

UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE

Opportunities to support the implementation and monitoring of a sustainable development goal on water

**under the Convention on the Protection and Use of
Transboundary Watercourses and International Lakes
and its Protocol on Water and Health**



UNITED NATIONS

Foreword

Discussions are ongoing at the global level on possible sustainable development goals (SDGs). One SDG might be dedicated to water.

The Vision for the future of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (ECE/MWAT/37/Add.2) adopted by the Meeting of the Parties to the Convention at its sixth session (Rome, 2012) foresaw that “It can be expected that the Convention and the Protocol on Water and health will also be useful tools for the achievement of the future Sustainable Development Goals”.

The present document provides an insight into the potential role of the Convention and its Protocol on Water and Health in supporting the post-2015 development agenda. That potential support is described below in terms of means of implementation of a water SDG at the national and international levels and means of monitoring.

The Convention’s Working Group on Integrated Water Resources Management, as well as the participants in the Protocol’s regional workshop on linkages with other existing monitoring and reporting mechanisms, were invited to consider this paper in June and July 2014, respectively. The paper was then updated in the light of a revised proposal on SDGs made to the General Assembly.

Background and Introduction

Global processes

One of the main outcomes of the United Nations Conference on Sustainable Development (Rio+20), held in Rio de Janeiro in June 2012, was the agreement by Member States to launch a process to develop a set of sustainable development goals (SDGs). That process comprises a number of work streams that include national, regional, global and thematic consultations and a High-Level Panel of Eminent Persons on the Post-2015 Development Agenda.

In addition, a 30-member Open Working Group (OWG) of the General Assembly was tasked with preparing a proposal on the SDGs. OWG met 13 times, with the first session on 14–15 March 2013 and the final one on 14–18 July 2014, and then, on 19 July 2014, forwarded to the Assembly its proposal for a set of SDGs. In preparation for the twelfth session, the OWG Co-Chairs issued a “zero draft” of goals and targets built around 17 focus areas. Proposed goal number 6 is “Ensure availability and sustainable management of water and sanitation for all”, which included targets and means of implementation:

- 6.1 by 2030, achieve universal and equitable access to safe and affordable drinking water for all;
- 6.2 by 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations;
- 6.3 by 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and increasing recycling and safe reuse by x% globally;
- 6.4 by 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity;

- 6.5 by 2030 implement integrated water resources management at all levels, including through transboundary cooperation as appropriate;
- 6.6 by 2020 protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes;
- 6.a by 2030, expand international cooperation and capacity-building support to developing countries in water and sanitation related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies;
- 6.b support and strengthen the participation of local communities for improving water and sanitation management.

Earlier, on 18 February 2014 and as input to the discussions in OWG, UN-Water had presented its technical advice on securing sustainable water for all: *A Post-2015 Global Goal for Water: Synthesis of key findings and recommendations from UN-Water*. The report was the result of a one-year-long expert consultation process among UN-Water's 31 United Nations system Members and its 36 international Partners. The possible targets set out in the UN-Water report are used to provide a structure for the present document, with subtitles under each target corresponding to elements identified in the UN-Water document. The targets in the OWG proposal to the General Assembly are then cited as appropriate.

Contribution by the United Nations Economic Commission for Europe secretariat

The United Nations Economic Commission for Europe (ECE) secretariat to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) contributed to the global thematic consultation on water in support of discussions on the post-2015 development agenda. In particular, ECE:

- (a) Led the thematic consultation stream on water resources management;
- (b) Hosted a “Post-2015 Development Agenda Consultation on Water: Water Resources Management and Wastewater Management & Water Quality” (27–28 February 2013), with the two streams facilitated by ECE and UN-Habitat/Aquafed, respectively;
- (c) Organized a side-event on “Water in the Post-2015 Development Agenda: How to achieve an aspirational water SDG?” (3 July 2013) with UN-Water;¹
- (d) Hosted and provided inputs to a UN-Water workshop on “Water in the post-2015 development agenda: Finalizing the UN-Water paper and follow-up actions” (16–17 December 2013);
- (e) Organized a briefing for permanent missions to the United Nations and the international organizations in Geneva on “Targeting water in the post-2015 development agenda” (14 March 2014) with UN-Water and the Swiss Agency for Development and Cooperation;
- (f) Provided numerous inputs to documentation in support of the development of the post-2015 agenda, including the UN-Water paper and briefing notes for OWG and the High-level Political Forum on Sustainable Development.

These contributions by ECE were made possible by financial support from the Swiss Agency for Development and Cooperation.

¹ Side-event to the sixth meeting of the Working Group on Water and Health under the Protocol on Water and Health.

Possible role for the Water Convention and the Protocol on Water and Health

There are 276 transboundary river basins in the world and these basins cover 46% of the Earth's land surface. About 40% of the world's total population and more than 50% of the population living in the European and Asian parts of ECE region lives within the internationally-shared river basins. With transboundary basins being so extensive and affecting so many peoples' lives, it is important to ensure the sustainable management of these resources.

The Water Convention provides a unique legal framework and an intergovernmental platform for strengthening transboundary water cooperation and water governance by promoting an integrated approach to the transboundary water resources management. It requires Parties to take national measures for the protection and ecologically-sound management of transboundary surface waters and groundwaters. The Convention has been amended to be open to all Member States of the United Nations.

Implementation of the Water Convention contributes to the achievement of the Millennium Development Goals and other international commitments on water, environment and sustainable development. The Convention is expected to support similarly the reaching of the post-2015 SDGs:

- (a) The intergovernmental platform of the Convention could provide a venue for exchanging experience on implementation of a possible SDG on water, at the global and ECE regional levels.
- (b) Several tools and activities under the Convention could contribute to the monitoring of a possible SDG and targets on water, notably the regular assessments. If Parties to the Convention decide to introduce regular reporting, this too could contribute to post-2015 monitoring;
- (c) Many guidelines and publications under the Convention could also help the implementation of a potential SDG on water.

The Convention's Protocol on Water and Health,² which is open only to ECE member States, takes a holistic approach to water and health, as made clear in its article 6, paragraph 1:

In order to achieve the objective of this Protocol, the Parties shall pursue the aims of:

- (a) Access to drinking water for everyone;
- (b) Provision of sanitation for everyone

within a framework of integrated water-management systems aimed at sustainable use of water resources, ambient water quality which does not endanger human health, and protection of water ecosystems.

The Protocol requires that Parties each establish and publish national and/or local targets in a number of target areas (see box overleaf) that go beyond water, sanitation and hygiene (WASH), as does the UN-Water advice. The Protocol requires the setting of targets and target dates, the definition of measures to achieve the targets, the monitoring of their implementation and their revision as necessary. The target areas are linked in the present note to the targets and elements that have been proposed by UN-Water.

² The secretariat for the Protocol is provided jointly by ECE and the World Health Organization (WHO) Regional Office for Europe (WHO/Europe). This paper, however, provides only an ECE perspective on the usefulness of the Protocol in the post-2015 development agenda; the paper has not been consulted with WHO/Europe as it addresses both the Convention and the Protocol and due to time constraints.

Protocol target areas (art. 6.2)³

- (a) The quality of the drinking water supplied, taking into account the Guidelines for drinking-water quality of the World Health Organization;
- (b) The reduction of the scale of outbreaks and incidents of water-related disease;
- (c) The area of territory, or the population sizes or proportions, which should be served by collective systems for the supply of drinking water or where the supply of drinking water by other means should be improved;
- (d) The area of territory, or the population sizes or proportions, which should be served by collective systems of sanitation or where sanitation by other means should be improved;
- (e) The levels of performance to be achieved by such collective systems and by such other means of water supply and sanitation respectively;
- (f) The application of recognized good practice to the management of water supply and sanitation, including the protection of waters used as sources for drinking water;
- (g) The occurrence of discharges of: (i) Untreated waste water; and (ii) Untreated storm water overflows from waste-water collection systems to waters within the scope of this Protocol;
- (h) The quality of discharges of waste water from waste-water treatment installations to waters within the scope of this Protocol;
- (i) The disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations and the quality of waste water used for irrigation purposes, taking into account the Guidelines for the safe use of waste water and excreta in agriculture and aquaculture of the World Health Organization and the United Nations Environment Programme;
- (j) The quality of waters which are used as sources for drinking water, which are generally used for bathing or which are used for aquaculture or for the production or harvesting of shellfish;
- (k) The application of recognized good practice to the management of enclosed waters generally available for bathing;
- (l) The identification and remediation of particularly contaminated sites which adversely affect waters within the scope of this Protocol or are likely to do so and which thus threaten to give rise to water-related disease;
- (m) The effectiveness of systems for the management, development, protection and use of water resources, including the application of recognized good practice to the control of pollution from sources of all kinds;
- (n) The frequency of the publication of information on the quality of the drinking water supplied and of other waters relevant to the targets in this paragraph in the intervals between the publication of information under article 7, paragraph 2.

The Protocol is therefore also expected to support the reaching of the SDGs by:

- (a) Providing an intergovernmental platform at the ECE regional level for the exchange of experience on the implementation of the SDG on water;
- (b) Providing a practical, legal framework for the setting of national targets tailored to match national priorities and capacities;
- (c) Offering guidance and capacity development on the setting, monitoring and achievement of targets.

³ The full texts of the Convention and Protocol are available at www.unece.org/env/water.

Numerous legal provisions of the Convention and Protocol, as well as many of the guidance materials and tools that have been developed under them, will support countries in their achievement of a water-related SDG. In addition, the three-year programmes of work, both of the Convention and of the Protocol, foresee numerous projects and other activities at the national and basin level that will further assist in reaching such an SDG.

Target A: Achieve universal access to safe drinking water, sanitation and hygiene

The full wording of the UN-Water target is “By 2030: To eliminate open defecation; to achieve universal access to basic drinking water, sanitation and hygiene for households, schools and health facilities; to halve the proportion of the population without access at home to safely managed drinking water and sanitation services; and to progressively eliminate inequalities in access”.

The UN-Water paper expresses the following desired outcomes or country actions for target A:

- Governments integrate open defecation targets within strategies for improving child survival and nutrition and reducing extreme poverty
- Governments adopt ambitious targets for improving WASH service levels in order to reduce global burden of WASH related diseases, to improve productivity and economic growth, and to reduce inequalities between population groups
- Governments adopt ambitious targets in order to reduce global burden of disease from diarrhoea and other WASH related diseases, improve child and maternal health, improve nutrition, improve (girls) education outcomes and reduce (gender) inequalities.

The OWG proposed targets that correspond most closely to this UN-Water target are:

- By 2030, achieve universal and equitable access to safe and affordable drinking water for all
- By 2030, achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- By 2030, ... substantially reduce the number of people suffering from water scarcity⁴
- By 2030 ... combat hepatitis, water-borne diseases, and other communicable diseases⁵
- By 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination.⁶

The Protocol aims for “Access to drinking water for everyone” and “Provision of sanitation for everyone”. It addresses profoundly the possible SDG target, with legal provisions on the setting of national targets in this area and reporting on progress to achieve them. In addition, practical measures covering the issues referred to in the possible SDG target are supported through international and national activities under the programme of work of the Protocol.

The Protocol provides thematic tools and guidance materials that relate to this target, such as *The Equitable Access Score-card: Supporting policy processes to achieve the human right to water and sanitation* (November 2013) and *No one left behind: Good practices to ensure equitable access to water and sanitation in the pan-European region* (February 2012).

⁴ The first phrase “substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity” does not correspond to this UN-Water target but to target B.

⁵ From proposed goal 3: Ensure healthy lives and promote well-being for all at all ages.

⁶ *Idem*.

The UN-Water proposal on adoption by Governments of ambitious targets in a range of areas is perfectly in tune with the Protocol's approach to national target setting, which is supported by *Guidelines on the setting of targets, evaluation of progress and reporting under the Protocol on Water and Health* (October 2010). Nonetheless, these Guidelines could eventually be updated in the light of the agreed post-2015 development agenda to offer an improved and more tailored support to both the Protocol and the post-2015 agenda.

No Open Defecation: “to eliminate open defecation”

The Protocol does not explicitly address open defecation. However, it is addressed implicitly through supporting access to sanitation for all, as described below.

Basic Access: “to achieve universal access to basic drinking water, sanitation and hygiene for households, schools and health facilities”

Of particular relevance to basic access are the Protocol's aims, detailed in its article 6, of:

- (a) Access to drinking water for everyone;
- (b) Provision of sanitation for everyone.

To achieve these aims, Parties are required to establish targets (and revise them periodically) related to the population served by collective systems for the supply of drinking water or any other improved drinking water supply and the population served by collective systems of sanitation or any other improved sanitation system.

Parties to the Protocol have agreed on common indicators for:

- (a) Access to drinking water (Percentage of the population with access to improved drinking water for urban, rural and total population);
- (b) Access to sanitation (Percentage of the population with access to sanitation including small decentralized sewerage systems, and also septic and safe excreta disposal, for urban, rural and total population).

The current programme of work under the Protocol is informed by and intends to contribute to “Attain Regional Priority Goal 1 on water and sanitation adopted by European States through the Parma Declaration on Environment and Health, particularly with respect to providing ‘each child with access to safe water and sanitation in homes, child care centres, kindergartens, schools [and] health care institutions ... by 2020’”. In particular, with relevance to this element of the possible SDG target, the programme of work aims, among other things, to:

- (a) Improve hygiene promotion and intensifying WASH campaigns in childcare settings (e.g., schools, kindergartens) (Programme area 2 — Prevention and reduction of water-related diseases), in particular to strengthen WASH in schools (area 2.4);
- (b) Facilitate access to water and sanitation for all, contributing to the progressive realization of the human right to water and sanitation (programme area 5), including for the poor, vulnerable and socially excluded people.

Safely Managed Services: “to halve the proportion of population without access at home to safely managed drinking water and sanitation services”

Of particular relevance to the safe management of services are the Protocol’s target areas on: the quality of the drinking water supplied, taking into account the Guidelines for drinking-water quality of the World Health Organization; the levels of performance to be achieved by such collective systems and by such other means of water supply and sanitation respectively; the application of recognized good practice to the management of water supply and sanitation, including the protection of waters used as sources for drinking water; and the effectiveness of systems for the management, development, protection and use of water resources, including the application of recognized good practice to the control of pollution from sources of all kinds.

The WHO/Europe publication *Water safety plans for better health: Safe drinking-water for small communities* (2014) and the WHO publication *Water Safety Planning for Small Scale Community Water Supplies* (2012) provide concrete guidance on how to safely manage small scale water supplies.

Of particular relevance to this element of the possible SDG target is the programme area 4 of the Protocol’s current programme of work dedicated to safe and efficient management of water supply and sanitation systems, with activities on capacity-building on water safety plans and sanitation safety plans, in particular for small-scale water supply and sanitation systems, hospitals and schools; and the exchange of experience on safe and efficient management of water supplies and sanitation systems.

Equality: “to progressively eliminate inequalities in access”

In taking measures to implement the Protocol, the Parties are guided by the approach of equitable access to water, adequate in terms both of quantity and of quality, that should be provided for all members of the population, especially those who suffer a disadvantage or social exclusion (art. 5 (l)). At the same time, “special consideration should be given to the protection of people who are particularly vulnerable to water-related diseases” (art. 5 (k))

Publications focusing on ensuring equitable access to water and sanitation have been developed under the Protocol. The publication *No one left behind: Good practices to ensure equitable access to water and sanitation in the pan-European region* (2012) aims to support policies and decision makers at the national and local levels to ensure equitable access, presenting good practices and lessons learnt on the policies and measures to be enacted to provide equitable access to water and sanitation. It distinguishes three key dimensions of equitable access: geographical disparities; specific barriers faced by vulnerable and marginalized groups; and affordability concerns. The *Equitable Access Score-card: supporting policy processes to achieve the human right to water and sanitation* (2013) is an analytical tool designed to help Governments to establish a baseline measure of the equity of access to water and sanitation, identify priorities and discuss further actions to be taken to progressively eliminate inequalities in access. This tool is therefore of particular relevance to this element of a possible water SDG target.

The current programme of work under the Protocol includes a programme area 5 dedicated to equitable access to water and sanitation: translating the human right to water and sanitation into practice. The programme area includes activities on raising awareness; assessing equity of access to water and sanitation (on the basis of *The Equitable Access Score-card*); and developing action plans for equitable access.

Target B: Improve by (x%) the sustainable use and development of water resources in all countries

The UN-Water paper expresses the following desired outcomes or country actions for target B:

- Water allocation decisions and water withdrawals that take into account both human and environmental water needs and impacts of water use on freshwater ecosystems, ensuring sustainable withdrawals in the long term
- Ensuring ecosystem health and capacity to be able to supply water of a sufficient amount and quality for human uses
- Countries take actions towards increasing available supply and productivity in the main water use sectors. The productivity and efficiency indicators are used to set targets and inform decision-makers of priority intervention areas.

The OWG proposed targets that correspond most closely to this UN-Water target are:

- By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity...⁷
- By 2020 protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
- By 2020 ensure conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.⁸

This proposed SDG target is solidly underpinned by the main principles of international water law and obligations of the Convention. The obligations to protect transboundary waters by preventing, controlling and reducing transboundary impacts and to use transboundary waters reasonably and equitably provide a basis for balancing between different water uses as well as the ecosystem needs.

Regional assessments of transboundary waters such as the *Second Assessment of Transboundary Rivers, Lakes and Groundwaters* (2011) got countries to report on the status of water resources, to carry out a self-assessment of the legal basis, regulation, monitoring and so on, to identify gaps and to exchange of experience and good practices. Such processes promote progressive harmonization of approaches as well as cooperation, through both political and technical dialogue, and come up with recommendations for ways forward.

In 10 countries in Eastern Europe, the Caucasus and Central Asia, regular national meetings under the European Union (EU) Water Initiative National Policy Dialogues provide for intersectoral exchange on major water policy developments. A number of policy packages — strategies, pieces of legislation etc. — have been adopted as a result of such intersectoral consultation,

The general provisions of the Protocol (art. 4) request Parties to manage water “within a framework of integrated water-management systems aimed at sustainable use of water resources, ambient water quality which does not endanger human health and protection of water ecosystems”. The Protocol also specifies that “water has social, economic and environmental values and should therefore be managed so as to realize the most acceptable and sustainable combination of those values” (art. 5 (g)) and that “water resources shall be managed so that the needs of the present generation are met without compromising the ability of future generations to meet their own needs” (art. 5 (d)).

⁷ The final phrase “substantially reduce the number of people suffering from water scarcity” does not correspond to this UN-Water target but to target A.

⁸ From proposed goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

The Parties to the Protocol have also agreed on common indicators on the protection and use of freshwater resources, which might support monitoring under the post-2015 agenda:

- Water quality: on the basis of national systems of water classification, percentage of water falling into each defined class
- Water quantity: water exploitation index at the national and river-basin levels for each sector (agriculture, industry, domestic).

Bring freshwater withdrawals in line with sustainably available water resources

Complying with the obligation of reasonable and equitable use generally requires that the long-term sustainability of the water resource is not compromised, that is, the withdrawals do not exceed the available water resource in the long term. Strengthening transboundary cooperation in the framework of the Water Convention supports the coordination of developments and uses by the riparian countries.

The various guidelines for monitoring and assessment of transboundary surface waters and groundwaters developed in the past two decades under the Convention support sound evaluation of the available water resources and their status. The guidelines and their application in projects promotes an approach that starts from identifying the relevant water management issues and forms a logical sequence to specifying the associated information needs.

Work under the Convention also promotes the reconciliation of different uses and the balancing of development with environmental needs. In particular, during the current work programme, the benefits of a nexus (or intersectoral) approach to managing the interlinked resources is looked into, in particular how water, energy and food security can be enhanced by increasing efficiency, reducing trade-offs, building synergies and improving governance across sectors. Selected basins from the pan-European region and beyond are being assessed for the water-food-energy-ecosystems nexus to draw valuable lessons to improve intersectoral coordination.

In the discussion on the ECE role and relevance for the post-2015 development agenda, the Executive Committee of ECE recognized the work on the nexus in transboundary basins under the Convention as showing the importance of linking and implementing the different SDGs jointly.

Restore and maintain ecosystems to provide water-related services

The conservation and, where necessary, the restoration of ecosystems is a specific due-diligence obligation under the Water Convention, where Parties have to take “all appropriate measures”. “Ecosystems” in the Convention are not necessarily limited to transboundary ecosystems or to water-related ecosystems. As concerns aquatic ecosystems, the *Guidelines on the ecosystem approach in water management*⁹ provide useful recommendations to maintain and improve the conditions and functions of aquatic ecosystems. Recommendations developed under the Convention on payments for ecosystem services provide guidance on the application of this innovative tool to protect and enhance the services provided by ecosystems.

The Protocol specifies that Parties should manage water resources “in an integrated manner on the basis of catchment areas, with the aims of linking social and economic development to the protection of natural ecosystems” (art. 5 (j)). Interestingly, the Protocol also requests “natural and legal persons and institutions, whether in the public or the private sector (to) contribute to the protection of the water environment and the conservation of water resources”.

⁹ ECE (1992), *Protection of Water Resources and Aquatic Ecosystems*, Water Series No. 1, available from www.unece.org/fileadmin/DAM/env/publications/documents/Part%20One_WaterSeries1.pdf.

Increase water productivity for all uses

Little work has been undertaken under the Convention on water productivity.

Target C: All countries strengthen equitable, participatory and accountable water governance

The UN-Water paper expresses the following desired outcomes or country actions for target C:

- Countries have an enabling environment established that supports an integrated approach to water resources management and cohesive policies across the range of water users (sectors) and at different administrative levels (regional, national, basin, local)
- Water and sanitation are embedded within National Development Plans and budgets
- Societies take account of risks from water-related hazards and make risk-based decisions and investments to enhance preparedness and resilience
- Nations establish institutional frameworks to integrate water disaster management into everyday water management activities and design policies and programs to assist communities in managing risks
- Governments invest in strengthening drinking water supply and sanitation policy and institutional arrangements to ensure that improvements in services are sustained and that inequalities in access between population groups are progressively reduced
- Countries put in place policies and regulations that lead to a reduction in the negative impacts of pollution, starting with, but not limited to the priority to reduce nitrogen and phosphorous pollution
- A systematic global monitoring framework for water development, management and use established, which allows for prioritizing resources and identifying key areas of importance.

The OWG proposed targets and means of implementation that correspond most closely to this UN-Water target are:

- By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
- By 2030, expand international cooperation and capacity-building support to developing countries in water and sanitation related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies
- Support and strengthen the participation of local communities for improving water and sanitation management.

Joining the Water Convention and implementing its provisions supports the development of a solid framework and an enabling environment for integrated management of water resources, promoting notably:

- Harmonization of approaches at the regional level
- Developing national level legislation to incorporate key principles of protection and use of waters
- Institutionalization of basin level (and bi- and multilateral) cooperation through a strong obligation to cooperate through establishment of agreements and joint institutions.

The catchment area concept is among basic principles of the Water Convention, which applies to surface waters and groundwaters alike and also makes a link to recipient seas. An integrated approach to managing surface waters and groundwaters is also explicit in the legally non-binding *Model Provisions on Transboundary Groundwaters* (2012), which are meant for application by the Parties in developing their specific agreements.

The Protocol on Water and Health also aims at strengthening equitable, participatory and accountable water governance by bringing together the issues of water, health and environment and requiring its Parties to follow, inter alia, the principle of access to information and public participation in decision-making processes as defined in its article 5 (i). Moreover, the Protocol promotes international cooperation and exchange of experience between technical experts and water and health managers from different countries through its subsidiary policy and technical bodies thereby fostering progress in the whole ECE region.

Regarding the UN-Water suggestion of a systematic global monitoring framework, the institutional framework of the Water Convention could, as appropriate, support discussions and the exchange of experience.

The pan-European assessments of transboundary basins carried out under the Convention — most recently the *Second Assessment of Transboundary Rivers, Lakes and Groundwaters* (2011) — contribute baseline information on the status of shared waters, pressures (e.g. withdrawals by sectors) management measures and governance. The next comprehensive assessment of transboundary waters is expected to be carried out from 2019 to 2021. The geographical coverage is expected to take into account the Convention's opening. The thematic scope of the assessment is to be discussed and the process will likely take into account the post-2015 developments agenda and any water SDG.

Monitoring and assessment guidelines and methodologies developed under the Convention and work on target-setting and indicators under the Protocol at the regional level could also contribute to development of a global monitoring framework.

Implement integrated approaches to water management at local, basin and national levels including participatory decision-making

Well-functioning, regular coordination at different levels – from river basin to national and to transboundary – and joint planning involving different interests are important for sustainable management of water resources. In Eastern Europe, the Caucasus and Central Asia, regular national meetings under the EU Water Initiative National Policy Dialogues, with the support of ECE and Organisation for Economic Co-operation and Development (OECD), provide for intersectoral exchange on major water policy developments. A number of policy packages in support of integrated water resources management (IWRM) have been adopted as a result of such intersectoral consultation.

The Water Convention recognizes that effective joint bodies are key to ensuring sustainable management of transboundary water resources. The conclusion of agreements between countries sharing transboundary waters and the establishment of joint bodies such as river, lake or aquifer commissions is a main obligation under the Water Convention, which supports their creation and reinforcement. The Water Convention specifies various tasks for joint bodies.

A number of activities under the Convention support joint bodies in their work, including most recently two workshops on river basin commissions and other joint bodies, held in Geneva in September 2013 and in April 2014. Drawing in this experience and earlier work, a set of principles of organization and activities were developed that generally increase the efficiency of joint bodies and contribute to reaching a mature level of cooperation between the riparian States. The principles highlight, for example, the needs for a broad competency and representation of authorities in the joint bodies to support IWRM and the importance of mechanisms for public participation and stakeholder involvement. Both the obligation and experience gathered promote the development of cooperation frameworks for management of shared waters, hence making a valuable contribution to this target element.

Article 5 (j) of the Protocol on Water and Health similarly promotes an integrated approach to water resources management. Moreover, the Protocol encourages Parties to set targets at the national and local levels. The existing structures at the basin and sub-basin levels should be used for establishing a dialogue with all relevant stakeholders. In accordance with article 6, paragraph 5 (a) of the Protocol, Parties have to establish national or local arrangements for coordination between their competent authorities in order to set targets. When setting up a coordination mechanism, the main stakeholders to be involved include: relevant ministries; national, federal, provincial and local (both urban and rural) authorities; existing relevant working groups; associations of public or private service providers, research institutes; academia, relevant professional associations and representatives of public (through consumer associations or NGOs).

A number of provisions in the Water Convention and its Protocol promote public participation. For example, one of the provisions of the Convention requires, among others things, that the riparian Parties ensure that information on the conditions of transboundary waters, measures taken or planned to be taken to prevent, control and reduce transboundary impact, and the effectiveness of those measures, is made available to the public. The Protocol on Water and Health includes strict provision for participatory decision-making. It requires that Parties, in order to achieve the objectives of the Protocol and in pursuing the aims to achieve those objectives, will ensure public participation when setting targets and developing water-management plans by making appropriate practical provisions for public participation, within a transparent and fair framework, and ensuring that due account is taken of the outcome of public participation (art. 6, paras. 2 and 5 (b)). In addition, the active participation of non-governmental organizations (NGOs) in the work under the Convention and its Protocol is a long-standing practice. Representatives of NGOs, the academic community, the private sector and diverse interest groups participate as observers in meetings under the Convention and the Protocol and have a major role in implementing some of the activities.

The publication by ECE and the United Nations Environment Programme (UNEP) *Water management: Guidance on public participation and compliance with agreements* (2000) recognizes that broad public participation in decision-making and access to information are preconditions for successful water management and detail the need for public participation in water management.

The Protocol recognizes that different water management responsibilities need to be handled at different administrative levels, recommending Parties to take “action to manage water resources … at the lowest appropriate administrative level” (art. 5 (f)). The *Guidelines on the Setting of Targets, Evaluation of Progress and Reporting* recommend that key stakeholders for the Protocol’s implementation should include national, federal, provincial and local (both urban and rural) authorities. A unique feature of the Protocol is the necessary provision for the involvement of NGOs, whereby article 16, paragraph 3 (f), requires that the Parties establish the modalities for the participation of other competent international governmental and non-governmental bodies in all meetings and other activities pertinent to the achievement of the purposes of the Protocol.

The informal template for summary reports under the Protocol specifically requests Parties to report on their implementation of article 9 on public awareness, education, training, research and development and information and article 10 on public information.

The *Guide to Public Participation under the Protocol on Water and Health* (2013) offers a tool to help improve the planning and carrying out of the public-participation process under the Protocol and encourages authorities to take into account the results of public participation at the different stages: in setting targets and target dates, in drawing up water-management plans and in reporting.

Deliver all drinking water supply, sanitation and hygiene services in a progressively affordable, accountable, and financially and environmentally sustainable manner

The work on equitable access under the Protocol showed that affordability is one of the current contextual challenges framing the inequities of access to water and sanitation. (see *No One Left Behind* publication). The good practices document describe several policy options which are available to deal with affordability concerns, both in-tariff and out-of-tariff.

Ensure regulatory frameworks are in place for water resources, infrastructure and services, and enhance the performance of responsible public authorities and their water operators

The process of joining the Water Convention also has benefits at the national level when necessary legislation is developed to reduce pressure on water resources.

The Water Convention stipulates that riparian Parties ensure that information on the conditions of transboundary waters, measures taken or planned to be taken to prevent, control and reduce transboundary impact, and the effectiveness of those measures, is made available to the public.

Countries in Eastern Europe, the Caucasus and Central Asia have been taking steps towards creating an enabling environment (policy, legal and institutional framework) for the introduction of IWRM principles of water management. The harmonization of national legislation with EU environmental and water legislation and the joining of the Water Convention have been important drivers in several countries. The National Policy Dialogue process has been helping public authorities in the countries of Eastern Europe, the Caucasus and Central Asia to understand and apply IWRM principles and to maintain regular multi-stakeholder discussions to develop and improve national water policies, as well as transboundary water cooperation.

The Protocol, in its article 6, paragraph 1 (m), requires Parties to pursue the effectiveness of systems for the management, development, protection and use of water resources, including the application of recognized good practice to the control of pollution from sources of all kinds. The Protocol has also been supporting the efforts of Parties to comply with their obligation to encourage the education and training of the professional and technical staff who are needed for managing water resources and for operating systems of water supply and sanitation, and encourage the updating and improvement of their knowledge and skills (art. 9, para. 3).

Strengthen knowledge transfer and skills development

Most activities in the current programme of work of the Water Convention have a strong capacity-development dimension.

The platform that the Convention provides allows for an increasingly global exchange of experience between countries but also between joint institutions for transboundary cooperation. In addition to Governments, the activities under the Convention involve NGOs, academia and international organizations. The process of developing guidance under both the Convention and the Protocol is an inter-governmental process that allows for the sharing of experiences and the building of knowledge. Twinning projects between countries and regional workshops on specific water resources related issues (for example, target setting or access to water and sanitation under the Protocol, or integrated water resources management under the Convention) also reinforce knowledge transfer.

The Protocol particularly encourages the education and training of the professional and technical staff who are needed for managing water resources and for operating systems of water supply and sanitation, and encourage the updating and improvement of their knowledge and skills (art. 9, para. 3). The Protocol's programme of work foresees twinning activities between water operators, whether in the public or private sector.

Target D: Reduce wastewater pollution and improve water quality by reducing untreated domestic and industrial wastewater by (x%); increasing wastewater reused safely by (y%); and reducing nutrient pollution by (z%) to maximize water resource availability and improve water quality

The UN-Water paper expresses the following desired outcomes or country actions for target D:

- Stimulate action in countries to ensure the collection and treatment of used water and related pollutants arising from domestic water users and from 'point sources' of industry and agriculture so as to protect human health, the environment and ecosystems
- Countries take actions towards increasing the amounts of used water that are re-used or recycled for beneficial purposes, thus contributing to satisfy sustainably all water needs
- Countries put in place policies and regulations that lead to prevention of pollution and a reduction in the negative impacts of diffuse pollution, starting with, but not limited to the priority to reduce nitrogen and phosphorous pollution.

The OWG proposed targets that correspond most closely to this UN-Water target are:

- By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and increasing recycling and safe reuse by x% globally
- By 2020 achieve environmentally sound management of chemicals and all wastes throughout their life cycle in accordance with agreed international frameworks and significantly reduce their release to air, water and soil to minimize their adverse impacts on human health and the environment.¹⁰

A basic provision of the Water Convention is the prevention, control and reduction of pollution at source, *inter alia*, through low- and non-waste technology. Licensing of wastewater discharges by competent authorities and the monitoring of these discharges are further core provisions. The Water Convention requires also that "appropriate measures and best environmental practices are developed and implemented for the reduction of inputs of nutrients and hazardous substances from diffuse sources, especially where the main sources are from agriculture".

Therefore, fulfilling obligations under the Convention contributes to reducing pollution, including by nitrogen and phosphorus, one of the desired outcomes of this target.

According to the Protocol, Parties shall take measures to reduce and eliminate discharges and emissions of substances judged to be hazardous to human health and water ecosystems (art. 4 (c)). In particular, targets have to be set to cover the effectiveness of systems for the management, development and protection and use of water resources, including the application of recognized good practices to the control of pollution from sources of all kinds (art. 6, para. 2 (m)).

¹⁰ From proposed goal 12: Ensure sustainable consumption and production patterns.

Reducing untreated domestic and industrial wastewater (including point source agricultural) by (X%)

Of particular relevance to this element are the Protocol's target areas on: the occurrence of discharges of: (i) Untreated waste water; and (ii) Untreated storm water overflows from waste-water collection systems to waters within the scope of this Protocol; and the quality of discharges of waste water from waste-water treatment installations to waters within the scope of this Protocol.

There is limited reference to wastewater in the current programme of work under the Protocol, but no previous work, and this might be considered an area where efforts should be made in the future to develop and exchange good practice.

Increasing wastewater reused safely by (Z%)

Of particular relevance to this element are the Protocol's target areas on the disposal or reuse of sewage sludge from collective systems of sanitation or other sanitation installations and the quality of waste water used for irrigation purposes, taking into account the *Guidelines for the safe use of waste water and excreta in agriculture and aquaculture* of WHO and UNEP.

However, to date, no work has been undertaken under the Protocol in this area so this too might be considered an area where efforts should be made in the future to develop and exchange good practice.

Reducing nutrient pollution by (Y%)

The Protocol does not address this issue explicitly. Under the Convention, article 3 provides a non-exhaustive list of measures that may be taken to reduce nutrient pollution. Some years ago guidelines were produced under the Convention: *Guidelines for ECE Governments on the prevention and control of water pollution from fertilizers and pesticides in agriculture* (1995).

Target E: Reduce mortality by (x%) and economic loss by (y%) from natural and human-induced water-related disasters

The UN-Water paper expresses the following desired outcomes or country actions for target E:

- At-risk communities implement hazard-specific early warning systems and evaluate effectiveness of their systems with respect to lead time and accuracy of forecasts and efficiency of dissemination
- Countries understand trends in disaster impacts and are able to make informed decisions as to investments in disaster risk mitigation and preparedness. Leaders are aware of the impact of disasters to vulnerable groups and are able to tailor policies to address the specific root causes of vulnerability in their country
- Economic losses reduced and livelihoods improved for vulnerable communities.

The OWG proposed target that relates most closely to this UN-Water target is:

- By 2030 significantly reduce the number of deaths and the number of affected people and decrease by y% the economic losses relative to GDP caused by disasters, including water-related disasters, with the focus on protecting the poor and people in vulnerable situations.¹¹

The above targets do not refer to water-related diseases but these are an important element in water-related disasters. The Protocol addresses water-related diseases profoundly, notably in its article 12 on

¹¹ From proposed goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable.

outbreaks of such diseases and in various guidance materials, such as the *Guidance on Water Supply and Sanitation in Extreme Weather Events* (2011), as well as *Policy and Technical guidance on water-related disease surveillance* (2011) produced by WHO/Europe.

There has been substantial work done under the Convention on extreme weather events particular in relation to climate change. The *Guidance on Water and Adaptation to Climate Change* is to be supplemented in 2015 by a collection of good practices and lessons learned on adaptation to climate change in transboundary basins. A workshop on floods is expected in early 2015.

Increased knowledge and understanding of nations with respect to communities at risk to water-related disasters, especially in a changing climate

Recognizing the importance of joint climate change adaptation in transboundary basins, the Meeting of the Parties to the Convention adopted in 2009 the *Guidance on Water and Adaptation to Climate Change*. This Guidance is a valuable resource to strengthen preparedness and resilience towards climatic variability and hydrological extremes as it explains step by step how to develop and implement an adaptation strategy in the transboundary context. Concretely, it provides advice on how to assess impacts of climate change on water quantity and quality, how to perform a risk assessment, including health risks, how to gauge vulnerability and how to design and implement appropriate adaptation strategies. The current programme of pilot projects on climate change adaptation supports countries putting this Guidance into practice.

Under the Protocol, *Guidance on Water Supply and Sanitation in Extreme Weather Events* (2011) has been developed to provide recommendations on how adaptation policies should consider the new risks from extreme weather events (which could affect the operation of water-supply, drainage and sewerage infrastructure, and the functioning of wastewater treatment plants), how vulnerabilities can be identified and which management procedures can be applied to ensure sustained protection of health. In addition programme area 2.1 under the current programme of work focuses on strengthening water-related disease surveillance, outbreak detection and management, to support the implementation of the Protocol's article 8 on response systems.

Adoption of integrated disaster risk management, including an appropriate mix of structural and non-structural approaches, to reduce mortality and economic losses for water-related disasters

On hazards, the *Model Provisions on Transboundary Flood Management* were adopted by the Parties to the Convention to assist riparian States to address transboundary flood prevention, protection and mitigation and enhance preparedness therefore. In transboundary basins, a well-developed cooperation in flood risk management, including early warning, helps to avoid negative repercussions from unilateral developments and to improve security to the benefit of all the Riparian Countries.

Adoption and implementation by nations of monitoring and people-centred early warning systems for communities at most risk to water-related disasters

The Water Convention specifically requires riparian Parties, in the framework of general principle of cooperation (art. 9), or specific arrangements such as joint bodies, to establish and implement joint programmes for monitoring the conditions of transboundary waters, including floods and ice drifts, as well as transboundary impact (art. 11, para. 1). A specific provision dedicated to the warning and alarm systems (art. 14) requires setting up and operating coordinated or joint communication, warning and alarm systems with the aim of obtaining and transmitting information.

The Protocol's article 8 requires the establishment of surveillance and early-warning systems and contingency plans, as well as the development of response capacities. Article 12 goes on to require that Parties promote cooperation in international action in this regard. As noted above, the current programme of work includes an area 2.1 on strengthening water-related disease surveillance, outbreak detection and management.

Application of an end-to-end preparedness approach to water-related disaster management which sees the needs of user communities being met, to the last mile

The Water Convention works with another ECE treaty, the Convention on the Transboundary Effects of Industrial Accidents, to address the prevention of, preparedness for and response to industrial accidents that may impact transboundary watercourses. The governing bodies have established a Joint ad hoc Expert Group on Water and Industrial Accidents that has prepared guidance on a number of topics in this area.

Articles 8 and 12 are also relevant in regard to this aspect of the possible target, with programme area 2 on Prevention and reduction of water-related diseases expected to strengthen capacities to deal with water-related diseases.

Conclusions

The above discussion illustrates that the Convention and Protocol deliver a generally comprehensive though, in some areas, complex coverage of most water-related issues being raised in discussions on a possible water SDG.

However, there are some policy gaps, notably on wastewater (target D) and on water productivity (within target B), whereas the work on water-related disasters (target E) is perhaps narrower than the scope foreseen for the target. In addition, the *Guidelines on the Setting of Targets, Evaluation of Progress and Reporting* under the Protocol on Water and Health might usefully be updated in the light of the agreed post-2015 development agenda to offer an improved and more tailored support to both the Protocol and the post-2015 agenda.

Given the somewhat jumbled mixture of legal provisions, guidance materials and tools available to assist in achieving a possible water SDG, a more structured toolbox—or toolboxes (one for the Convention, one for the Protocol)—or overview(s) might be of help to countries in their implementation and monitoring of targets. Such work would naturally have to await agreement on the post-2015 development agenda at the global level.

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