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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**

**Seminar on Flood Prevention, Protection and Mitigation**  
(Berlin, 21-22 June 2004)

**REPORT OF THE SEMINAR**

Introduction

1. At the invitation of the Government of Germany, the Seminar on flood prevention, protection and mitigation took place in Berlin on 21 and 22 June 2004.
2. The following countries participated in the Seminar: Armenia, Austria, Belarus, Belgium, Czech Republic, Finland, France, Germany, Greece, Hungary, Netherlands, Poland, Portugal, Republic of Moldova, Romania, Serbia and Montenegro, Slovakia, and Sweden. Representatives of the European Commission (DG Environment and DG Joint Research Center) also participated.
3. The Seminar was also attended by representatives of the Regional Office for Europe of the World Health Organization (WHO/EURO), the World Meteorological Organization (WMO), the secretariat of the International Commission for the Protection of the Danube River (ICPDR), the secretariat of the Convention on Wetlands (Ramsar, Iran, 1971), the International Rainwater Harvesting Alliance (IRHA) and the World Wide Fund for Nature (WWF, Auen Institute, Germany).

## I. OBJECTIVES

4. The Seminar was designed to provide a platform for governmental officials, policy and decision makers, lawyers, economists, managers and technical experts to share their experience with the implementation of the Guidelines on Sustainable Flood Prevention, adopted by the Parties to the Convention in March 2000, and to assist the Task Force on Flood Prevention, Protection and Mitigation, led by Germany, to explore options, including the possibility of drawing up a legal instrument under the Convention, to further develop and strengthen a common framework for flood protection, prevention and mitigation.

## II. PROCEDURES

5. Ms. Henriette Berg, Head of Department, German Federal Ministry for the Environment, Nature Protection and Nuclear Safety, opened the Seminar and delivered a speech on behalf of the host country. The secretariat also addressed the participants.

6. Mr. Otto Malek (Germany) was elected Chairman and Mr. Sandor Todt (Hungary) and Mr. Zbigniew Kundzewicz (Poland) were elected Vice-Chairmen.

## III. SEMINAR DOCUMENTS AND STATEMENTS<sup>1</sup>

7. The Seminar had before it reports on experience gained in the implementation of the Guidelines on sustainable flood prevention (MP.WAT/SEM.3/2004/4), drawn up by Germany,<sup>2</sup> and on possible options to further develop and strengthen a common framework for flood protection, prevention and mitigation (MP.WAT/SEM.3/2004/5), prepared by the secretariat.

8. In addition to these documents, the Seminar considered and took note of keynote lectures: (a) by representatives of France and Romania on national and local action, including the creation of a national “flood vigilance system” and the use of geographic information systems (GIS) to locate floods and trace impacted sites in France, and the use in Romania of the “river-basin solidarity principle”; (b) by Belarus on the river Pripyat project on integrated water resources management plans, biodiversity and landscape protection from local, national and transboundary perspectives; (c) by Hungary and the Netherlands on joint and coordinated action in transboundary river basins, including the “Budapest initiative on strengthening international cooperation on sustainable regional development”; (d) by Poland on lessons drawn from flood reporting by the media; (e) by the European Commission on the European initiative on flood

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<sup>1</sup> The meeting documents (MP.WAT/SEM.3/2004/1 to 5), the keynote lectures and the countries' background report are available at the Convention's web site at <http://www.unece.org/env/water/meetings/flood/seminar.htm>. The Government of Germany will publish the proceedings of the Seminar in autumn 2004.

<sup>2</sup> During the discussion, the following two amendments were made to paragraph 6 of this document:

- For Morava substitute Elbe
- For Bilateral and trilateral agreements substitute Bilateral and multilateral agreements.

protection, stating with a Communication of the Commission and a final statement that the joint goals is the improvement of cooperation and coordination at river basin level to improve flood protection; and (f) by the WMO and the European Commission's Joint Research Center regarding their programmes on integrated flood management.

9. The Seminar also took note of country reports which were referred to during the discussion and circulated as conference room papers. Moreover, it took note of statements by WHO/EURO on the health-related aspects of floods and the potential impact of climate change; by the Ramsar Convention secretariat on ecosystem considerations, the traditional values of flood plains for local populations, and the advantage of re-establishing retention areas against structural measures; and by IHRA on the need for joint flood and drought management as well as rainwater harvesting as a major freshwater supply option in many locations in the world and as a significant complementary provision in other parts to adapt to climate changes and weather conditions.

10. The Seminar took note of a written joint statement by Armenia, Belarus and the Republic of Moldova, which voiced the need to draw up and sign an international agreement on the prevention, control and reduction of damage caused by floods and to initiate international assistance to implement European best practice. The Seminar also took also note of the interventions by participants from EU Member States regarding the legal dimension of the common framework. One country fully supported the idea of drawing up a pan-European agreement on floods, preferably as a protocol to the Convention. Other countries, while questioning the need for a pan-European agreement, stated that they would cooperate in its development, provided that there was sufficient demand from non-EU member States for such an option and that further investigations showed gaps in existing treaties. Other EU Member States held that all substantial flood issues were already regulated in their bilateral agreements. One country suggested the preparation of a pan-European code of conduct as an intermediate step, if there was no consensus to embark on the preparation of a legal instrument.

#### **IV. OUTCOME OF THE SEMINAR**

11. The Seminar concluded that the UNECE Guidelines on sustainable flood prevention were an effective instrument to guide action on flood prevention, protection and mitigation at local, national and transboundary levels. The Seminar participants saw no need for a substantial revision of these Guidelines.

12. To further develop the common pan-European framework on flood prevention, protection and mitigation, the Seminar recommended to continue work on three major options:<sup>3</sup>

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<sup>3</sup> At the third task force meeting, held on 23 June 2004 in Berlin, Hungary expressed its readiness to further develop the capacity building option, and Germany the policy-guidance-and-advice option. Greece expressed its readiness to guide the work of the Convention's Legal Board on the legal-instruments-and-support option. Other countries represented in the task force expressed their readiness for work sharing. The Legal Board at its first meeting on 28-29 June 2004 agreed to provide its advice on the subject matter and inserted it into the agenda for its second meeting (Geneva, 16-17 September 2004).

**(a) Capacity-building.**

A capacity-building component under the common framework could provide training for local and national authorities as well as joint bodies responsible for transboundary water cooperation (see annex for details);

**(b) Policy guidance and advice.**

A “soft-law” component could present recommendations to policy makers, governmental authorities as well as municipal and local authorities on issues that were not taken up in the Guidelines. In further developing this option, the link between the Guidelines and the EU Best Practice Document should be taken into account (see annex for details);

**(c) Legal instruments and support**

On the basis of an analysis of gaps in international flood agreements and requests for assistance, a legal component may be designed. This legal component could offer model provisions on floods for States riparian to the same transboundary waters, so as to establish or update relevant provisions of bilateral or multilateral agreements. It could also be at the root of a UNECE regional agreement. Efforts to draw up and implement legal instruments should build on existing processes within the European Union and UNECE and among countries sharing transboundary waters.

13. In support of these three options, the Seminar also drew conclusions from the deliberations and made additional recommendations on policy development, guidance and capacity-building (annex).

14. The conclusions and recommendations, together with the activities set out in the terms of reference of the Task Force on Flood Prevention, Protection and Mitigation, with Germany as lead country (see programme element 2.1 on flood protection of the 2004-2006 work-plan under the Convention, ECE/MP.WAT/15/Add.2), will provide the basis for the further work of the Task Force until the first meeting of the Working Group on Integrated Water Resources Management (Geneva, December 2004) and thereafter.

15. On behalf of the participants, the delegation of Greece thanked the Government of Germany and the host of the Seminar, the Federal Ministry for Environment, for the excellent arrangements that had been made and for the cordial hospitality extended to them during the Seminar. The secretariat expressed its gratitude for the financial assistance provided by Germany to enable representatives of countries in transition to attend the meeting and to cover the participation of secretariat staff.

Annex**CONCLUSIONS AND RECOMMENDATIONS RELATED TO POLICY DEVELOPMENT, GUIDANCE AND CAPACITY-BUILDING**

1. At their second meeting on 23-25 March 2000 in The Hague, Netherlands, the Parties to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes adopted the Guidelines for sustainable flood prevention (MP.WAT/2000/7). Parties and non-Parties to the Convention were recommended to apply these Guidelines in the framework of their cooperation in transboundary water management, and where necessary, within the national context. The Guidelines contain recommendations for measures and management practices to prevent, control and reduce adverse impact of flood events on human health and safety, on valuable goods and property and on the aquatic and terrestrial environment. The Parties agreed to pass on their experiences in the application of the guidelines at the fourth meeting of the Parties in 2006.

2. At their third meeting on 26-28 November 2003 in Madrid, the Parties reiterated the need for transboundary cooperation on flood prevention and protection. They welcomed the fact that the Guidelines had been incorporated into the work of the European Union and served as a basis for its Best Practice Document on Flood Prevention, Protection and Mitigation. In reference to the decision taken at the second meeting, it was confirmed that the experience gained in applying the Guidelines would be reviewed. Germany's offer to organize an international conference in the form of a UNECE seminar in June 2004 in Berlin was welcomed.

3. In support of the Seminar, a task force, headed by Germany, was set up. It met on 19-20 January 2004 in Berlin and on 26-27 April 2004 in Budapest. To prepare the Seminar, a questionnaire on the Guidelines was drawn up and its responses evaluated (see MP.WAT/SEM.3/2004/4).

Guidelines on sustainable flood prevention

4. In many countries, the Guidelines on sustainable flood prevention have already been incorporated into national legislative acts or programmes and, in some cases, in international agreements. Flood prevention, protection and mitigation measures have become part of the work of international river commissions and other joint bodies which have been established in virtually all large river basins in Europe. In some cases flood action plans have been adopted, or are in the preparation or planning stages.

5. The Guidelines' recommendations for measures and management practices to prevent, control and reduce the adverse impact of flood events on human health and safety, on valuable goods and property and on the aquatic and terrestrial environment remain valid. The same applies to the principles and approaches put forward in the Guidelines on policies and strategies, and joint and coordinated actions.

6. Moreover, the Guidelines' recommendations on the provision of information in the case of flood events, mutual assistance, the drawing-up of alarm and emergency plans and

awareness raising among the broad public have already been implemented in many countries; others are planning to do so.

7. In some countries, binding regulations facilitated the implementation of the Guidelines at local and national level. As concerns transboundary basins, bilateral and multilateral action plans were a good means to make the implementation of the Guidelines possible.

8. This highlights the fact that the UNECE Guidelines on sustainable flood prevention and the proposed measures for local, national and transboundary action were effective ways and means for flood prevention, protection and mitigation. Therefore, there was no need for a substantial revision of these Guidelines.

#### Policy guidance on flood protection, prevention and mitigation

9. The Seminar participants felt that further policy guidance was needed on such issues as:

- (a) The use of GIS;
- (b) Flash floods in urban areas;
- (c) Mud flows and flash floods in mountainous areas;
- (d) The link between floods and accidental pollution of waters;
- (e) The interlinkages between flood and drought management and enhancing/stimulating appropriate land use change in the framework of landscape management;
- (f) The potential of rainwater harvesting; and
- (g) The consideration of effects of possible climate change in flood action plans.

10. The Seminar also examined the following issues:

- (a) Application of the solidarity principle, as set out in the EU Best Practice Document, across the entire UNECE region;
- (b) Better use of existing financial supporting mechanisms for non-EU member States sharing river basins with the EU and supporting initiatives, particularly the EU Water Initiative's component for Eastern Europe, the Caucasus and Central Asia as well as the Balkan countries, as well as the clustering of programmes, carried out under the auspices of the United Nations Environment Programme and the Food and Agriculture Organisation of the United Nations, with sustainable regional management based on river-basin-based flood management;

(c) Taking into account the principles of the Convention on Environmental Impact Assessment in a Transboundary Context and its Protocol on Strategic Environmental Assessment in order to better integrate environmental and health considerations in the preparation of flood action plans and programmes;

(d) Consideration of the hazards posed by floods on installations containing hazardous substances according to article 2 of the Convention on the Transboundary Effects of Industrial Accidents;

(e) Organization of joint post-flood assessments in transboundary river basins and, if appropriate, UNECE-wide;

(f) Further investigations of possible effects of climate change on floods and consideration of these potential effects in flood action plans and environment-and-health action plans;

(g) Adjustment of spatial planning legislation, if not already done so, in order to include “water and its various functions” in the decision-making process at the local level and basin-wide, and to improve decision-making and integration between sectors.

11. Moreover, the Seminar considered the possibility of introducing binding and non-binding measures in transboundary cooperation activities:

(a) Binding measures would encompass data supply and exchange (e.g. hydro-meteorological and hydrological data on the formation of floods, operational data as well as the regulation of the operation of upstream impoundment structures, planned and existing human activities that may have an impact on the regime of the waters, announcement of alert levels and operation of emergency reservoirs and polders) as well as the joint preparation of contingency and confinement plans in transboundary river basins;

(b) Non-binding (i.e. recommended) measures would encompass: adaptations of existing practices in order to achieve sustainable land use patterns, enhance natural retention or reduce damage potential; training and incentives to reveal and use the benefits of floods (e.g. landscape management, rehabilitation and maintenance of pastures, floodplain forests, wetlands); flood risk assessment and mapping; raising public awareness, including preparedness to enhance self-protection and self-help; and transboundary assistance.

12. The Seminar underlined that local authorities needed flood information to perform their duties properly and noted that local authorities’ associations had played an important role in data and information gathering and communication. Cooperation among local authorities themselves as well as between local authorities, river basin authorities and provincial and national bodies remained a challenge river-basin-wide. To prevent conflicts, river-basin-wide flood action plans and local flood action plans need to be harmonized. There was also a need for addressing local authorities in capacity-building programmes.

13. The Seminar recommended paying more attention to the possibilities for enlarging areas for retention and storage in regional and local water systems. As set out in the Guidelines, the retention of water on the soil should have priority over swift run-off. In

implementing this recommendation, attention should also be paid to the aquifer systems and their storage potential during flood events. To restore retention areas, the Seminar, moreover, recommended the drawing-up of inventories of retention areas in the various river basins as an important tool to document the increase or the loss of potential storage capacities. In doing so, due attention should be paid to the proper selection of a reference point, i.e. the recurrence interval of “design floods”. Particular attention should be paid to retention areas located in the areas of flood formation; their establishment and maintenance could be promoted through local and/or national laws and regulations.

14. The Seminar participants also addressed the media to help providing flood information (e.g. disseminate flood and weather forecasts, inform about processes and consequences of floods), while avoiding sensationalist reporting. To this end, services with the media should be arranged ahead of possible flood events, and information should be prepared in a commonly understandable format such as fact sheets. To be successful, the media should be kept informed, and not only during flood events. The media may also be invited to visit crisis management centres and other institutions to become familiar with the work undertaken.

15. The Seminar participants suggested that the Guidelines, once supplemented by one or more of the above topics, could be issued in the form of a web-based document, which could be further updated and supplemented, if need be. It remains to be discussed in other forums (e.g. the task force or the Convention’s Working Group on Integrated Water Resources Management), whether interactive work with the Guidelines should be explored.

#### Capacity-building

16. The Seminar participants proposed a more extensive exchange of experience among the Parties to the Convention, since in many countries a number of measures set out in the Guidelines were still in the preparation or planning stages and further experience would be available only at a later date. Partners of the international river basin commissions, other joint bodies, institutions of the European Commission, relevant United Nations agencies and programmes, and NGOs should also be included in the experience exchange. Examples of topics include the exchange of information on methods for the evaluation of damage and procedures for flood damage compensation. As discussed in the previous section, there was also a need for addressing local authorities in capacity-building programmes.

17. Seminar participants also voiced the need for sharing experience with other regions in the world, and suggested, for example, the distribution of information on the UNECE Guidelines on sustainable flood prevention at the Fourth World Water Forum and other global events.

18. There was an obvious need for widening the scope of capacity-building programmes, which usually aimed to improve flood forecasts and warning, raise preparedness and build response capacities. Such a broadened scope should include activities to enhance technologies and harmonize methodologies for risk assessment and mapping. Training and incentive development were also needed to support a process of adaptation, i.e. the “living-



with-floods” paradigm; possible topics should include appropriate land use and flood plain management.

19. The Seminar participants agreed to build also on the recommendations and experience of the “Budapest initiative on strengthening international cooperation on sustainable regional development“ when sharing experiences, developing best practices, and further shaping the common pan-European framework for integrated river-basin based flood and drought management. The Budapest Initiative was considered as an effective consultation forum for innovative initiatives, catalysing efforts aimed at proper and fast use of the results of transnational cooperation to support EU and UNECE endeavours in managing the risks of floods and droughts.