



*Center of Excellence in  
Wetland Hydrology*

EVK1-CT-2002-80011

- Research project supported by the European Commission under the Fifth Framework Programme
- The project is financed by EC in the years 2003-2005

# **Problems to be solved:**

The overall objective of the WETHYDRO project is to increase the scientific potential of the Department of Hydraulics Engineering and Environmental Recultivation (DHEER) through increased international cooperation and by expanding its role as a regional centre of excellence in wetland hydrology. The project activities will also facilitate integration of the Centre of Excellence within the European Research Area within the European Commission's Sixth Framework Programme in the "Global Change and Ecosystems" and water cycle priorities. Results of the project will contribute to the implementation of the EU Habitat Directive and Water Framework Directive in NAS countries. The project will also contribute to increasing awareness amongst the public, technical staff and other stakeholders of the role of wetlands in integrated water resources management.

# Scientific objectives and approach:

The scientific research interest of the Center are focused on two areas: **hydrological modelling of wetlands and coupling this hydrological knowledge with ecological and management issues**. In the first research domain the Center collects hydro-morphological data, processes data and carries out hydrological modelling. The main objectives in this area are: assessments of the measurement techniques for riparian wetlands; GIS and RS techniques for the land use mapping in waterlogged areas; evaluation of hydrological models for their accuracy in modelling water flows in natural rivers and floodplains. In the second research domain the Center focuses on reference sites and management of wetlands. The main objectives are: deriving nature protection goals including the anthropogenic influences (e.g. extensive agriculture) and their impact on water management (in wetlands and in the catchment); defining terms of sustainability for wetland areas.

The Center plans to develop through: staff exchanges, networking and training with leading specialists and research centers of EU and NAS countries.

## **Expected impacts:**

Implementation of the project activities will increase the scientific potential of DHEER and expand its role as a regional center of excellence in wetland hydrology. Envisaged effects of the Center will be positively related to the social needs of Poland and other NAS countries. Disseminated research results of the Center will be useful for sustainable development of the agricultural areas in regions related to nature protection activities. They also will be applied for developing master plans of these areas allowing for stimulation of sustainable development. Both, Biebrza National Park and Narew National Park will use the Center's results for integrated management of park resources. Project results will be disseminated by the subunit for continuing education, which will develop and deliver retraining courses for local administration.

# Organisation and management

Work of the Center is organized in nine work packages which are logically related



- All info on the webpage:

<http://levis.sggw.waw.pl/wethydro>

# Main activities of WETHYDRO

2003

- organisation of two workshops in Biebrza national park
  1. "Measurement techniques and data assessment in wetlands hydrology"
  2. "Integrated eco-hydrological assessment: coupling ecological methods with hydrological and water quality models in GIS „
- Organisation of Measurement Campaign in Biebrza National Park

# 2004

- Organisation of three workshops in Narew National Park
  1. "Model application for wetlands hydrology and hydraulics"
  2. "Anthropogenic influence on wetlands biodiversity and sustainable management of wetlands,,
  3. Wetlands as a water user and service provider - feasible ways for wetlands protection in the Water Framework Directive”
- Organisation of Short Intensive Course on wetland water management – in Biebrza National Park
- organisation of Measurement Campaign in Biebrza National Park



# 2005

- Organization of students' training in Biebrza National Park (Belgium students)

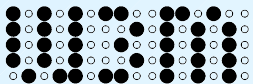


- Co-organization of Conference „ Mokra Robota – protection and restoration of Polish wetlands”

- Organisation of Measurement Campaign in Biebrza National park



- Organisation of 2nd Short Intensive course on wetland water management



- Organization of International Conference for wetlands”  
W3M: monitoring, modelling, management”

# WETHYDRO Monograph series:

1. “Measurement techniques and data assessment in wetlands hydrology”
  2. “Model application for wetland hydrology and hydraulics”
  3. „Anthropogenic influence on wetlands biodiversity and sustainable management of wetlands”
- Proceedings of W3M conference