Sustainable Development in Poland”

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A two-stage e-learning course (introducing sustainable development and ecosystem services theme) and a three-week Summer Academy, during which the participants acquire practical knowledge and gain experience in the principles of sustainable development and their implementation into the development of cities, companies and organizations. Research and analysis conducted as a part of the Summer Academy contribute greatly to the process of generating innovation. The result is the Report prepared by participants for authorities of given city, containing the main guidelines for the sustainable use of Ecosystem Services. Recruitment for participation in the next training cycle which will take place in the Tri-City area (Gdansk, Gdynia, Sopot) will begin in February 2012. <http://www.sendzimir.org.pl/en/course>

Analysis of institutional barriers to the preservation of trees in cities and ways to overcome these barriers

02 The number of trees in central areas of large cities in Poland is decreasing which brings about increasing social and economic costs. The aim of this study is to identify the institutional barriers to the preservation of trees in the central areas of large cities in Poland, and ways of removing these barriers. Results and conclusions from the study will be available on the Sendzimir Foundation's website by the end of 2011.

Estimating the economic value of street trees in the center of Lodz

03 Lack of knowledge of the economic value of trees reduces the possibility of making rational decisions about urban greenery. Meanwhile, there are many valuation methods that can be used to determine the value of non-market goods, such as urban trees. We used one of these methods – choice experiment to estimate the value of trees in the center of Lodz. A representative sample of Lodz inhabitants was asked how much they would be willing to pay for implementing a hypothetical scenario that would increase the number of trees. Results will be available on the Sendzimir Foundation's website by the end of 2011.

International seminar „Synthesizing different perspectives on the value of urban ecosystem services”

04 The seminar took place in July 2011 at University of Lodz. The aim of the seminar was to exchange knowledge between researchers from several countries who deal with the issues of ecosystem services in urban areas. Additionally, we asked the participants to contribute to the discussion on the management of urban ecosystem services in Poland. Presentations given at the seminar can be found at: <http://www.sendzimir.org.pl/en/seminar2011/presentations>

Publication of the guide „ Nature in the city. Ecosystem services – untapped potential of cities”

05 This publication is meant to help decision makers at the local level, as well as other stakeholders to manage ecosystem services in a sustainable way. It will present in an interesting manner the most important and practical issues related to the identification, valuation and the management of urban ecosystem services, as well as results of the abovementioned research projects. In addition, the guide will present a set of inspiring examples of good practices in the area of management of urban ecosystem services. The book will be published in English within the series „Sustainable Development – Applications” and will be available on www.sendzimir.org.pl/journal in March 2012.

Publication of “TEEB Manual for Cities” in Polish language

06 This publication will transfer to Polish ground synthesis of the most important conclusions of TEEB project. TEEB (The Economics of Ecosystems and Biodiversity) is the most famous international initiative devoted to nature conservation in recent years. The project was launched in 2007, it engaged hundreds of scientists and experts from around the world. The main focus of TEEB is to highlight the necessity of valuation of ecosystem services and recommend solutions in this area, tailored to the needs of different groups of decision makers. TEEB project received broad support of many important international institutions (European Commission, government agencies of several developed countries, UNEP, IUCN). Polish translation will be available on the Sendzimir Foundation's website in the early 2012. The original can be found at: http://www.teebweb.org/Portals/25/Documents/TEEB_Manual_for_Cities_Ecosystem_Services_for_Urban_management__FINAL_2011.pdf

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About the Sendzimir Foundation

The Foundation initiates and supports educational, research and practical projects aimed at solving complex environmental, economic and social problems collaborating with companies, governments, NGOs and communities, and participating in local, national and international initiatives.

The Sendzimir Foundation pays particular attention to building lasting partnerships with institutions, local communities and participants of the Foundation's projects.

The project Ecosystem Services for Sustainable Development of Cities is implemented in partnership with:

- University of Lodz;
- International Institute of Polish Academy of Sciences – European Regional Centre for Ecohydrology under the auspices of UNESCO;
- AGH University of Science and Technology in Krakow;
- Baltic University Programme, Uppsala, Sweden;
- Institute of Spatial Management and Housing, Warsaw;
- Fraunhofer-Zentrum für Mittel-und Osteuropa, Leipzig, Germany;
- Department of Environmental Protection and Agriculture, Office of the City of Lodz.

The project is formally endorsed by:

- Chief Nature Conservator, Deputy Minister of Environment, Janusz Zaleski;
- ICLEI - Local Governments for Sustainability;
- Union of Polish Metropolises;
- Mayor of Lodz;
- Marshal of Lodz.

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