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MEETING OF THE SIGNATORIES TO
THE CONVENTION ON THE TRANSBOUNDARY
EFFECTS OF INDUSTRIAL ACCIDENTS

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8 September 1999

MEETING OF THE PARTIES TO THE CONVENTION
ON THE PROTECTION AND USE OF TRANSBOUNDARY
WATERCOURSES AND INTERNATIONAL LAKES

ENGLISH ONLY

**SEMINAR ON THE PREVENTION OF CHEMICAL ACCIDENTS
AND LIMITATION OF THEIR IMPACT ON TRANSBOUNDARY WATERS**
(Hamburg, Germany, 4-6 October 1999)

**PREPARATION OF POLLUTION SOURCES' INVENTORIES
UNDER THE PILOT PROJECT PROGRAMMES IN HUNGARY**

Discussion paper transmitted by the Government of Hungary */

(Prepared by Mrs. Z. STEINDL)

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The bilateral transboundary agreements

Approximately 95% of the Hungarian surface water resources originate from abroad. This condition creates a continuous potential risk for water users principally from the point of view of quality, but also of quantity. In particular, the safety of drinking water intakes is endangered, because the river systems entering Hungary are often subjected to accidental water pollution incidents.

The regular surface water quality monitoring network has 27 sampling sites on rivers crossing the national borders of Hungary, of which there are 24 sites of entering sections and only 3 sites of leaving sections. This situation underlines the importance of water quality control at the border section of the river-system, with special attention on sudden changes of quality caused by accidental river pollution incidents abroad.

For this reason the bilateral agreements on transboundary water related questions have a big importance for Hungary. We have seven neighbouring countries around and we have agreements and joint bodies on transboundary co-operation in all relations from decades. In the beginning the agreements covered mainly flood control's questions, later surface water management problem and water quality questions too. In the beginning the agreements were valid only for several kilometres from both side of the frontiers, but today we are going to extend them to the whole catchment area. Nowadays all of the bodies have surface water quality sub-groups, which deal mainly with the assessment of the common monitoring measurements and the discussion of the accidental pollution cases.

In the interest of planning new monitoring systems, analysing and indicating the changes in the water quality we need more information from the upper part of the river basins in connection of the pollution sources, hot spots, etc. We need good inventories related water management for the whole catchment areas.

In this aspect the Helsinki Convention (Convention on the protection and use of transboundary watercourses and international lakes, 1992) and the Sofia Convention (Convention on co-operation for the protection and sustainable use of the Danube river, 1994) will help us to develop and update the transboundary agreements.

The Pilot Project programme

In June 1996, the Guidelines on Water-quality Monitoring & Assessment of Transboundary Rivers, drafted by the Task Force on Monitoring & Assessment under the Convention on Protection and Use of Transboundary Watercourses and International Lakes (Helsinki, 1992), were accepted by the UN/ECE Committee on Environmental Policy.

The Task Force started a pilot project programme to demonstrate the implementation of these Guidelines in a series of river basins and to support countries in the implementation. Furthermore, a revision of the Guidelines was scheduled to include the findings of the pilot projects.

Eight river basins in Europe and central Asia are included in the pilot project programme. The Core Group on Pilot Project under the Task Force, with the Netherlands (RIZA) as lead country, prepares, co-ordinates and supports the programme.

The pilot projects are made up of two phases: the Preparatory phase and the Implementation phase. The duration of the project is about 4 years.

The results of the Preparatory phase are presented in three reports:

1. *Inception Report* (including results of the project preparations)
2. *Synthesis Report* (including inventory results, evaluation of water legislation and regulations and specifications of information needs)
3. *Recommendation Report* (including results of surveys, recommendations for improvement of monitoring and assessment practices and cost estimates)

In the Implementation phase the recommended monitoring system will be operated for about a yearlong period and after the assessment of the experiences the Guidelines will be revised.

Two of the selected river basins belong partly to our country: the Ipel/Ipoly between Slovakia and Hungary, the Mures/Maros between Romania and Hungary. Both are tributaries of the Danube. These projects are complementary with the Danube Environmental Programme, which programme was until now directed to the monitoring of the main course of the Danube and the development of the accident emergency warning system.

The characteristic of the selected pilot river basins

Ipel/Ipoly

The length of the river is almost 250 km, 150 km of which form the border between Slovakia and Hungary. The river basin area is 5121 km², from which 3650 km² belong to Slovakia. River water is used for drinking water supply, industry and agriculture. Also recreation on the river is important; part of the basin is subject of nature protection. The Ipel/Ipoly river basin has more than 300,000 inhabitants, 60% of them rely on drinking water from the Ipel/Ipoly river.

The main problem is formed by the pollution from municipalities, agriculture and industries. Also the high variability of annual discharges forms a problem for the water management in the river basin.

Time series and statistical data of oxygen budget and nutrient parameters during the last decade indicate that the Ipel/Ipoly river is moderately polluted. The water quality has improved in case of some components (e.g. ammonium), mainly after 1990, likely due to the decrease of pollution load from point and diffuse sources. The information about pollution sources is limited. Only the major point sources are monitored for a restricted number of pollutants with insufficient sampling frequency. Serious discrepancy exists between ambient water quality monitoring and pollution source monitoring.

During the previous ten years the characteristic frequency of accidental pollution cases was one per year. Oil pollution and activated sludge release were the typical of the pollution. In some cases with fish kills on Hungarian side the cause of the pollution could not be identified.

Mures/Maros

The Mures/Maros river is a tributary of the Tisza river. The total length of the river on Romanian territory is 761 km; a 24 km long section forms the Hungarian-Romanian boundary. Downstream a 27 km long stretch is in Hungary. The area of the Mures /Maros river basin is 28310 km² on the Romanian territory.

In the river basin surface water resources are used for drinking water (for 2 million persons), industrial and agricultural water supply. Industrial and urban utilities are the two major polluters that affect the quality of the river. Of those with effluent discharge permits, 20 % are considered to be major pollutants. Pollution decreased since 1989 however is still significant.

In the Hungarian part, water quality data over the last ten years of the oxygen budget, nutrients and metals indicate that the Maros is polluted. Actual water uses require improvement of the water quality of the river. The pollution load discharged along Hungarian section has only a small impact on the water quality of the Maros.

During the past ten years five cases of serious accidental pollution occurred in the downstream section of the river. Main pollutants were ammonium, nitrate, oil, cyanide and heavy metals.

The main scope of the monitoring-improvement

Shortcomings in the existing situation need improvement. The monitored media is restricted to water and should be extended to bottom sediments, special pollution parameters and biological monitoring. There are not enough information about the pollution sources, the effluent monitoring is not enough sufficient. We need implementation of revised legislation, training for local experts. The slow data exchange (especially in case of emergency situations) and limited information on water uses are problems too.

The steps of the project:

I. Preparatory phase

1. Agreements between countries (11/1995)

The Hungarian-Slovak and the Hungarian-Romanian Joint Commission on Transboundary Waters agreed on development of projects. The governments have signed Memorandums of Understanding on the common participation in the watersheds. The Memorandums declare that the implementation of the Guidelines on monitoring and assessment needs more workload than the requirements of the present regulations.

2. Inception (1996/97)

* On the basis of bilateral agreement a **project organisation** was established.

* The preparatory works began with arrangement of an **Inception Report** to fulfil the requirements designed in the Task Force and Core Group documents. The first step of the preparation was to define the relation of this project to different bi- and multilateral agreements to avoid overlapping and duplications with other national and international projects. After this stage the actual state of the river basin was revised from point of view of the monitoring and assessment. In the next step the information needs analysis was elaborated.

3. Monitoring and assessment analysis

(1998/99)

* Preparation of the next **reports** on the basis of the available information concerning water quality issues:

a) Inventory

(Content of the reports)

- General characteristics of the river basin
- Water uses and functions
- State of water quality
- Point sources: inventory of the most important point sources of pollution (industrial, municipal and others), production process, pollution composition and discharge load, type of purification process
- Diffuse sources: from land use, traffic, pipe lines, air born pollution, use of fertilisers and pesticides in agriculture
- Accidental pollution: Identification and characterisation potential sources of accidental pollution
- Monitoring systems
- Laboratories, QA/QC
- Data processing and assessment

b) Specification of Information Needs

(Basic elements of the reports)

- Identification of the responsible institutions in water management and the users of information
- After the integrated analysis of the river basin management agreements on the: water uses, ecological functions, problems/issues that have impact on human uses and ecological functions, existing and future pressures, which constitute the problems, water quantity management targets, further measures, etc.
- Prioritising of the problems/issues
- Monitoring objectives
- Selection of the indicators
- Specification of requirements for presentation of information

c) Evaluation of Legislation

(Basic elements for Terms of Reference)

- Inventory of environmental legislation and water classifications methods
- International standards
- Relevant EU legislation
- Comparison of applied standards with internationally recognised risk assessment criteria
- Harmonised system of water classification system

d) Synthesis Report

-The harmonised version of the national Inventories, Legislation Reports and Information Needs Report

*** River basin study tours, workshops**
(1997/98/99)

- Inception and Synthesis work-shops
(To discuss and finalise the project plan, the reports, future tasks, etc.)
- Study tours
(To visit the most important pollution sources, water intakes, etc on the field to know better the neighbouring part of the catchment area)

*** Surveys**
(1999)
Preliminary surveys to obtain omissions in information (water quality, point sources, etc)

*** Recommendation of improvement**
(End of 1999)

II. Implementation phase
(2000)

- * Redesign of monitoring programmes
- * Evaluation of the upgraded situation
- * Recommendation for the joint Transboundary Commissions and the Task Force to improve the monitoring systems and the related guidelines

Although the two projects are still going on, some of their results are clear for us by now. We have more information about the pollution sources, we got their inventories from the neighbouring countries and in generally the quality of the co-operation on expert's level is much better now than it was before the start of these common projects.

Remark: The underlined parts are in very close connection with the subject of the workshop: how could be identified the main pollution sources (and get more information about them) which can have impact on the quality of transboundary waters.

Used literature:

1. Mures/Maros Inception Report 1998. (UN/ECE TFMA)
2. Ipel/Ipoly Inception Report 1998. (UN/ECE TFMA)



UNEP Convention on the protection and Use of Transboundary Watercourses and International Lakes (1992)
Task Force on Monitoring and Assessment

Task Force on Monitoring & Assessment set up in 1994

Goals:

- strategic and methodological guidance on Monitoring & Assessment
- operational/institutional support
- exchange of know-how - platform for Europe

Participating countries and organisations:

Albania, Austria, Azerbaijan, Belarus,
Bosnia & Herzegovina, Bulgaria, Croatia,
Czech Republic, Denmark, Estonia, Germany,
Hungary, Latvia, Netherlands, Poland,
Portugal, Republic of Moldova, Romania,
Russian Federation, Slovakia, Slovenia,
Spain, Ukraine, UN/ECE, WMO, WHO,
Local authority leading institution Netherlands, etc.

Participating countries in Task Force

For more information on the activities of the
Task Force please contact the secretariat at the above address.

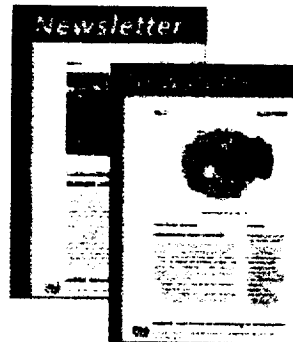
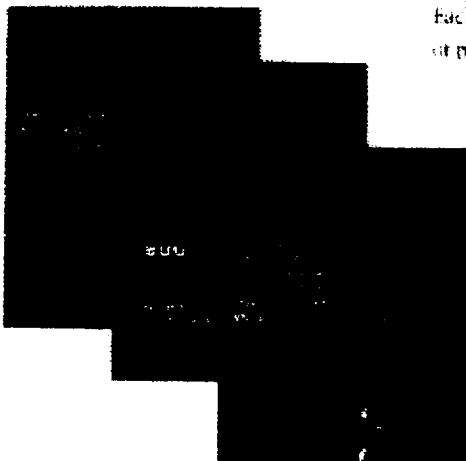
Current programmes:

- guidelines on transboundary rivers
- pilot projects - rivers
- guidelines on transboundary groundwater
- each programme is managed by a CORE GROUP of project leaders and advisors.

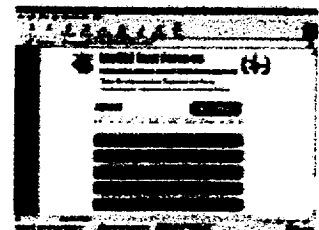
Transboundary watercourses:

- rivers
- groundwater
- lakes
- estuaries

Products:



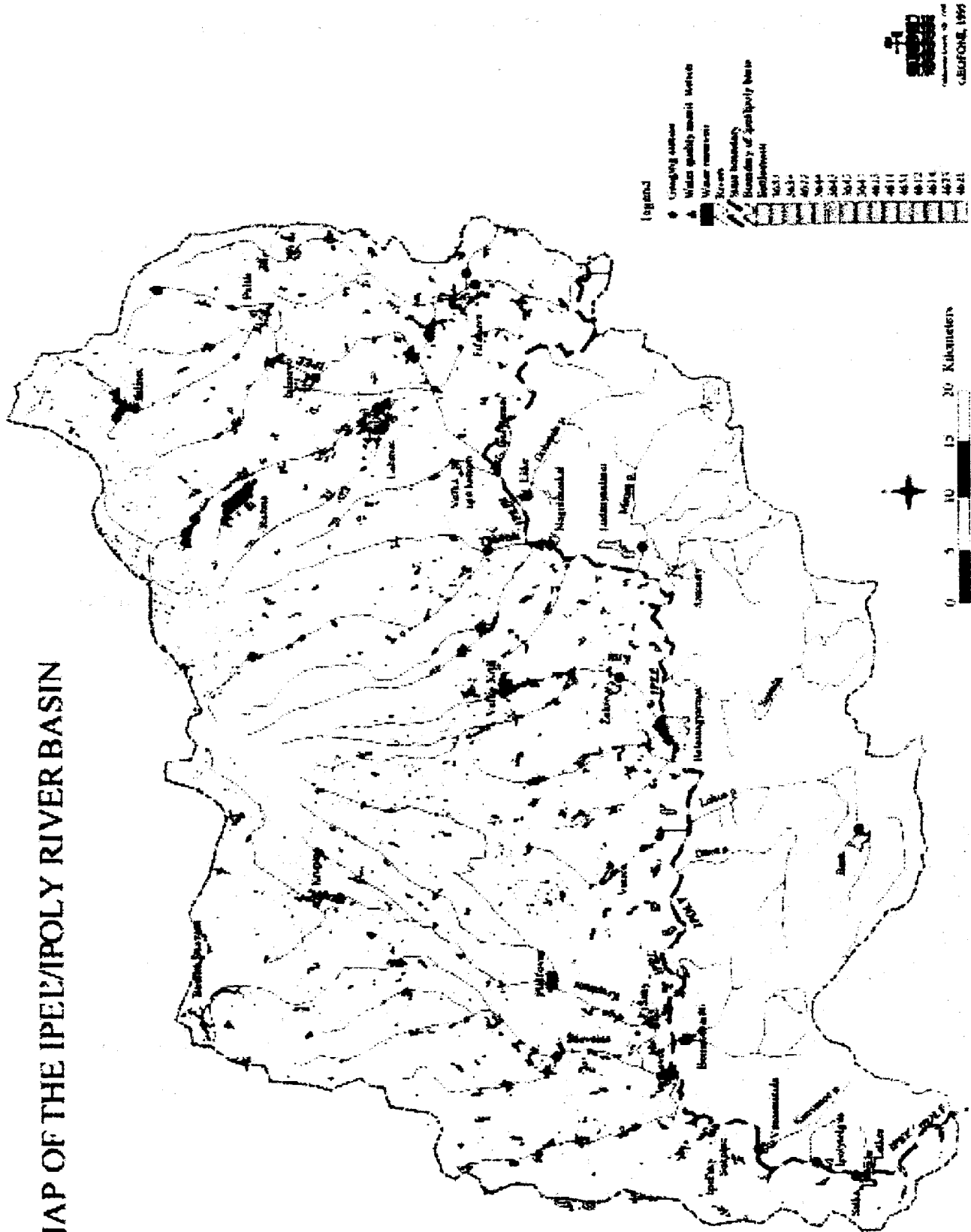
www.watfaid.net/monitoring/watfaid



Water for People Newsletter 1998

Annex 2: Map of the Ipel/ Ipoly River Basin

MAP OF THE IPEL/IPOLY RIVER BASIN



Annex 2: Map of the Mures/Maros in Relation to the Tisa/Tisza and Danube

