PROJECT PORTFOLIO

SWITCH: SUSTAINABLE WATER MANAGEMENT IMPROVES TOMORROW'S CITIES' HEALTH

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SWITCH is an EU-funded research programme aimed at achieving more sustainable integrated urban water management in the 'City of the Future', 30-50 years from now. Beginning in February 2006, it consists of a Consortium of 33 partner organizations working in 15 European and developing cities worldwide, with UNESCO-IHE as lead partner. The consortium partners are working together to share knowledge and research on a range of tested scientific, technological and socio-economic solutions to urban water management. It is envisaged that such proven sustainable solutions will be adopted globally to replace the many different ad hoc approaches which currently exist and to create a paradigm shift to sustainable urban water management.

Background

Cities around the world are facing a range of dynamic global and regional pressures, including rapid urbanisation and urban sprawl due to population growth, industrialisation, and climate variability and change.

They are facing difficulty in efficiently and transparently managing ever scarcer water resources, delivering water and sanitation services, and disposing of wastewater, while minimizing negative impacts on the downstream environment and on the urban populations' quality of life including environmental, health, social and economic aspects.

The ecological 'footprints' of cities are ever growing through over-exploitation of available resources (land, water, energy, food, building materials, energy, finance) for their populations whilst producing massive streams of waste (solid, gaseous, liquid) in return, contaminating soil, air and water.

In order to face these challenges, SWITCH is facilitating a paradigm shift in urban water management by converting from ad-hoc actions into a

coherent and consolidated approach. The overal goal of the SWITCH project is to catalyse change towards more sustainable urban water management in the "City of the Future".

Objectives

The SWITCH Integrated Project aims at the development, application and demonstration of a range of tested scientific, technological and socio-economic solutions and approaches that contribute to the achievement of sustainable and effective urban water management (UWM) schemes in 'The City of the future' (30-50 years from now).

Project details

- **Start and end date:**
  February 2006
  to January 2010
- **Counterpart(s):**
  European Commission
- **Partner(s):**
  full partner list in main text
- **Funding agency:**
  European Commission 6th Framework Programme
- **Location(s):**
  Others
- **Type(s):**
  Research and Development

More information

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  SWITCH Website

The approach is to develop efficient and interactive urban water systems and services (city level) in the context of the city's geographical and ecological setting (river basin level), which are robust, flexible and adjustable to a range of global change pressures (global level).

Activities and Outputs

The project is implemented by different combinations of the consortium partners, along the lines of various complementary and interactive themes.

- **Action research** address problems through innovation based upon involvement of users.
- **Learning alliances** to link up stakeholders to interact productively and to create win-win solutions along the water chain;
- **Multiple-way learning** European cities learn from each other and from developing countries, and vice versa.
- **Multiple-level or integrated approach** to consider the urban water system, and its components, (city level) in relation to its impacts on, and dependency on, the natural environment in the river basin (river basin level), and in relation to Global Change pressures (global level).
- **Linking upwith key experts** on urban water from Europe and developing countries, and pooling scientific, technological and financial resources from partners and in the demonstration cities through an integrated, multi-disciplinary research effort.

PARTNERS

Stichting International Water and Sanitation Centre, ETC Foundation, Wageningen University, Middlesex University Higher Education Corporation, The University of Birmingham, Ove Arup and partners Limited, The University of Greenwich - Natural Resources Institute, Technische Universität Hamburg – Harburg, Municipality of Hamburg, Mekorot Israel National Water Co., The Hebrew University of Jerusalem, Chongqing University, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, Ayuntamiento de Zaragoza, University of Lodz, International Water Management Institute, Department of Civil Engineering, Kwame Nkrumah University of Science and Technology, Prefeitura Municipal de Belo Horizonte, Univesidade Federal de Minas Gerais, ICLEI - European Secretariat, GmbH, Swiss Federal Institute of Technology Lausanne, University of Athens, Centro Inter-Regional de Abastecimiento y Remocion de Agua, IPES - Promocion del Desarrollo Sostenible, Ingenieurgesellschaft Prof. Dr. Sieker mbH, Technische Universität Berlin, Loughborough University, House of Water and Environment, Institute of Graduate Studies & Research, Universidad Nacional, University of Abertay Dundee

Progress

The first year of SWITCH focussed internally on the initiation of research and demonstrations and coordination activities among the Consortium partners, and also of the logistics/start-up of the learning Alliances in the SWITCH cities. SWITCH has made substantial progress in its first twelve months of activities including:

- Initiation of the Learning Alliances process and completion of scoping studies in all nine SWITCH cities
- Commencement of 20 PhD and 26 MSc students
- Initiation of research in all 18 workpackage areas
- 1st Annual Scientific Meeting
- First training of LA facilitators
- Initiation of demonstrations in Tel Aviv, Lodz and Zaragoza

The coming period, SWITCH will continue to focus on strenghtening the capacity of the Learning Alliances and progressing the research and demonstrations. Additional effort will be focussed externally with a much higher level of dissemination and collaboration including planning for EXPO 08 in Zaragoza, the beginning of the Global Learning Alliance and on-line availability of the SWITCH Training Toolkit.

The lasting impact that SWITCH is striving for is a paradigm shift from our global cities being vast consumers and importers of critical water, energy and food resources to being zero impact or net producers of these product.