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**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
Second meeting
Geneva, 27 -28 May 2010
Item 6 of the provisional agenda

Information paper 8

**WATER SUPPLY AND SANITATION IN SHORT-TERM CRITICAL SITUATIONS AND
ADAPTATION TO CLIMATE CHANGE**

**Report form the second meeting of the Task Force on Extreme Weather Events
Geneva, 27 – 28 October 2009**

I. Opening session and adoption of the agenda

1. The Chairperson of the Task Force, Dr Luciana Sinisi, opened the second meeting of the Task Force on Extreme Weather Events (TFEWE) on Tuesday, 27 October 2009 at 10:00 am.
2. The Agenda was adopted as proposed.

**II. Review of the Guidance on Water Supply and Sanitation in Extreme Weather
Events**

3. The Chairperson summarized the rationale and background of TF activities, with special focus on guidance on water supply and sanitation development: the work done since the first meeting of the TFEWE (Rome, 21 – 22 April 2008), guidance drafting group establishment and meetings (Madrid, November 2008, Rome, February 2009) and recalled the presentation of a Russian-language version of the draft guidance document to the meeting of the Working Group on Water and Health (Geneva, 2 – 3 July 2009).
4. The Chairperson recalled also the partnership between the Task Force on Water and Climate established under the 1992 Convention on the Protection and Use of Transboundary Watercourses

and International Lakes, and the synergies established with other Task Forces under the Protocol on Water and Health.

5. The Chairperson then reviewed comments received to date. General comments on the present text related to completeness of individual sections, multi-audience satisfaction, technical feasibility, usefulness for adaptation strategy, key messages and the need to develop a final checklist for single chapters. Specific comments were made on chapters 6,7,8,9 related to the need for additional case studies and updating of the bibliographic references, differentiation of adaptation interventions according to country capacity and local needs (eg rural population vs urban), and the need to add previously uncovered issues such as water pricing, and urban flooding as well as maybe the need on more focus on drought adaptation measures and technique.

6. Difficulties had been encountered due to shortness of time, the comparatively new approach followed for the development of the Guidance document, the need to balance technical and institutional measures, and the language barrier.

7. Target of the TFEWE now is to finalize the guidance document by end December 2009 early January 2010. Georgia and Azerbaijan already sent detailed comments very useful for the review process. TF Participants were all invited to contribute to the review process also by contacting utility managers or other suitable experts to expand the review process and contribute case studies. All efforts should be made to enhance institutional cooperation with all involved decision makers and utility managers.

8. Comments need to reach the Secretariat not later than December 4th, 2009 to allow a draft version ready for distribution at the Fifth Ministerial Conference on Environment and Health (Parma, 10 – 12 March 2010). The exceptional involvement of all stakeholders, both public and private, makes the Guidance a unique document and a valuable contribution to the overall goals of the Protocol and the climate change work in particular.

9. UNECE recalled that, in order to make document available for endorsement of the Working Group on Water and Health (WGWH) meeting (Geneva, June 2010), the final text should be ready by 1 March 2010.

10. Invited speakers then made their presentation to facilitate in depth discussion on guidance issues.

III. New challenges for water utility managers under climate change and variability

11. A representative of EUREAU, representing 600,000 operators of water and wastewater services in Europe reviewed the use of water resources (as percentage of the total abstractions without cooling) in the EU and EFTA countries. He reported the following abstraction rates: drinking-water services non-domestic uses (7.51%), drinking-water services domestic uses (19.86%), other uses including self-supplied drinking-water (3.69%), agriculture (43.16%), and industry self-supplied (25.77%).

12. He recalled the position paper *EUREAU position paper Climate Change and Water and Waste Water Services* developed by his organization on the basis of the EU White Paper¹.

¹ The paper is accessible through URL: http://www.stilis.be/clients/eureau/publications/2008.06.27_position_on_climate_change.pdf accessed 2 December 2009

13. He illustrated concerns of the water and wastewater services with examples from England and Cyprus, and identified key water adaptation measures as including: water resource management planning, flood analysis and adaptation, asset and network resilience, use of renewable energies, and catchment-based approaches. Besides adaptation measures, mitigation is deemed important particularly national initiatives to evaluate the carbon impacts of the water sector, the need for a ‘systematic check’ of climate change impacts and water impacts of policies, and prioritization of least carbon impacts and no regrets solutions for the water sector.

14. On behalf of EUREAU he welcomed the development of the Guidance and formulated the following suggestions for inclusion in the document:

- (a) Controlling pollution at the source in both urban and rural areas
- (b) Prioritisation of drinking-water within the allocation hierarchy
- (c) Increasing aquatic ecosystem resilience support adaptation
- (d) Adaptation of the supra-national and national regulatory framework as well as individual life styles to recognize climate change
- (e) Implementation of the EU Water Framework Directive as a tool to aid adaptation
- (f) Integration of adaptation into other sectoral policies is essential for effective climate change adaptation
- (g) Least carbon impacts and no regrets solution

IV. Information and early warning

15. A representative of the Italian Ministry of the Environment presented Chapter 4 *Information and Communication Needs in Extreme Weather Events*. She stressed that an integrated communication strategy should be included in risk disaster management and adaptation plans to extreme weather events. An appropriate communication strategy should include capacity building and training in risk communication prior to the event, early, accurate and comprehensive announcements during the event, and an analysis of lessons learnt for inclusion in future planning after the event.

16. The Chairperson guided the discussion by inviting participants to comment on two questions:

- (a) how do you relate to managers / decision makers and
- (b) in your country, do they teach kids to protect themselves in the event of floods?

17. The response generally showed that utility managers were often not prepared for extreme weather events as a component of general risk assessment risk management, although in some countries bilateral cooperation has been established to share information and technical know-how. In few countries, local action plans have been established for the benefit of local authorities.

18. Children are sometimes instructed in emergency measurements, but are generally not receiving specific training to deal with extreme weather events, including floods.

19. Offers to further support the work of the TFEWE under this specific chapter were noted from:

- (a) United Kingdom: Case studies where communication did and did not work.
- (b) Georgia: Copy of local action plan 2010 – 2013 to be shared with the Chairperson of the TFEWE. Copy of booklet intended for schools to be shared with Chairperson of the TFEWE.
- (c) Belarus: Instruction programme for children to be shared with Chairperson

20. Examples were given of past events that highlighted the importance of the issue, including the frequent flooding of the Chisinau pumping station by the waters of the Dniester river, the 2007 floods in the United Kingdom which led to increased awareness of flooding risk, and the droughts in the Chishai River Basin where five settlements of 150,000 persons each were without water for five days.

21. A representative of UNDP introduced the UNDP Water Governance Programme, citing the Albania community-based programme as an example, and referred to the communication efforts in the Black Sea Environmental Programme (BSEP).

V. Role of health systems in disaster preparedness and early warning

22. A representative from Georgia summarized different actions taken by the national government regarding climate change adaptation started since 1998. . She explained the concept and operation of the National Response Plan and the role of the health sector therein. Medical assistance in emergency situations serves to strengthen health systems and build institutional capacity in relation to:

- (a) Extreme weather event preparedness and response.
- (b) Communicable disease surveillance and response.
- (c) Respiratory disease early detection and response.
- (d) Water and food safety and malnutrition.
- (e) Setting up of a climate-inclusive environmental health early warning system in district offices.
- (f) Development of contingency plans for hospitals and health care facilities.

23. She called for the development of standard operating procedures (SOP) including integration of local major weather-related risks in SOP, defining structural / non-structural vulnerability related to extreme weather events in health care facilities, and looking for saving / green settings for health care facilities (enhanced sanitation, green energy, water saving devices etc.)

24. She illustrated the changing role of the health sector by referring to the resurgence of malaria, which had been completely and sustainably eradicated in the 1970s. However, the

receptivity of a great part of the national territory remains high and potentially hazardous because of the existence of mosquito vectors and prevailing natural conditions.

25. The capital city Tbilisi is an active and most affected focus of Visceral Leishmaniasis with a high prevalence of infection both in humans and in dogs. The relatively high percentage of adult cases indicates that this disease is re-emerging from an endemic to an epidemic situation. Poor logistics of existing laboratories (or unavailability at the local level) hamper serious investigation. Even data on diarrhoeal diseases are now frequently lacking, although water supply infrastructure has deteriorated and even collapsed in several places.

26. The Guidance was deemed to provide added value for raising awareness of the overall problem, promoting a multidisciplinary approach, emphasizing primary health protection, and providing a useful focus for research.

27. One country representative commented that health was frequently omitted in disaster planning and early warning since the specific training needs of health staff were often overlooked, leaving health workers with little or no understanding of the problems.

28. Many countries noted that the nearly total eradication of certain vector-borne diseases had led to a lack of trained professionals and a corresponding weakening of the health systems in many countries in this area. Changing environmental conditions caused by climate change may lead to a resurgence of such vectors and will require a corresponding strengthening of the health system.

VI. Impact of extreme weather events on the quality of recreational waters

29. A representative from Hungary introduced this subject. She discussed the physical, chemical and biological impacts of drought and heat waves, as well as of floods and heavy rainfalls on the quality of recreational waters. Impacts resulting from the effects of climate change on recreational water quality, particularly surface waters, is linked to the overall management of the river basin and the wider management of the flood plain area. Integrated water resources management is therefore an important aspect of recreational water management.

30. The speaker drew the attention to the fact that many stakeholders are involved in risk assessment risk /management including public health services but also involving water police, media, army, fire services, local government, environmental protection and civil protection services. The importance of the latter should be duly acknowledged in the Guidance document.

31. He advocated making the Guidance document available through the internet.

VII. Adaptation measures for water supply utilities in extreme weather events

32. A representative of the United Kingdom, as main author of the specific Guidance chapter, presented adaptation measures for water supplies in extreme weather events, including drought and floods. He also addressed emergency distribution of water / mobilization of alternative supplies, recovery of drinking-water supply systems.

33. Climate change predictions for the United Kingdom foresee an increase in the intensity, severity and frequency of extreme weather events, a reduced availability and quality of water in rivers, reservoirs, and aquifers leading to increased quality challenges and increased treatment and energy costs, bigger demand at times of reduced availability, and higher vulnerability of capital

assets such as flooding due to inadequate drainage and sewerage systems, vulnerability of assets in coastal / floodplain areas, increased siltation and slippage in dams and reservoirs, and increased pipe bursts due to more frequent ground movements.

34. Drought adaptation measures required long-term planning of water resource use, interconnection of strategic water resources, resource optimisation including remote control, and assessment of the impacts of water resource management on water quality. A stepwise approach to demand management is favoured, composed of voluntary measures, mandatory restrictions, temporary reduction in flow, physical flow restrictions, temporary total cuts in water supply, and cessation of piped supply.

35. Specific challenges for the water industry in coping with greater variability in water flow and quality include: water quality monitoring and controls, flow controls (weirs, pipes, pumps etc), adequacy of treatment processes, appropriateness of disinfection arrangements, dosing equipment, delivery of treatment chemicals, storage of treatment chemicals, drainage systems, contingency arrangements for power supplies, and training of staff and plant operators.

36. Flood adaptation should include the revision of local geographic situations, using flood risk maps, and preparing interim adaptation measures such as semi-permanent flood barriers that can be deployed rapidly requiring only “low-tech” installation technology.

37. Nationally an investment of £500m has been proposed to improve resilience through protection of costs, adaptation of assets and operational activities, and provision of additional capability.

38. Key principles in recovering a water supply system that has been put beyond use included: a revision of the risk assessment in the catchment area to ensure that new / revised hazards have been duly taken into account, assessment of the damage and risks in the treatment works, repair and restoration of the treatment works including implementation of verification programmes to ascertain that the controls are working as designed, assessment of the damage and risks in storage and distribution assets including repair as needed, verification of the operation of control measures, and phased re-introduction of supplies followed by phased sampling and verification of controls.

39. The phased recovery of water treatment plants should be quality-focussed, using skilled, experienced personnel, ensure source protection, reinstatement of critical controls (physical treatment, disinfection, chemical treatment stages), followed by the staged reinstatement of non-critical treatment

40. During the discussion of the presentation, one country asked for an expansion of the treatment of drought events and the inclusion of ECOSAN technologies in the Guidance. Another country remarked that past experience has shown that extreme events can result in such deterioration of the resource water quality that it can no longer be used for the production of drinking-water.

41. The issue of rainwater harvesting as a drought adaptation measure was introduced; the discussion on this item was postponed until after the corresponding UNDP presentation..

42. There was common agreement that the issue of small scale water supplies could have been handled better, and that the Small Community Water Supply Network (SCWS) operated by WHO could provide an important supporting network.

VIII. Adaptation measures for drainage, sewerage and wastewater treatment

43. A speaker from the Czech Republic, as main author of the specific Guidance chapter, reviewed the adaptation measures for drainage, sewage and wastewater treatment in extreme weather events. She identified the consequences of higher temperatures for sanitation as a decreased dilution capacity requiring stricter emission limits, a higher pollution load entering wastewater treatment facilities. As to the consequences of floods, she called for protection against high hydraulic loads, preparation of retention reservoirs and storm water tanks to accommodate additional storm waters, and the need to treat first flash storm water heavily loaded with pollutants.
44. Prolonged periods without any rainfall lead to lower waste water emissions, lower water flow and consequently to accumulation of solid waste and incrustation in sewage conduits that can cause clogging, water rotting in the systems that can cause unpleasant odours, increasing population of rodents and growing risk of disease dissemination; and salt water intrusion especially in coastal agricultural areas causing degradation of sewer conduits and affecting the quality of the waste water.
45. Increasing air temperatures affect the process of urban wastewater treatment plants in a variety of ways. Lower oxygen solubility in water can cause possible lower efficiency of activate sludge, leading to higher consumption of compressed air (and hence rising demand for energy), while higher dust concentration causes higher cost of air filtration. However, on the positive side, biological processes will proceed faster due to higher temperature, sludge dewatering will be faster, and the cost of heating anaerobic digestion facilities will be lower at increased air temperature.
46. Adaptation measures of urban sanitation systems in case of drought are possible at different levels. Equipment maintenance includes the periodic cleaning of pipelines using service water to prevent clogging, periodic control and cleaning of electromechanical equipment, and periodic rinsing of adjacent pavements and roads by hygienically safe water. Mathematical models need to be (re)calibrated for current conditions, but may then illustrate the flow through the system and may prove to be useful for identifying critical points. Other preventive measures include the development of maintenance and emergency plans, and staff training. Operational adaptation may require adaptation of the amount of dissolved oxygen in the activation tanks during higher pollution loads.
47. Reliable meteorological forecasting is a basic precondition for the design of heavy rain adaptation measures, as is a thorough understanding of potential vulnerability of the sanitation system to change in hydrogeological conditions.
48. Both strategic and technical preventive measures need to be taken against floods. Strategic measures include: regularly updated crisis and emergency plans based on co-operation of all actors, regular staff training, detailed mapping of the system preferably in GIS, development of precise simulation models, and regularly-tested emergency systems. Technical measures include: construction of separate drainage for rain water where possible, construction of protective measures against floods both permanent and mobile, installation of retention tanks for superfluous flash water especially in case of combined sewers, periodic preventive maintenance, keeping pipelines waterproof and impermeable, performing regular maintenance of machines and electric parts of pumping stations, having spare flood pumps available for emergency situations, having electric sources prepared as power failure occurs often during floods.
49. General principles concerning protective measures during floods include: maximal operational maintenance of the system as long as possible, good communication between operators of wastewater treatment plants, river basin authorities, dam operators, flood protection bodies etc.,

and the use of simulation models. For large systems the central operational unit should be in charge to steer and supervise response of the network.

50. Technical measures to protect during flood include: immediate installation of flood mitigation and protective technical components (flood protective walls, pumping devices etc.), location of essential components above flood level or in waterproof tanks, closure of anti-backflow devices and use of pumps to protect the system against backflows from the final recipient, maintenance of maximum hydraulic capacity of the system preventing solid sedimentation, pre-position electric generators and verify their operational status, removal of all movable equipment to prevent damage, and safe storage of all chemicals and potential contaminants.

51. Special attention needs to be given to protective measures during floods in rural areas. These include avoidance of the release of contaminated sludge from septic tanks and cesspools into the water, protection of sources (wells) from contamination, and removal of all sludge from cesspools and septic tanks after the flood events and transportation to wastewater treatment plants for further treatment.

52. General messages concerning the recovery of sanitation systems after the flood include: restart the system as soon as possible; verify, restore and monitor the status of conduits and pumping systems; clean and disinfect wastewater treatment plants including buildings and technical equipment; assess the stability of affected buildings and structural components; and perform in-depth damage analysis followed by the establishment of a recovery plan.

53. Technical measures concerning the recovering of sanitation systems include, in order:

- (a) Ensure safe electric energy supply.
- (b) Make waste water distribution and bypass systems passable
- (c) Start pre-treatment (bar screens, grease traps) with bypass of sedimentation and biological treatment.
- (d) Start sludge management operations (at least sludge storage reservoirs) as the precondition for starting primary sedimentation.
- (e) Start the operation of mechanical treatment and possible chemical precipitation in primary sedimentation tanks (precondition is a functioning pre-treatment and sufficient capacity for sludge storage).
- (f) Start operation of aeration system and gradually put the biological stage into operation (precondition is functioning of primary sedimentation).
- (g) Gradually put the automatic management system into operation.

54. Preventive and protective measures for industrial plants require flood protection measures to reflect the fact that each industrial plant use different techniques, technologies and raw materials. Each facility should have its own crisis and emergency plan, including emergency early warning systems, detailed analysis of applied technologies equipment and chemicals, and basic principles of recovery. Regulations valid for hazardous substances have to be respected – safe intermediate storage of contaminated water, sludge and chemicals should be used enabling their subsequent safe disposal. Special training of staff covering all possibilities is essential.

55. Recovery measures for industrial plants include: making the site accessible, assessing damage and developing an in-depth recovery plan, re-establishing electric power, cleaning of sewer conduits, and performing a stepwise recovery of the whole treatment process (from preliminary treatment to automatic control).

56. During the discussion the specific vulnerability of sanitation systems to adverse weather effects was noted. The section in the Guidance on this specific topic will be further strengthened.

IX. Finalization of the Guidance on Water Supply and Sanitation in Extreme Weather Events

57. A representative of UNECE informed the meeting about the procedures related to the publication of guidance materials through the UNECE Division of Conference Services. She stressed that the process of preparation was important, in addition to the quality of the final product.

58. UNECE Guideline documents are usually distributed free of charge in 3000 copies and are distributed through the UN contact network. Cost for printing is borne by the UN regular budget, but additional costs may be incurred for layout and editing.

59. She also recalled the timeline associated with the finalization of the document. Documents for endorsement by the Working Group on Water and Health should be submitted by the first week of March 2010; final versions of the documents for the adoption by the second Meeting of the Parties should be submitted mid July 2010 for timely submission to the second Meeting of the Parties.

60. A representative of WHO informed the meeting of the interest shown by the International Water Association (IWA) for a joint publication, following previous standing agreement with WHO for the publication of the WHO Drinking-water Quality Series. He recalled the basic advantages for cooperation with IWA, a professional organization with over 10000 members and participants in over 130 countries. Amongst these advantages are: the scientific support from IWA Specialist Groups including one on climate change, the increased visibility of the product through the IWA biennial world water conference (3000+ participants), the yearly specialty and regional conferences (40+ held, 6000 participants) and the leading edge technical conferences. The intensive marketing system established by IWA through email (IWA Info Alert Service 2000+ registrants), website (200,000 hits per months), direct mail, and advertising in specialist journals (Water 21 10,000 copies per month) could be an additional advantage for the wider dissemination of the Guidance.

61. The price of the publishing was an additional factor to be considered when exploring the different possibilities for the joint publication. The secretariat informed the meeting that the resources available were not sufficient to cover all the costs related to editing, translating, and printing of the guidance and asked for contributions.

62. Participants agreed that UNECE would provide detailed information on the expected print run, explore copyright issues of a joint publication and that further exploratory contacts would be made by WHO with IWA to explore the possibilities and conditions of a joint publication.

X. The future of the guidance and the task force: information and communication needs in disaster preparedness and planning

63. A representative from WHO HQ introduced the topic in the context of health sector disaster preparedness and planning for extreme weather events. He drew the attention to the triple role of

health services for the management of health and social impacts, and called for further efforts in increasing the resilience of the health sector.

64. He then introduced the proposed framework 2010 - 2011 including the definition of standard operating procedures for preventing adverse effects of extreme weather events through: planning improvements taking into account local major weather-related links, defining structural / non-structural vulnerability related to extreme weather events in health care facilities, and identification of possibilities for the greening of health care facilities.

XI. Implementation of the guidance by local authorities and barriers to implementation

65. A representative of Azerbaijan introduced the topic by stating that expected temperature increase over the national territory is expected to be of the order of 4 – 7.2 °C. He identified sea level change, desertification and development and implementation of a legal framework to uphold water safety as the main challenges. He recalled the catastrophe of the 2003 Kura River flooding during which many water purification systems collapsed, and the subsequent emergency measures that needed to be taken by the health system to monitor quality of drinking-water after the collapse of the drinking-water infrastructure. He also drew the attention to the need to implement anti-malarial measures after flooding. An important World Bank-implemented project on water supply and sanitation might offer a possibility for early implementation of the Guidance.

66. A representative of Ukraine discussed the present state and new challenges in the development of flood management in the Dnister, Prut and Tisza river basins. He identified long rainstorms (55%), snowmelt coupled with rain(40%) and snow melt (5%) as the main reasons of very high floods in the region. Economic damage has been substantial in 2008, with \$185,5 million loss in the Dnister basin, \$37 million in the Prut and \$87,5 million in the Tisza basin. Contributing factors for this loss were: forest clearance (40%), building permits issued in high flood risk areas (24%), weakened water management (14%), insufficient early warning systems (12%), global climate change (4%), river regulation (3%) and others (4%). He then described the distribution of responsibilities in the area of flood management amongst different authorities at the national level.

67. He identified the following potential barriers that could hamper implementation of the Guidance:

- (a) Different aspects of flood management are shared by a number of state and local bodies.
- (b) There are often no effective communication systems between State and local authorities during floods.
- (c) Scarce budget funds often preclude sustainable flood management.
- (d) Social, ecological and economical aspects of flood management are often planned and managed separately.
- (e) Lack of modern technical equipment and technology for hydrometeorological observation, forecasting and warning.
- (f) Low level of public participation in water-related activities.

XII. Resilience of water supply and sanitation in the face of climate change

68. A representative of WHO HQ shared the key outcomes of a study done by WHO and the Department for International Development DFID on the resilience of water supply and sanitation facilities against climate change impacts

69. The findings of the study point to a high potential resilience and adaptive capacity amongst urban utility managed water supply small community managed water supplies are more vulnerable to climate change impacts. With regard to sanitation, the study found high underlying potential resilience of utility managed centralized sewerage systems could be compromised by the lower resilience of sewerage technology particularly in water scarce or stressed scenarios.. Household-managed sanitation has the potential to be highly resilient to climate change but remains contingent on a host of other factors such as management quality, adequate guidance etc.

70. Some of the policy implications presented in the study are:

- (g) Low resilience of water supply against climate impacts has serious public health consequences.
- (h) Comprehensive water policies and management are key to increasing resilience.
- (i) Diversification of water resources could increase resilience.
- (j) Systematic assessment of climate resilience of water supply and sanitation facilities are necessary.
- (k) It is important to act to increase resilience now to avert future problems.
- (l) Selection of technologies should take into account climate resilience in addition to cost, environmental and social considerations.
- (m) Missing out on climate resilience, the progress towards achieving the drinking-water and sanitation targets of the Millennium Development Goals (MDGs) could be affected.

71. He shared on some of the next steps that WHO HQ will consider and explore in the near future, contingent on resources available and priorities for the unit, and these include (i) develop guidance on systematic and rapid assessment of climate resilience of water utilities and sanitation programmes (ii) develop a package of information on water scarcity (iii) develop information sheets on possible adaptations for technologies in specific circumstances at the regional level and (iv) raise awareness on the risks of climate change impacts and the issue of resilience of small community managed supplies through relevant WHO networks.

XIII. Potential further areas of investigation: rain water harvesting

72. The representative of UNDP introduced the topic. He identified rain water harvesting as a suitable technique for dry environments with low and poorly distributed rainfall, rainfed areas where crops can be produced but with low yield, arid areas suffering from desertification, and remote communities where water supply is insufficient for domestic and animal consumption.

73. He concluded that rainwater harvesting is a viable option for drier environments and remote communities yielding both direct benefits as well as additional environmental and social benefits. Rainwater harvesting requires the involvement of users in the planning and development process, as well as appropriate selection, design and implementation of the selected technology.

XIV. Task Force activities and synergies with other current programmes:

(a) Progress in the preparation of the fifth Ministerial Conference on Environment and Health

74. A representative of the Italian Ministry of the Environment introduced the topic by recalling the main outcome of the series of ministerial conferences on environment and health that have taken place so far. She then reviewed the preparatory process towards the fifth Ministerial Conference on Environment and Health (Parma, Italy, 10 – 12 March 2009) which had led to a preliminary programme including a pre-event on the Protocol, conference documentation including protocol documentation on RPG1, and the main content of the draft ministerial Declaration with explicit mention to the Protocol and future commitments related to RPG1. She highlighted technical synergies between the background document on main water and health related diseases in the region and the links to RPG1 under climate change and variability.

(b) Organization of “PROTOCOL DAY”

75. A representative of UNECE informed on the draft programme of Protocol Day, consisting of a general introduction; setting targets; surveillance of water-related diseases; assistance to implement the Protocol in particular through the ad hoc Project Facilitation Mechanism; review of compliance, public participation and the realisation of the basic human right to water; climate change and the Protocol. He also informed the participants of the proposed working paper on the Protocol on Water and Health.

(c) Task Force on Indicators and Reporting

76. The Chairperson on the Task Force on Indicators and Reporting informed on the preparation of two documents, “Guidelines on setting of targets, evaluation of progress and reporting” and “Summary reports in accordance with Article 7 of the Protocol on Water and Health”. He recalled that setting of targets allows assessing climate change impact on the whole water cycle and identification of potential risks related to the changing environment as part of a baseline analysis, formulation of integrated policies on water/health and possibility for introduction of adequate adaptation measures / strategies, introduction of mid- to long-term objectives, and support for the implementation of other international commitments, particularly the achievement of the MDGs and the compliance with the obligations under the UN Framework Convention on Climate Change. He informed the meeting of the pilot target setting and reporting exercise which was about to start, and the upcoming meeting of the Task Force.

(d) Task Force on Water-Related Disease Surveillance

77. Speaking on behalf of the Chairperson of the Task Force on Water-related Disease Surveillance, Mr R Aertgeerts informed the meeting on the main achievements of the Task Force, including the preparation of a regional assessment of the capacity for water-related disease surveillance, a study on the correlation between water-related disease outbreaks and provision of drinking-water by small scale drinking-water plants in rural areas in Europe, and the development of Guidance on water-related disease surveillance. He announced plans to convene the third session in Tirana, Albania in January 2010. He identified possible work plan elements for the period 2011 – 2013 including assessment of country needs, training on time series analysis for contingency planning and outbreak detection, and creation of a new network in this area.

(e) Task Force on Water and Climate Change

78. A representative of the Netherlands, co-chair of the Task Force on Water and Adaptation to Climate Change established under the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes informed on progress in the development of the Guidelines on Water and Climate Change and the partnership with TF EWE. The Guidelines were developed by a drafting group composed of experts from Armenia, Belarus, Finland, Germany, Hungary, Italy (Chair of TF EWE), the Netherlands, Spain, Switzerland, Uzbekistan as well as UNECE, WHO, WMO, UNESCO and CPWC. He pointed to the mutual interests between water supply and sanitation and integrated water resources management.

79. It should be noted that the Meeting of the Parties to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes formally adopted the “Guidance on Water and Adaptation to Climate Change” at its fifth session (Geneva, 10 – 12 November 2009) and decided on a programme of follow up activities including: (a) the development of a programme of pilot projects to support implementation of the Guidance in transboundary basins; (b) the creation of a platform for the exchange of experience on water and adaptation to climate change in the pan-European region.

(f) Water Safety Plans and adaptation to climate change

80. A representative from WHO HQ recalled the basic role of water safety plan as a quality assurance tool for water utilities. WHO HQ is currently developing a WSP quality assurance tool intended to help water utilities identify areas where improvements could be made and prioritize improvement efforts. The tool will provide the water supplier an assessment of the water safety plan in place. Pilot testing of the assessment tool is expected to proceed in Dec and finalization of the tool can be expected around June by end of June 2010

XV. Future work activities under the Protocol on Water and Health to be included in the work programme 2011-2013.

81. A representative of the WHO Regional Office for Europe introduced the background paper “Protocol and Climate Change Adaptation”. He identified five major challenges: health systems and water-related diseases, integrated water resource management, water supply sanitation and drainage, protection of vulnerable groups and public information and participation, and demonstrated that the Protocol still has the necessary and adequate legal provisions to address these priority challenges. He concluded that the Protocol can therefore continue to be seen as a living tool for climate change adaptation in the water and health sector. He recommended for inclusion in the proposals for the work plan for the upcoming period 2011 – 2013: assessment and increase of the resilience of water, drainage and sewerage systems, expansion of water and sanitation service coverage to meet presently unmet needs, assessment and reduction of the carbon footprint of water sanitation and drainage services, increased attention of the to the specific problems of small scale water supply systems, and addressing specific knowledge gaps.

82. The Chairperson reviewed the mandate of the TFEWE, achievements to date and challenges encountered. On the issue of continuing activities under the Protocol to address the specific challenges of the impact of climate change, all partners agreed to the need for continuation of the work of the Task Force with a renewed mandate. The proposed future activities were discussed in-depth.

83. It was decided to organize a consultation among Country partners on the issue of continuing activities under the Protocol in the area of climate change adaptation, and to select few activities options. On the basis of the consultation an info note will be prepared and delivered by the Chair, with the assistance of the Secretariat, to the third meeting of the Working Group on Water and Health (Geneva, June 2010).

84. The Task Force instructed to draft an information document to highlighting the need for continued action,

XVI. Follow-up

85. The TFEWE discussed the required follow-up and agreed on the following schedule/ next steps:

(a) The guidelines will undergo further editing and will be disseminated, together with a questionnaire assessing the guidance, for further comments/case studies, among the Task Force participants and other contributing partners (deadline for comments 30 November 2009)

(b) The Chairperson will incorporate the received comments into the guidance and the amended version of the guidelines will be forwarded to the drafting group to be further, revised, edited and finalized - (end of review 30 January 2010)

(c) The chairperson will prepare and the secretariat will disseminate by 30 November a short questionnaire with possible themes/options for future work of the Task Force to be incorporated in the Protocol's work programme (2011-2013), replies by 15 January 2010.

XVII. Closure

86. The Chairperson closed the meeting at 17:30 on Wednesday, 28 October 2009.