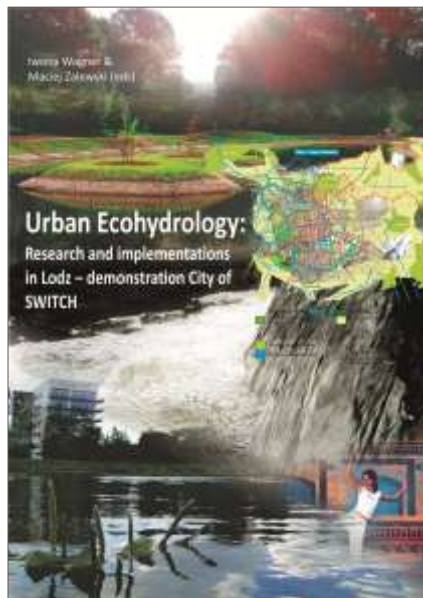


Books:

Ecohydrology in Urban areas: Experiences of the SWITCH demonstration City of Lodz, Poland

Iwona Wagner, Maciej Zalewski



The book brings together experiences of the city of Lodz gained during the implementation of the SWITCH Project:


- 1) developing basic research and concepts related to Urban Ecohydrology;
- 2) implementation of the research results in demonstration project; and
- 3) strengthening inter-institutional co-operation by establishing, developing and implementing activities of the Learning Alliance.

SWITCH Int. SWITCH Scientific Conference
Sustainable Water Management Improves Tomorrow's Cities' Health: achievements and way forward
16-18 November 2011 Lodz, POLAND

SECTIONS OF THE BOOK

1) THEORY AND CONCEPTS:

- Ecohydrology and links to the UNESCO IHP Programme and demonstration projects;
- Urban Ecohydrology – concept, principles and methodology for implementation;
- Translation of experiences of river basin ecohydrology into urban systems;
- Specifics and evolution of the Lodz urban system (historical, social, economical, environmental);



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SECTIONS OF THE BOOK

2) FROM RESEARCH TO PRACTICE:

2.1. ECOHYDROLOGICAL BIOTECHNOLOGIES

- **Sequential system for stormwater purification - converting threats into opportunities for sustainable city**
 - Analysis of the seasonal and spatial distribution of PCBs, PCDDs and PCDFs and cyanobacterial blooms toxicity - risk assessment for health and quality of life;
- **Conversion of sewage sludge into bioenergy:**
 - closing nutrients cycles in bioenergetic plantation;
 - „0” CO2 emission technology;
 - creating economic feedbacks;
 - mathematical model for economic optimization of plantation and sewage sludge use.

Experiences from demonstration projects



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10th SWITCH Scientific Conference

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SECTIONS OF THE BOOK

2) FROM RESEARCH TO PRACTICE:

2.2 . SYSTEM SOLUTIONS

- **River rehabilitation**
 - water retention and purification and stream channel rehabilitation;
 - preventing toxic cyanobacterial blooms in urban reservoirs;
 - Landscape validation and mapping of real vegetation as a basis for the rehabilitation plan of the river valley ;
 - recreational area development of sustainable architecture, quality of life, urban sprawl control.
- **Blue Green Network**
 - spatial planning of the urban environment for SD;
 - adaptation to global climate change;
 - quality of life and human health;
 - BMPs in stormwater management in Lodz;
 - links to City Water.

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SECTIONS OF THE BOOK

3) LEARNING ALLIANCE AND STRATEGIC PLANNING

- Stakeholder analysis;
- LA concept, process and methodology in Lodz;
- Strategic Planning based on stormwater resources as foundation for sustainable development of the city and adaptation to climate change;

<u>Scenario 1</u>	<u>Scenario 2</u>
<u>Scenario 3</u>	<u>Scenario 4</u>

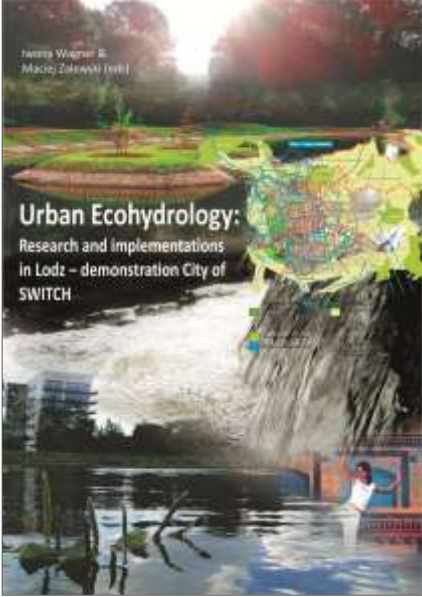


SWITCH Scientific Conference

Sustainable Water Management Improves Tomorrow's Cities' Health: achievements and way forward

16-18 September 2015 Lodz, Poland





WITH WHOM?

- based on the material produced during SWITCH by
 - scientists from the University of Lodz;
 - ERCE/UNESCO;
 - scientific institutes in Lodz (Technical University, Medical University, Institute of Occupational Medicine);
 - SWITCH partners (WP 2.2., WP 2.2., WP 6.1, WP6.2, CW);
 - Practitioners, specialists and decision-makers of the Lodz LA.

FOR WHOM?

- Lodz and other SWITCH cities' Learning Alliances;
- decision-makers and water service providers in Polish cities and abroad;
- Academia (students of environmental engineering and protection);
- scientific community.