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Work of the Task Forces: water supply and sanitation in short-term critical situations and adaptation to climate change

Draft guidance on water supply and sanitation in extreme weather events

Submitted by the Chair of the Task Force on Extreme Weather Events*

Summary

The present document is submitted pursuant to a decision by the Working Group on Water and Health at its third meeting (Geneva, 27–28 May 2010; ECE/MP.WH/WG.1/2010/2–EUR/10/56335/II). The document summarizes the process of preparation of the draft guidance on water supply and sanitation in extreme weather events (submitted under separate cover) and contains a proposal for a decision by the Meeting of the Parties to Protocol on Water and Health concerning its adoption.

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^{*} Late submission.

I. Background on the development of the draft guidance on water supply and sanitation in extreme weather events

- 1. Extreme weather events such as floods and droughts are occurring with increasing frequency and intensity in the pan-European region. They affect the capacity and operations of existing water and sanitation infrastructures and services, and thereby threaten the protection such services offer to human health and the environment. Therefore, water and sanitation are key components of any adaptation strategy aimed a preserving human health in a changing world.
- 2. Water supply and sanitation are crucial determinants of health, especially during emergencies, but failing or compromised water and sanitation services may in themselves pose a risk, a sometimes irreversible source of contamination, whose impact goes beyond local and national borders.
- 3. Under extreme pressure all the different elements of water utility services like abstraction, treatment, mains supply, sewerage systems, sewage treatment works and effluent discharge may become key environmental health determinants, increasing the risk of chemical and biological contamination of water for human consumption, food and bathing waters, and also the risk of vector-borne diseases and those spread by rodents. Water and soil contamination may result from effluent discharge during floods or water supplied may contain higher concentrations of pollutants in a drought, and the ability of natural ecosystems to assimilate wastes will be affected by inadequate water for sanitation. In large cities, water scarcity can reduce the self-cleaning capacity of sewers, and flooding can exacerbate storm water overflows and the resulting pollution. In poor and rural areas, environmental health hazards are often even more significant, as water supply and sanitation infrastructure is lacking, in a bad state, or because small service suppliers cannot cope with adverse weather conditions.
- 4. Therefore, water supply and sanitation services need to be prepared for the consequences of floods and droughts. These impacts will also have to be taken into account in the design and construction of new infrastructure for water supply and sanitation, such as new reservoirs. However, it is not simply a problem of finding engineering solutions, but a more complex quest for adaptation measures to improve joint coping capacities, as joint efforts are needed from all sectors involved in the sustainable protection of water resources and the risk management of exposed populations to unhealthy environmental risk factors.
- 5. To tackle these problems and to promote adaptation to climate change of water supply and sanitation facilities, the Meeting of the Parties to the Protocol on Water and Health decided at its first session (Geneva, Switzerland, 17–19 January 2007) to establish a Task Force on Extreme Weather Events under the leadership of Italy and entrusted it to prepare a strategy paper on how to cope with the potential impact of climate change, and on adaptation and mitigation programmes for water supply and sanitation (see ECE/MP.WH/2/Add.5-EUR/06/5069385/1/Add.5).
- 6. To achieve this task, the Task Force held two meetings (Rome, Italy, 21–22 April 2008 and Geneva, Switzerland, 27–28 October 2009) and established a multidisciplinary drafting group made up of representatives of national authorities, international organizations and non-governmental organizations (Azerbaijan, the Czech Republic, Germany, Hungary, Italy, the Netherlands, the Republic of Moldova, the United Kingdom, the World Meteorological Organization (WMO), the Regional Office for Europe of the World Health Organization and the non-governmental organization "Armenian Women for Health and Healthy Environment"). The drafting group was chaired by Italy. To foster the involvement of experts from countries in Eastern Europe, the Caucasus and Central Asia,

the draft guidance was also presented at the workshop, "Climate Change, Water and Health", hosted by the Romanian Ministry of the Environment and Forests back to back with the Joint Meeting of the European Union Water Initiative EECCA¹ Working Group and the Environmental Action Programme Task Force's Group of Senior Officials for Water Sector Reform in Eastern Europe, Caucasus and Central Asia of the Organization for Economic Cooperation and Development (24–25 November 2009, Bucharest).

- 7. In accordance with a decision made by the joint meeting of the Bureaux of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) and of the Protocol on Water and Health (13 September 2007), the Task Force on Extreme Weather Events cooperated with the Task Force on Water and Climate under the Water Convention, led by the Netherlands and Germany.
- 8. The draft guidance is based on experience and good practices in the pan-European region; its preparation relied on a broad consultative process. Beside the two meetings of the Task Force on Extreme Weather Events, the draft guidance was reviewed and discussed at the second meeting of the Water Convention's Task Force on Water and Climate (Geneva, 24 April 2009), and at the second and third meetings of the Working Group on Water and Health (Geneva, 2–3 July 2009 and 27–28 May 2010). Moreover, the draft guidance was also submitted for review to experts with specific competence on the different aspects covered by it. Utilities managers were involved in all parts of the guidance development process and an ad hoc meeting was hosted in London in March 2010 by the European Federation of National Associations of Drinking Water Suppliers and Waste Water Services (EUREAU) to foster further discussion between the drafting group and EUREAU experts.
- 9. The draft guidance provides an overview of why and how adaptation policies should consider the vulnerability of and new risk elements for health and environment arising from water services management during adverse weather episodes.
- 10. The draft guidance is intended to guide Parties and non-Parties to the Protocol on Water and Health in the implementation of the Protocol's provisions in the context of extreme weather events. It is targeted at a broad audience, including policymakers, environment, health and water resources professionals, and water service managers.
- 11. An integrated environment and health approach steers the overall document. Possible cross-cutting issues such as the role of environment, climate and health sectors in weather extremes; the need for policy dialogue and multisector partnership building; and the challenge of different settings (urban vs. rural, small vs. centralized large scale suppliers) are addressed.

II. The way forward: implementation of the guidance

- 12. The guidance calls for action in adapting water supply and sanitation facilities to climate change: by adopting it, the Parties commit to such action and to the guidance's implementation. Proposed activities to support the guidance implementation under the Protocol's workplan for 2011–2013 (ECE/MP.WH/2010/L.1–EUR/EUDHP1003944/4.2/1/3) include the following elements:
 - Promoting and supporting the use of the guidance on water supply and sanitation in
 extreme weather events, notably through the exchange of experience, capacitybuilding and training (under Italian leadership);

¹ Eastern Europe, the Caucasus and Central Asia.

- Providing support to the development of a methodology for the assessment of resilience to the impact of climate change in water supply and sanitation networks, in cooperation with World Health Organization headquarters;
- Providing support to countries to include risks related to extreme weather events in the development and implementation of water safety plans;
- Developing decision-support tools to balance new water resources —
 desalinization, groundwater recharge, use of treated wastewater in agriculture and
 rainwater harvesting with quality needs. This is necessary because new water
 resources will become increasingly important to meet demand, especially in areas
 where drought events are more likely to become more frequent.

III. Proposed action by the Meeting of the Parties

- 13. The Meeting of the Parties may wish:
- (a) To adopt the guidance on water supply and sanitation in extreme weather events (presented under separate cover);
- (b) To invite Parties and non-Parties to the Protocol to implement the guidance in the framework of their national adaptation efforts, in the management of water supply and sanitation management in emergencies and in the design and construction of new facilities;
- (c) To request the Working Group on Water and Health to promote the implementation of the guidance, including through the development of capacity-building and awareness raising activities;
- (d) To review, at its third session, experience with the implementation of the technical guidance and decide, if need be, to update it in the light of practice and lessons learned;
- (e) To express its gratitude to the Governments of Italy for its leadership in the development of the guidance and the financial contributions made and to the Government of the Netherlands for the financial support;
- (f) To commend members of the drafting group and especially the lead authors as well as all the reviewers and all experts who contributed to the guidance, for their excellent work.

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