

## Monography „Identification and Assessment of Anthropogenic Influence on Water Resources in Order to Identify Water Bodies Threa- tened by Failure to Achieve Environmental Objectives”

Written under the PBZ-KBN 061/T07/2001 project titled *Methodic Basis of the National Plan of Water Management Integrated Development in Poland*.

### BACKGROUND

Under the Water Framework Directive by 2009 all the Member States have to produce management plans for each river basin district. Such plans have to present the existing status of water bodies in the each river basin district and to describe measures undertaken with a view to implementing the Directive objectives. At the first stage of planning the characteristics of each river basin district will be completed (Article 5 of the Directive). It includes the identification of the most important influence sources and their effects as well as the analysis of risk of the failure to achieve environmental objectives by homogenous parts of water bodies separated in the river basin district.

### PROBLEMS

In order to implement this task it is necessary to produce appropriate guidelines supported by the analysis of Poland's conditions and its

capability to meet the European requirements.

### SOLUTIONS

- Under the project commissioned by KBN (presently: the Ministry of Science and Information Technology) N° PBZ-KBN 061/T07/2001 *Methodic Basis of the National Plan of Water Management Integrated Development in Poland* and pursuant to the agreement between the Water Resources Department in the Ministry of Environment and the management of the above mentioned project the **Identification and Assessment of Anthropogenic Influence on Water Resources in Order to Identify Water Bodies Threatened by Failure to Achieve Environmental Objectives** methodology was developed (Elżbieta Nachlik et al., Monography 318, Seria Inżynieria Środowiska, Wydawnictwo Politechniki Krakowskiej, Krakow 2004).
- This methodology:
  - quotes the sources of data necessary to analyse the influence and its effects and proposes to build a single information base; carries out a detailed identification of the causatives for individual types of factors that influence water bodies,
  - determines the way to conduct an overall assessment of surface water (rivers, lakes, transitional and coastal waters) and groundwater bodies,
  - puts forth a preliminary analysis of the risk that the above mentioned types of water bodies fail to achieve

environmental objectives.

- includes the list of source documents, of the correlations between Polish and European legislature, and the dictionary of elementary terms.
- The methodology has been implemented in the Raba, Narew, Widawa and Radunia (*The Characteristics of the Radunia River and its Catchment in the Light of the EU Water Framework Directive*, Wojciech Majewski et al., Wydawnictwo IBW PAN, Gdańsk 2005) and other pilot river catchments.

### BENEFITS

- The methodology that has been put forth in the Monography contains uniform and adjusted to Polish specificity principles of the analysis of anthropogenic pressures on water bodies and its impacts as well as the rules of water status assessment.
- These principles, following the Minister's of Environment approval, can become binding in the practice of the regional water management boards and their consultants.
- The methodology uses the generally available data from the state resources. It is vital both now and in the future since it ensures that the information base will be constantly enlarged.
- The accuracy of this methodology from the factual and technical points of view has been verified in the course of its application when characterising the chosen pilot river catchments.
- The Monography titled **Identification and Assessment of Anthropogenic Influence on Water Resources in Order to Identify Water Bodies Threatened**

**by Failure to Achieve Environmental Objectives** is a source of knowledge about the approach and principles of the implementation of modern water policy not only for those who are responsible for the water status assessment, but also for:

- universities, research institutes and other organisations dealing with water management and environment protection and shaping,
- students of environmental engineering,
- local governments.

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Version: 2006