SWITCH: LOCAL DEMONSTRATIONS FOR GLOBAL CHANGE

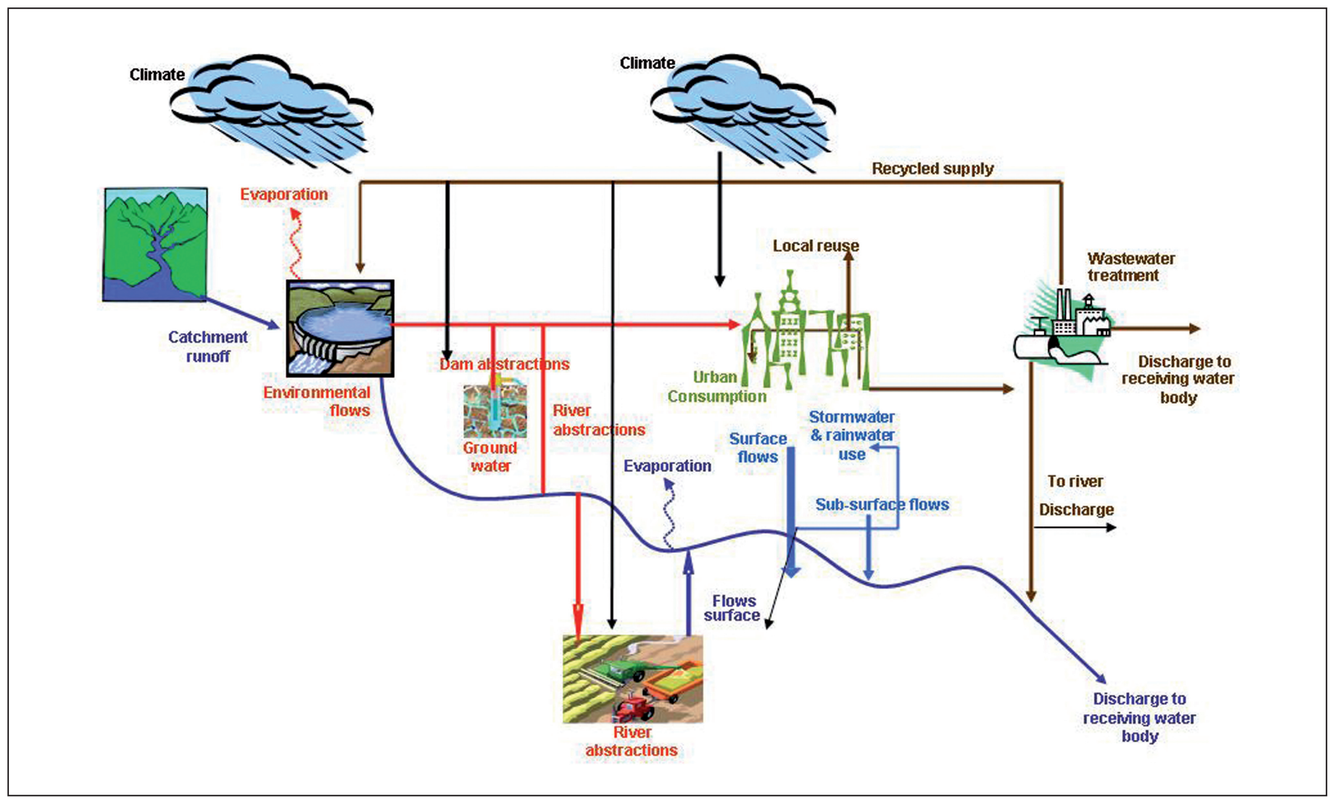
LODZ:
ECOHYDROLOGY FOR URBAN WATER MANAGEMENT

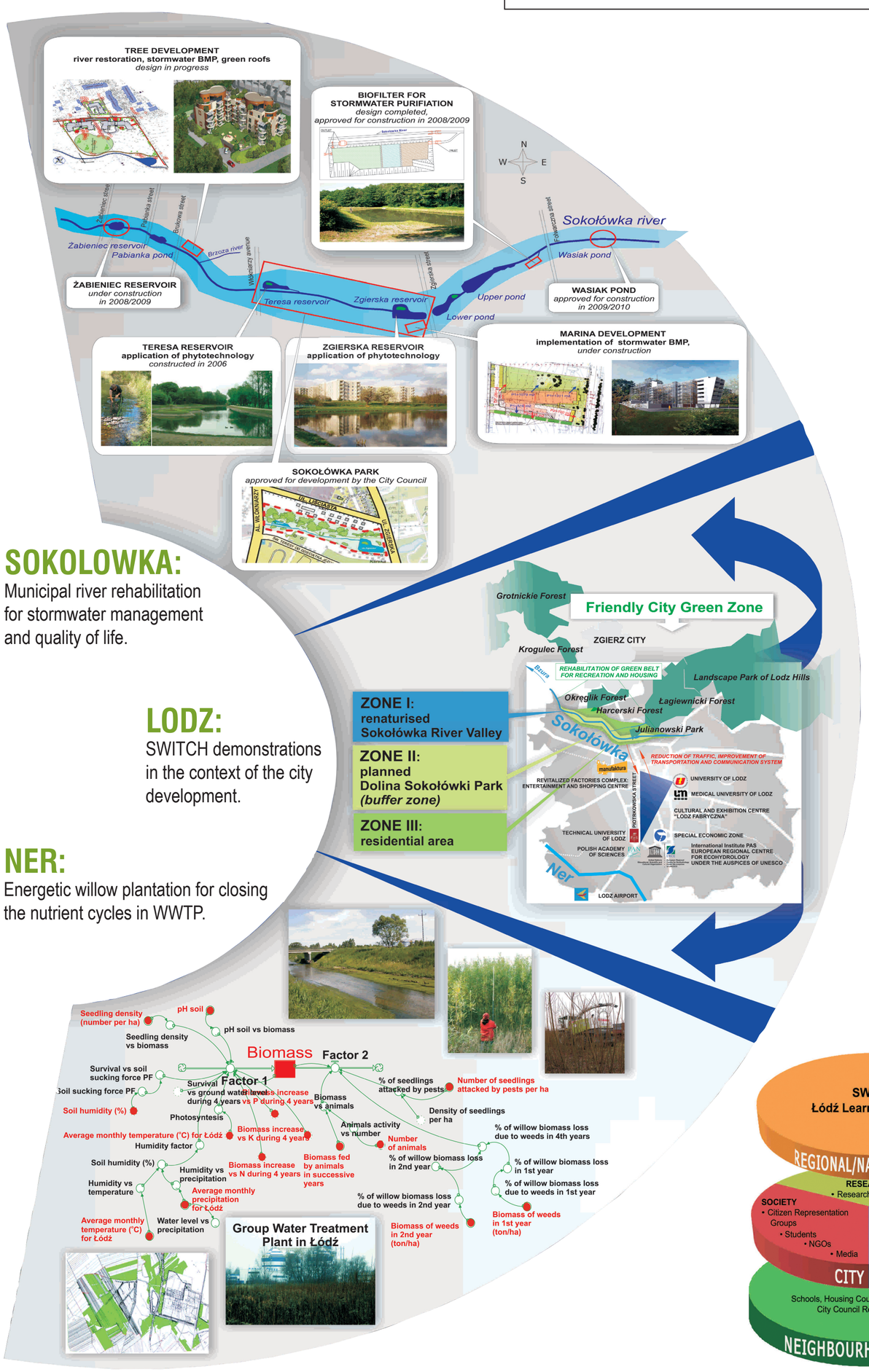
SWITCH

SIXTH FRAMEWORK PROGRAMME

A DESCRIPTION OF THE PROJECT WITH PICTURES & GEOGRAPHIC LOCATION

The City of Lodz (agglomeration of 1 mln inhabitants) is located at the watershed divide of the Vistula and Oder rivers in central Poland. A network of 18 streams has been a key factor for its rapid growth as the European textile industry centre in the 19th century. Today most of the rivers serve as sewerage. Compacted historical development reduced water retentiveness in the landscape and destabilized streams hydrological patterns. Habitats simplification lowered their ecological potential. The efficiency of sewage purification by the WWTP during wet weather is diminished due to combined drainage system. There is a need for cost-efficient systemic approach to address these issues.





POTENTIAL IMPACT

The project demonstrates application of Ecohydrology (EH) as the integral part of the IUWM. Its goals are to mitigate the key water issues, increase the quality of life (e.g., flood protection, access to open water) and health (e.g., reduction of toxic algal blooms, allergies and asthma) of the inhabitants, and lower the cost-efficiency of the management by providing new technologies and increasing the integration within the water sector.

RESULTS TO DATE

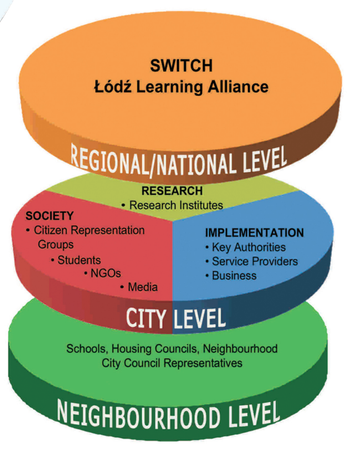
A common Vision – Lodz 2038 produced by the Lodz LA has set priorities for the IUWM in the city. Two demonstration sites (the Sokolowka and Ner rivers) allowed to undertake demand-led research, which was a basis for implementations – design and construction of stormwater reservoirs systems based on EH principals and stormwater BMPs and operation of a 70 ha of wilow plantation for bioenergy production (see pictures). The results were presented in scientific journals, books and on conferences. Dissemination activities included media coverage, popular papers and articles for the public, decision-makers and school competitions. Several trainings for the LA members increased the knowledge about natural systems in IUWM. The ecohydrological measures are starting to influence other projects in the city addressing water issues, sustainable development, spatial planning, restoration and investments.

EVIDENCE OF DEMAND & PLANS FOR UPSCALING

The SWITCH activities are complementary to urban water policies in the city. EH has recently been considered a basis for elaboration of the recommendations for the spatial development plan for the management of other city's rivers corridors. In a longer time scale, the Lodz regional authorities see the possibilities for replication of the SWITCH experiences in other cities in the region.

PARTNERS AND LA MEMBERS INVOLVED

The Lodz Learning Alliance (LA) was launched in May 2006. The group of members is constantly growing and the LA has now a wide representation of stakeholders from the national, regional and local levels. The key partners on the City level are:



Authorities:

- City of Lodz Office
- Lodz infrastructure Company (LSI).

Researchers:

- University of Lodz
- European Regional Centre for Ecohydrology u/a of UNESCO, PAS
- Lodz Technical University: Department of Environmental Engineering
- Nofer Institute of Occupational Medicine in Lodz.

Service Providers:

- Waterworks and Sewage Systems Company (ZWik)
- Waste Water Treatment Plant (GOS)

VERITAS ET LIBERTAS • UNIVERSITAS LODZIENSIS

United Nations Educational, Scientific and Cultural Organization

ERCE European Regional Centre for Ecohydrology Under the auspices of UNESCO

I. WAGNER & M. ZALEWSKI

3rd SCIENTIFIC MEETING
BELO HORIZONTE BRAZIL
DECEMBER 2008