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ECONOMIC COMMISSION FOR EUROPE

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

Second meeting

The Hague, Netherlands, 23-25 March 2000

Item 7 (a) of the provisional agenda

GUIDELINES ON MONITORING AND ASSESSMENT OF TRANSBOUNDARY GROUNDWATERS */

Submitted by the Chairman of the task force on monitoring and assessment,
led by the Netherlands, and prepared with the
assistance of the secretariat

1. At their first meeting, the Parties decided to include in their programme of work for the period 1997-2000 the drawing up of guidelines on monitoring and assessment of transboundary groundwaters and the preparation of relevant background documentation for consideration at the second meeting of the Parties (programme element 3.6.1).

*/ This document has not been formally edited.

2. Following this decisions, the task force entrusted a small group of experts from Hungary, the Netherlands, Slovakia, Spain, Ukraine, United Kingdom and the UN/ECE secretariat to prepare such draft guidelines for consideration at the seventh meeting of the task force (Bled, November 1999). This small group of experts hold ten meetings and organized a number of consultations with experts from other countries and organizations, notably experts and organizations involved in the development of the pilot projects on transboundary rivers (see programme element 3.7), experts participating in the activities of other task forces as well as representatives of the secretariats of the World Meteorological Organization (and one of its Collaborating Centres) and UNESCO. Account was also taken of the outcome of the 1997 workshop on groundwater management (see item 6 (a) of the provisional agenda and document MP.WAT/WG.1/1998/5), and consultations were held with the steering group set up for this workshop.

3. In addition, the group of expert prepared, and/or provided assistance and guidance to draw up, four background reports: inventory of transboundary groundwaters (prepared by experts from Hungary), problem-oriented approach and the use of indicators (prepared by experts from the Netherlands), application of models (prepared by experts from Hungary, Netherlands, Slovakia and Ukraine), and state-of-the-art of monitoring and assessment of groundwaters (prepared by experts from the Netherlands).

4. At its seventh meeting, the task force examined and adopted these guidelines on the understanding that they would be submitted to the Parties at their second meeting for official endorsement. 1/ Moreover, the task force considered the opportunity of initiating a pilot programme on transboundary groundwaters following the example of the river pilot programme (programme element 3.7), and entrusted its Chairmen to report on progress made to the second meeting of the Parties.

Draft decisions

5. The Meeting of the Parties may wish to:

(a) Endorse the guidelines on monitoring and assessment of transboundary groundwaters (addendum to be provided under separate cover), and welcome the four background reports; 2/

(b) Invite the Parties and non-Parties to the Convention to apply these guidelines in the framework of cooperation on transboundary water management and, as far as appropriate, in the national context;

(c) Request Riparian Parties to report jointly, preferably through their joint bodies, to the meetings of the Working Group on Monitoring and Assessment as well as to the third meeting of the Parties about their experience gained in the implementation of these guidelines;

(d) Invite non-Parties to inform the Working Group on Monitoring and Assessment as well as the third meeting of the Parties about experience gained in the implementation of these guidelines;

(e) Request the Working Group on Monitoring and Assessment to take these reports into account when considering the need for updating the guidelines;

(f) Request the International Water Assessment Centre (see document MP.WAT/2000/14) to assist the Working Group on Monitoring and Assessment as well as relevant joint bodies in their efforts to provide training on issues dealt with in the guidelines;

(g) Request the secretariat to issue these guidelines in the Water Series in all UN/ECE working languages;

(h) Comment the members of the expert group and the other members of the task force for their excellent work;

(i) Express its gratitude to the Government of the Netherlands for the provision of human and financial resources to support the activities of the task force.

Notes:

1/ As current UN rules and regulations do not provide for translation of meeting documents which exceed 16 pages, the Bureau of the Meeting of the Parties decided at its third meeting on 1 December 1999 to follow the same approach as the UN/ECE Committee on Environmental Policy regarding meeting documents on environmental performance reviews and the Executive Body for the Convention on Long-range Transboundary Air Pollution regarding policy reviews and guidelines on air pollution control. In doing so, the Bureau noted that these rules and regulations do not affect the publication of the guidelines in all UN/ECE working languages once they have been endorsed by the Parties. Following this approach, the annex explains the underlying principles of the guidelines and provides a summary of the most relevant parts.

2/ The guidelines, published in English as an addendum to this document, and the four background reports were / are being distributed by the Chairman of the task force to the focal points under the Convention and other recipients according to the relevant mailing lists. Additional copies will be available at the meeting.

Annex

**DRAFT GUIDELINES ON MONITORING AND ASSESSMENT OF
TRANSBOUNDARY GROUNDWATERS**

Explanatory notes

This annex provides explanatory notes on major conclusions and recommendations of the guidelines. After the endorsement of the guidelines by the Meeting of the Parties, the guidelines will be implemented and tested through a series of pilot projects.

To keep the guidelines up to date and to maintain their role as a high-level guidance document, a revision of the guidelines will be carried out, possibly after a period of 3 years. This revision will be based on the experience gained with the pilot projects. The guidelines will also be updated in the light of technological advances, economic and social factors and changes in scientific knowledge and understanding.

1. The guidelines are not legally binding.
2. The character of the guidelines is strategic rather than technical. They are intended to assist UN/ECE Governments and joint bodies in developing and implementing procedures for monitoring and assessment in a harmonized way.
3. The guidelines form part of a series of guidelines on monitoring and assessment of rivers, groundwaters, lakes and estuaries.
4. The guidelines follow the general approach of the monitoring cycle, as presented in the guidelines on monitoring and assessment of transboundary rivers (MP.WAT/2000/10).
5. Special attention has been given to some specific aspects of groundwater monitoring in comparison with surface water monitoring. When implementing transboundary groundwater monitoring and assessment programmes, it is essential to present the existing hydrogeology in conceptual models and/or in graphic schemes. This should include a characterization of the geometry of the transboundary aquifer, the flow conditions including recharge and discharge areas, and the evolution of the groundwater quality.
6. Characterization and description of relevant transboundary aquifer systems is a prerequisite for monitoring and assessment of transboundary waters in general and transboundary groundwaters in particular. Special attention was given to this aspect.

7. Two features of groundwater systems, the long residence time and the degree of physico-chemical interaction between the water and the containing aquifer material, distinguish them from surface waters. The properties of both the aquifer material and the water are important, and interaction between the water and aquifer material is enhanced by the long residence time.

8. As groundwaters are mostly invisible and less accessible than surface waters, major implications on management actions and related monitoring and assessment will result from these two features. Obtaining the essential information may be technically difficult and costly. Consequently, limitations in groundwater assessment have to be accepted and also need to be recognized in the interpretation and use of monitoring results. This will also influence the possible groundwater resource management strategies and the water-quality goals to be established.

9. Attention has been given to the integrated approach. The integration of surface water and groundwater monitoring networks must be envisaged in order to achieve the necessary effectiveness in management and protection of transboundary water resources. Consequently, both the groundwater and river guidelines should be used in conjunction.

10. In these guidelines, different concepts (the policy life-cycle and the pressure-state-impact-response (DPSIR) concept) are recommended as approaches to define information needs. Attention has been given to the role of indicators. Indicators can play an important role to communicate monitoring results with decision makers since indicators are closely linked to relevant recommendations for management action. When the selection or development of indicators is based on the above concepts, they will result in more harmonized pieces of information.

11. Issues and targets of groundwater management should be prioritized (in accordance with the provisions of the Convention and other relevant agreements) at different scales. These prioritized issues determine to a large extent the information needs which will constitute the basis for monitoring. Attention has been given to the role of risk assessment in priority setting. This assessment should be kept as simple as possible and include considerations of functions and threats in the transboundary region (population density, political important area, etc.). Ideally, such a risk assessment can entirely be based on existing information or on information gathered by surveys.

12. A special chapter has been prepared on joint or coordinated action and institutional arrangements, because the successful drawing up and implementation of policies, strategies and methodologies on groundwater management significantly depend on institutional aspects. These include the organizational structures, arrangements for cooperation and division of responsibilities between involved institutions and organisations.