

FINAL DEMONSTRATION ACTIVITY REPORT

WP 5.3

**THE CITY OF ŁÓDŹ
2006-20011**

**DEPARTMENT OF APPLIED ECOLOGY
UNIVERSITY OF ŁÓDŹ**

THE CITY OF ŁÓDŹ OFFICE

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1. General information

1. This report presents the results of demonstration activities implemented in the city of Łódź within the activities of the WP 5.3 implemented under the SWITCH Project.
2. The major goal of the Demonstration Projects was to demonstrate application of Ecohydrology as an integral part of the Integrated Urban Water Management and to develop system solutions for the sustainable development.
3. The selection of two demonstration areas allowed to address a diverse scope of water-related issues specific for the city, validate ecohydrology concept tested in meso-scale in urban systems and develop research activities which provided a basis for investment and decision making process.
4. The decision making and implementation process was undertaken under the consultative process within the Łódź Learning Alliance. It was based on the demand-led-research.

2. The Legal Basis of Cooperation and Demonstration Activities

1. Implementation of the demonstration activities under the SWITCH Project “Sustainable Water management Improves Tomorrow’s Cities’ Health” (SWITCH) was regulated by agreements endorsed between the University of Łódź and the City of Łódź:
 - a. Agreement of Cooperation in the field of Implementation of a Demonstration Project under the integrated project of the EU Sixth Framework Programme entitled the “Sustainable Water management Improves Tomorrow’s Cities’ Health” (SWITCH)” of 20 March 2007
 - b. Agreement of Cooperation in the field of Implementation of a Demonstration Project under the integrated project of the EU Sixth Framework Programme entitled the “Sustainable Water management Improves Tomorrow’s Cities’ Health” (SWITCH)” of 28 August 2010.
2. Project implementation entered into force by virtue of the following resolutions adopted by the City Council in Łódź:
 - a. Resolution No VI/81/07 of the City Council in Łódź of 21 February 2007
 - b. Resolution No LXXXVIII/1533/10 of the City Council in Łódź of 26 May 2010

3. Demonstration Activities undertaken in Łódź

The detailed activities undertaken in the demonstration project covered the following measures and are presented in the annexes to this general report, as indicated below:

Project 1: Sokołówka river

Restoration of a municipal river for stormwater management and improvement of quality of life:

1. Infrastructure construction (Annex 1):

- Installation of on-line hydrological and meteorological monitoring systems;
- Elaboration of Stormwater Management Model of the Sokołówka River;
- Construction of the following infrastructure:
 - Modernization of Folwarczna Sedimentary Tank: construction of Multi-Chamber Sedimentation Biofiltration System (MCSB);
 - Construction of the Teresa Reservoir;
 - Planting of vegetation on the Zgierska Reservoir;
 - Construction of the Żabieniec Reservoir;
- SWITCH spin-offs and complementary infrastructure (funded from other sources and based on the knowledge generated by SWITCH):
 - Construction of the Wycieczkowa Reservoir;
 - Preparatory work for the construction of the Wasiak Pond Reservoir;

2. River rehabilitation and Sokołówka Park (Annex 2):

- Elaboration of a conceptual and technical project of the rehabilitation of a Sokołówka River stretch;
- Elaboration of a conceptual and technical project of the Sokołówka River Valley Park;

2. Project 2: Ner River (Annex 3):

Sewage system management for the environmental quality and positive socio-economic feedbacks;

- Establishment of the willow plantation (70 ha) and an experimental willow plantation in the restricted use zone of the Wastewater Treatment Plant (WWTP) in Łódź and their monitoring;
- Production of willow biomass with the use of sewage sludge as a fertilizer;
- Generation of bioenergy from the biomass produced;
- Developing, testing and demonstrating methods of reduction of sewage sludge toxicity and increase of biomass production;
- Developing, testing and demonstrating methods of phytoremediation for heavy metals removal;
- Developing a Mathematical Model for Decision Support System for the willow plantations in WWTPs.

3. Blue-Green Network Concept (Annex 4):

Originally the demonstration activities were implemented under two demonstration projects described above. However within the project timeframe, the ideas developed under the demonstration projects were widely accepted by the decision makers and the community, and finally, as a result of several activities, they addressed the whole area of the city by formulation of the Blue-Green Network Concept.

3. Educational and dissemination activities related to demonstration projects (Annex 5):

Educational and dissemination activities related to the demonstration projects covered the following actions:

- Elaboration, publication and distribution of a series of maps and guides of the Łódź Rivers ('Z biegiem Łódzkich rzek');
- Production of three films addressed to general public and a advertisement spot, which was a key component of a social campaign on stormwater;
- Establishment of an educational path at the SWITCH demonstration projects;