SWITCH PROJECT: LODZ, POLAND

LODZ

http://www.lodz.pl/
http://switchlodz.wordpress.com

LODZ LEARNING ALLIANCE

The Lodz Learning Alliance (LA) was launched in May 2006. The membership is constantly growing and starting to influence other projects in the city addressing water issues, sustainable development and spatial planning, restoration and investments.

At the beginning, the focus of the LA activities was on the development of the alliance, co-operation, sharing and communication, identifying the water-related challenges for the city and the creation of a common vision for its sustainability and future. These have been further supported with other activities, such as artistic competitions, exhibitions, a documentation workshop and several working groups and face to face meetings. Numerous media coverage activities, publications and presentations such as articles in popular papers, information brochures, films and TV broadcasts, local, national and international workshops and conferences have been made.

Nowadays, within the third year of SWITCH, LA process has greatly accelerated. Based on the LA members' suggestions, the alliance is extending to regional and national levels. Several activities are being initiated by the LA members themselves, including additional demonstrations, as well as the establishment of policy regulation at the city level.

LA Members

The LA has a wide representation of the city stakeholders and includes members from the national, regional and local levels:

- City Level:
  City of Lodz Office, service providers, research institutes, developers and designers, society groups' representatives, local newspaper.

- National/Regional level:
  Voivodship Office for Spatial Planning, Voivodship Inspectorate of Environmental Protection, Voivodship Company for Melioration and Water Infrastructure, Voivodship Fund for Environmental Protection and Water Management, Regional Boards for Water Management, Regional TV.

- Neighborhood Level:
  Primary and secondary schools, Housing Estate Councils, NGOs.

VISION & GOALS FOR URBAN WATER MANAGEMENT

The vision for Lodz City 2038 "Lodz Uses Its Water Wisely"

The city's resources management is based on an efficient and integrated system ensuring access to information for all. Investors and authorities respect ecological properties of land and waters. Infrastructure serves the functions and requirements of an environmentally secure city; it is reliable and meets the needs of all the city's population, assuring good status of aquatic ecosystems. Green areas - river valleys along open corridors – provide space for recreation and are the 'green lungs' of Lodz. The application of ecological biotechnologies and the population's common and in-depth ecological awareness contributes to an exceptionally high quality of life. Our city is a leading centre for innovation, education and implementation in Poland.

MEASURING SUSTAINABILITY

The sustainability indicators are under development by the LA, and at this stage include the following:

- Water management decisions are efficiently integrated within water sectors and with other related sectors
- The water infrastructure is reliable and ecologically secure
- Ecological biotechnologies are adopted as a regular element of water management
- Green areas are integrated into the city planning
- Technically restorable city rivers are rehabilitated and have good ecological potential
- Demonstration activities provide an example for up scaling. New developments, re-developments and revitalization activities undertaken in the city integrate ecological properties of land and waters
- The society understands and supports the changes in the city

LODZ'S WATER SYSTEMS & PRESSURES

The City of Lodz is drained by 18 small urban streams, most of which serve as part of the sewage system. High hydrological stress and habitats simplification lowers ecological potential and water quality. Compacted historical development reduces water retentiveness in the landscape and destabilizes streams' hydrological patterns. The efficiency of sewage purification by the Waste Water Treatment Plant during wet weather seriously diminishes due to the combined drainage system.

The application of an ecohydrological approach contributes to mitigating these issues, increases the quality of life (e.g., flood protection, access to open water) and health (e.g., reduction of toxic algal blooms, allergies, asthma) of the city inhabitants, increases cost-efficiency of the IUWM and provides opportunities for society.

ISSUES/CHALLENGES

- Adaptation of city rivers and catchments for interception of large stormwater and pollution loads
- Comprehensive wastewater treatment plant management concepts addressing issues of sewage sludge utilization, biomass production, and river rehabilitation
- Increased quality of life for city inhabitants
- Socio-economic feedbacks to city inhabitants based on the use of the ecosystem resources of regenerated urban ecosystems
- Integration of stakeholders through capacity building, improved governance and efficient decision making for IUWM (LA).

FACTS & FIGURES

- Water supply population: 800 000 inhabitants
- Water demand: 55 ml m^3/year
- Length of the water supply system: 2000 km
- Length of the sewage system: 1650 km
- Groundwater supply: 100%
- Sewerage population: 850.000 inhabitants
- Waste water production: 67 910 m^3/year
- Treated sewage: 200,3 m^3/24h
- Sewage sludge production in WWTP: 200 tons/24 h
- Produced bio-gasses are used as a "green" energy on the WWTP area

DEMONSTRATIONS

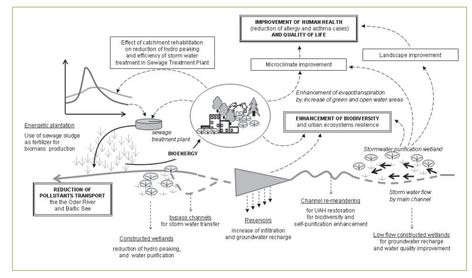
The project demonstrates the application of ecohydrology as an integral part of IUWM.

Sokolowska River

Restoration of a municipal river for stormwater management, increase of water retentiveness and improvement of quality of life.

Ner River

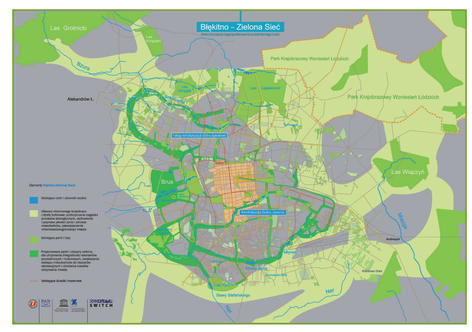
Sewage system management for environment quality and positive socio-economic feedbacks.



POTENTIAL FUTURE SCENARIOS

The experiences gained on the Sokolowka river will become a basis for the restoration of the other rivers in the city of Lodz. The realistic goal for scaling-up within the timeline of the project includes elaboration of recommendations and preparation of a general plan for river valley management for the city.

One of the major results of the project is the development of the new concept for city spatial planning - the **"Blue Green Network"** concept. It proposes making use of the location of the city on the watershed divide, and developing a network of parks along river corridors and green spaces, providing several benefits to the city, such as: stormwater retention and purification through natural systems, improvement of the environment, quality of life and inhabitants health, and improving the city's attractiveness and thus competitiveness in the country and region. The concept has been approved by the city inhabitants and decision makers, and become a part of the City Spatial Plan (under development).



The research takes place in the two demonstration areas of the Sololowska and Ner (WWTP) rivers and aims to develop the scientific basis for the ecohydrology approach in urban areas, validation and assessment of the effects of its application. According to the ecohydrology concept, reduction of impacts and application of engineering solutions is the fundamental condition in urban areas, however successful management has to include ecohydrological measures which increase the absorbing capacity of urban catchments against impacts, and reduce the occurrence of degradation symptoms by augmenting the assimilative capacity of aquatic systems.

SWITCH

SIXTH FRAMEWORK PROGRAMME

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