



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/MP.WH/WG.1/2008/3  
EUR/08/5086340/7  
17 April 2008

Original: ENGLISH

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**ECONOMIC COMMISSION FOR EUROPE**

**WORLD HEALTH ORGANIZATION  
REGIONAL OFFICE FOR EUROPE**

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

Working Group on Water and Health

First meeting  
Geneva, 26–27 June 2008  
Item 5 of the provisional agenda

**SURVEILLANCE AND EARLY-WARNING SYSTEMS, CONTINGENCY PLANS  
AND RESPONSE CAPACITIES**

**PROGRESS REPORT ON THE ACTIVITIES OF THE TASK FORCE ON  
SURVEILLANCE AND PROSPECTS FOR ITS FUTURE WORK**

Note by the Chairperson of the Task Force on Surveillance

**I. BACKGROUND**

1. The first meeting of the Parties to the Protocol on Water and Health to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Geneva, 17–19 January 2007) established a Task Force on Surveillance, led by Italy. The Task Force was entrusted with providing assistance to Parties in establishing and/or strengthening outbreak detection and response systems, including assessment and improvement of national and/or local

surveillance, outbreak detection and early warning systems, contingency plans and capacity response (see ECE/MP.WH/2/Add.5 - EUR/06/5069385/1/Add.5).

2. The Italian National Institute of Health (Istituto Superiore di Sanità, or ISS) organized the first meeting of the Task Force in Rome on 24 and 25 September 2007. The meeting was attended by representatives from Finland, Germany, Hungary, Italy, Kyrgyzstan, Norway, Romania and Slovakia.

3. As a basis for its work, the Task Force took into account the work accomplished before the first meeting of the Parties under the Convention's Working Group on Water and Health, as well as the guidance documents of the World Health Organization (WHO) related to communicable disease surveillance and the entry into force of the International Health Regulations (IHR, 2005).

4. The Task Force is developing its activities in a framework of cooperation with the WHO Centralized Information System for Infectious Diseases (CISID), the WHO Health for All database, the European Centre for Disease Surveillance and Control, the WHO Epidemic and Pandemic Alert and Response system and the WHO Collaborating Centre for Health-Promoting Water Management and Risk Communication.

## **II. WORK TO BE UNDERTAKEN**

5. In accordance with its mandate, the Task Force shall:

(a) Prepare guidelines on surveillance, outbreak detection and early warning systems contingency plans and capacity response - taking into account established WHO guidelines - for adoption by the Parties at their second meeting (to be also translated into Russian);

(b) Support the guidelines' implementation by providing assistance, upon request, to Parties and non-Parties through in-country missions (up to six missions to be organized for the period 2008-2009).

6. During its first meeting, the Task Force discussed and planned the following activities to be conducted up to the second meeting of the Parties:

(a) Drafting of a questionnaire to assess the current capacity of water-related disease surveillance, and collection, elaboration and publication of replies;

(b) Drafting of guidance materials (technical and policy guidelines);

(c) Organization of a scientific workshop;

(d) Planning for assistance and in-country support.

#### **A. Questionnaire to assess the current capacity for water-related disease surveillance, and elaboration and publication of replies**

7. At its first meeting, the Task Force discussed and approved a questionnaire requesting information on the surveillance of diseases which can be transmitted through water in relation to: priority; emerging locally important diseases; organization of the surveillance systems; laboratory capabilities to detect pathogenic microorganisms; public information on the importance of water-related diseases; outbreak detection; capacity of response; training; and databases and mapping/geographic information systems (GIS) resources (see ECE/MP.WH/WG.1/2008/4 - EUR/08/5086340/8).

8. The questionnaire has been hosted in electronic format on a protected section of the of the ISS website (<http://cms2.iss.it/>) since the end of February 2008. The questionnaire, as well as information on registration, access and compiling, have been sent to the Protocol's national focal points.

9. Regretfully, by end of April 2008, only seven countries had replied to the questionnaire (Andorra, the Czech Republic, Estonia, Finland, Hungary, Norway and Slovakia).

10. The information collected through the questionnaire is especially important for the activities of the Task Force. Hence it is crucial that Parties and non-Parties reply, and in this regard the role of focal points in facilitating such replies is of vital importance. The needs to translate the questionnaire into Russian, in order to overcome the language barrier, and in general to solicit the replies were also recognized.

11. The information gathered through the questionnaire will be used to prepare an up-to-date review of the state of the art of surveillance systems of water-related diseases in the UNECE region. This information will also be used to estimate the burden of water-related diseases in the region and to identify critical areas/situations, and will help define assistance programmes and training activities.

12. It is proposed to publish the results of this analysis.

#### **B. Guidance materials – Technical and policy guidelines**

13. The Task Force shall support Parties and Signatories by preparing guidance documents on water-related disease surveillance systems.

14. Further to this aim, the Task Force agreed to use as a basis the technical guidelines elaborated by the Working Group on Water and Health before the first meeting of the Parties. The Task Force agreed on a sharing of responsibilities and a time schedule for finalizing the guidance document.

15. The Task Force also agreed to elaborate policy guidance targeting political and health authorities, to provide useful and simple tools to improve their awareness on the importance of

water-related diseases. ISS is elaborating the first draft of this document, which should be ready by the end of May 2008.

16. The annex contains the outline of both policy and technical guidance.

### **C. Scientific workshop**

17. The Task Force discussed the issue of organization of specific scientific workshops. The following issue was considered of particular interest for the activities of Task Force: how to assess the relative weight of water-related diseases in the overall burden of communicable disease in the UNECE Region, also taking into account the experiences gained in the different countries.

### **D. Assistance and in-country support**

18. This activity will be defined on the basis of analysis of replies to the questionnaire and will depend on specific requests by Parties and non-Parties as well as available resources. In fact, some countries have already requested assistance for the organization of water-related disease surveillance systems or training.

### **E. Future workplan**

19. The activities of the Task Force are scheduled, as follows:

- (a) June 2008: draft of the policy guidance document;
- (b) September 2008: first draft of the document with the analysis of the results from the replies to the questionnaire;
- (c) October 2008: second meeting of the Task Force;
- (d) December 2008: scientific workshop.

## **III. PROPOSED ACTION BY THE WORKING GROUP**

20. Considering the crucial importance of receiving replies to the questionnaire vis-à-vis the future work of the Task Force, the Working Group is invited to discuss and agree on ways and means to increase the number of replies, in particular from Parties to the Protocol.

21. The Working Group is also invited to comment and advice the Task Force on the work achieved – in particular on the prepared guidance document – and on the planned future activities.

22. In particular, the Working Group is invited to agree on the proposed new activities to be included in the programme of work of the Task Force, namely the preparation and publication of

the results of the survey providing a review of the state of the art of surveillance systems of water-related diseases in the UNECE region, an estimate of the burden of water-related diseases and an identification of critical areas/situations, as well as the organization of a scientific workshop.

23. The Working Group should also discuss and agree on ways and means to mobilize the missing funds needed to implement the programme of work of the Task Force. These include the resources needed for:

(a) The publication of the analysis of data and information elaborated from the replies to the questionnaires (if it is so decided);

(b) The provision of in-country assistance;

(c) The organization of a scientific workshop (if it is so decided);

(d) The organization of the second meeting of the Task Force.

## **Annex**

### **OUTLINE OF THE GUIDANCE ON WATER RELATED DISEASES SURVEILLANCE As agreed by the Task Force on Surveillance**

#### SECTION 1: POLICY-SETTING

1. Problem-setting
2. Water-related diseases
  - A. Definition of water-related diseases
  - B. Economic importance to national development
3. National policy requirements
  - A. National health systems and water-related diseases
    - i. Core functions
    - ii. Laboratory management and accreditation
    - iii. Capacity-building and continuous education
  - B. Importance of outbreak detection, prevention and management
  - C. Intersectoral collaboration
4. International policy aspects
  - A. Transboundary cooperation
  - B. Compliance with binding international agreements
  - C. Participating to international cooperation programmes

## SECTION 2: TECHNICAL GUIDANCE

This section is based on guidance previously prepared by the WHO Collaborating Centre on Health Promoting Water Management and Risk Communication at the Institute of Hygiene, University of Bonn, Germany. Unless otherwise indicated, the Collaborating Centre will update the information contained herein in accordance with the timetable agreed by the Task Force.

1. Introduction
2. Water-related pathogens
  - A. Bacteriological diseases
  - B. Viral infections
  - C. Protozoan diseases
  - D. Helminth infections
  - E. Emerging pathogens, including cyanobacteria (Enzo Funari)
3. Chemical risks
  - A. General considerations
    - i. Organoleptic assessment
    - ii. Drinking water treatment and distribution
    - iii. Basis for calculating guideline values
  - B. Selected parameters
    - i. Inorganics
    - ii. Organics
    - iii. Radioactivity (Venera Djudemisheva)
4. Water safety
  - A. Water source
    - i. Vulnerability of the water source
    - ii. Measures for groundwater protection
    - iii. Measures for surface water protection
  - B. Water treatment
    - i. Primary rural water treatment
    - ii. Centralized water treatment
    - iii. Disinfection by-products (Mihály Kádár)
    - iv. Vulnerability of the production units
    - v. In-house treatment

- vi. Choice of household treatment methods
- C. Water distribution networks
  - i. Integrity of the network
  - ii. Vulnerability of the distribution networks
  - iii. Compromised networks
- D. Monitoring
  - i. Pathogens transmitted by drinking water (examples of recent outbreaks)
  - ii. Development of measures ensuring the supply of safe drinking water
  - iii. Drinking water contamination in compromised networks
  - iv. Microscopic testing as monitoring tool (Mihály Kádár)
  - v. Toxicity (Mihály Kádár)
- E. Water safety plans
  - i. Hazard analysis
  - ii. Differences and complementarity between Hazard Analysis and Critical Control Points (HACCP) approach and water safety plans
  - iii. Development of a water safety plan
  - iv. Water safety in buildings
- 5. Water-related disease surveillance
  - A. General
    - i. Why surveillance
    - ii. Approaches to water-related disease surveillance
  - B. Setting up a national water-related disease surveillance system
    - i. Introduction
    - ii. Data collection
    - iii. Data management and analysis
    - iv. Response capability and contingency plans
  - C. Evaluating a surveillance system
    - i. Criteria
    - ii. Process evaluation criteria
  - D. Epidemiology
    - i. Basic epidemiological concepts
    - ii. Basic study design



- iii. Sources of errors in epidemiological studies
- E. Specific methodological challenges
  - i. Study design
  - ii. Exposure assessment
  - iii. Measurement of health outcomes
  - iv. Analysis
- F. Detection, investigation and reporting of water-related disease outbreaks (T. Krogh, I. Miettinen)
  - i. Preparation
  - ii. Response
- G. Summary
- H. Sources of additional information
- 6. Application of geographical information systems (GIS) to epidemiological studies
  - A. Introduction
  - B. Application of GIS to water-related disease epidemiology
  - C. Case studies
  - D. Conclusions

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