



## **Up to and Beyond 2015:**

### ***Emerging Issues and Future Challenges for the International Water and Sanitation Agenda***

A synthesis report of global stakeholder views

**April 2008**

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## Introduction

**The Global Public Policy Network on Water Management**<sup>1</sup> was established by Stockholm International Water Institute (SIWI) and Stakeholder Forum for a Sustainable Future at the World Water Week in 2006. It was conceived in consultation with a wide range of international water management stakeholders to enable a successful review of water management at the 16<sup>th</sup> session of the Commission on Sustainable Development, in May 2008.

At CSD-16, the water management commitments outlined in the CSD-13 decision will be reviewed. The review will take place on 12<sup>th</sup>-13<sup>th</sup> May (the first two days of the second week). The GPPN aims to enhance the review process by providing a space ahead of CSD-16 where all water management stakeholders – including governments, civil society and international agencies – can provide their inputs and exchange knowledge on how far CSD-13 commitments on water management have been met. As a parallel process the GPPN is also seeking inputs from stakeholders on water management as a cross-cutting issue in relation to Agriculture and Africa – two of the thematic issues under discussion at CSD-16 to which water management is most relevant.

Here, the GPPN has gathered stakeholder input on *Emerging Issues and Future Challenges for the International Water and Sanitation agenda* – this paper covers issues that have not been dealt with in depth by the CSD-13 decision. The GPPN has dedicated a separate paper to these issues to highlight their importance, and catalyse further discussions on how the CSD can incorporate these issues effectively into its policy commitments.

The GPPN secretariat has synthesised the input from stakeholders on *Emerging Issues and Future Challenges* into the document below.

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<sup>1</sup> Water Management in this context refers to the five themes covered by the CSD-13 decision: Access to basic water services; Integrated water resources management (IWRM); Access to basic sanitation; Sanitation and hygiene education; Wastewater collection, treatment and reuse

## Methodology and Process

The Global Public Policy Network is a joint initiative by Stakeholder Forum for a Sustainable Future and Stockholm International Water Institute. During the process of compiling global stakeholder inputs in preparation for the CSD-16 review, Stakeholder Forum undertook the majority of the administrative and analytical work, whilst SIWI acted as a strategic and technical advisor. **As such, the paper does not represent Stakeholder Forum's or SIWI's position but rather reflects a collection of the views submitted.**

The GPPN secretariat identified key global stakeholders with experience and expertise in the water and sanitation sector, and sought their feedback on key emerging issues for the international water and sanitation agenda, including:

Right to access to access to safe water and sanitation  
Water management and climate change  
Virtual/Embedded Water and Water foot-printing  
Virtual Water Trading  
Trans-boundary Watercourses.

**A full version of the guidelines and the table provided to frame stakeholder inputs can be found at**

<http://gppn.stakeholderforum.org/index.php?id=documents>

The GPPN secretariat received inputs from twenty six stakeholders, many of whom had in turn consulted their own members. The stakeholders who provided valuable inputs are listed below:

### **Women**

- Gender and Water Alliance

### **Business and Industry**

- World Business Council for Sustainable Development
- Aquafed
- Coca Cola, Hellenic

### **Workers and Trade Unions**

- UNISON/PSI

### **NGOs**

- Freshwater Action Network (FAN)
- Instituto Ipanema (Brazil)
- Water Research and Planning Organisation (Bangladesh)
- WWF
- SWITCH (Sustainable Water Management Improves Tomorrow's Cities' Health)
- Water and Sanitation for the Urban Poor (WSUP)

## **Water and Sanitation: Obstacles Constraints and Next Steps for the CSD**

A report from the global public policy network on water and sanitation

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- Tearfund
- WaterAid
- Freshwater Action Network (FAN)
- Centre for Rural Studies and Development (CRSD) – FAN South Asia
- NGO Forum for Drinking Water Supply and Sanitation – FAN South Asia
- Mexican Institute of Water Technology (IMTA) – FAN- Mexico
- Centre for Rural Studies and Development (CRSD) – FAN South Asia
- NGO Forum for Drinking Water Supply and Sanitation – FAN South Asia
- CONIWAS – African Civil Society Network on Water and Sanitation (ANEW)
- Mexican Institute of Water Technology (IMTA) – FAN- Mexico

### ***Scientific and Technological Communities***

- International Council for Science ICSU, Global Water System Project
- Centro de Estudios Ambientales, CEDEA (Argentina)
- Stockholm International Water Institute

### ***Farmers***

- International Federation for Agricultural Producers (IFAP)

Although, seen from a global perspective, this only represents a fraction of the stakeholders involved with global water issues, it is felt that it is a representative mix and thus can provide an important input to the CSD process. In the first round of consultations, the focus has been on non-governmental stakeholders as there are already specific processes in place to gather inputs from governments. However, it is the intention of the GPPN to share its findings with governments, and invite inputs from governmental stakeholders in response to the findings.

## **GPPN Steering Committee**

This paper has benefited from the valuable insights and expertise of the GPPN Steering Committee, and the Secretariat would like to extend our thanks to them.

Aaron	Salzburg	Oceans, Science and Environment	US Dept of State
Peregrine	Swan	Policy and Research Division	DFID
Flavia	Loures	Freshwater Policy	WWF
Danielle	Gaillard	Forum Co-ordinator	World Water Council
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Falk	Schmidt	International Human Dimensions Programme	
Danielle	Morley	Director	Freshwater Action Network
Eva	Haden	Program Officer, Water and Ecosystems	WBCSD
Karin	Lexen	Secretariat	SIWI
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Torkil	Jonch Clausen	Managing Director	DHI Water Policy
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Tri	Tharyat	First Secretary	Indonesia Mission to UN
Melanie	Santizo	Second Secretary	Mission of Guatemala to the U N

## Findings

The findings from stakeholder inputs have been presented below. We have tried to present the findings as concisely as possible, whilst reflecting the depth and insight of many of the contributions. Each section outlines some key obstacles and constraints in each of the Emerging Issue areas, and recommendations and 'Next Steps' are highlighted in a separate box at the end of each section.

### Right to Access to Water and Sanitation

The main **obstacles and** in this area are outlined below:

#### *Implementation of Right to Water and Sanitation*

The right to water has become a pressing issue as international attention to the widespread lack of access to water and sanitation increases, and it becomes clear that in many parts of the world the Millennium Development Goals on water and sanitation are unlikely to be met. UN General Comment 15 outlines the legal basis for the right to water and the 2006 Human Development Report urges all governments to enshrine the human right to water in enabling legislation.<sup>2</sup> However, the guarantee of the right to water in national legislation is not widespread.

#### *Indicators for Right to Access Water and Sanitation*

Indicators for the scope and meaning of access to safe drinking water and sanitation are still evolving, and despite a number of declarations by the Human Rights Council, definitive indicators must be established so that governments understand the obligations that such rights entail, including:

- i. How much water per person is required to have 'access'?
- ii. What is a reasonable distance to travel to collect water?
- iii. Does the Right to Water also include the usage for agricultural and industrial purposes, which is integral to the right to development?
- iv. How are privacy issues taken into account in the term 'safe sanitation'?
- v. Does the Right to access to safe Water and Sanitation guarantee a healthy environment within which water resources are protected from pollution?

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<sup>2</sup> Summary of Human Development Report, UNDP 2006, p 20

## ***Next Steps for CSD***

### ***Implementation of Right to Water and Sanitation***

Governments should call on the Human Rights Council to state that the right to access to water and sanitation be explicitly included in the International Covenant on Economic, Social and Cultural Rights. In addition to/parallel to this, governments should incorporate the right to access to safe drinking water and sanitation into national law.

### ***Indicators for Right to Water and Sanitation***

Governments should take note of General Comment 15 of the UN Committee on Economic, Social and Cultural Rights<sup>3</sup>, and the recommendations outlined in the Report of the United Nations High Commissioner for Human Rights on the scope and content of the relevant human rights obligations related to equitable access to safe drinking water and sanitation under international human rights instruments.<sup>4</sup> Governments should over the next three years also take note of clarifications issued by the recently appointed Independent Expert on the content of human rights obligations in relation to access to safe drinking water and sanitation.<sup>5</sup>

The report on scope and content concludes that “it is now time to consider access to safe drinking water and sanitation as a human right” and calls upon States to prioritize personal and domestic water uses over other uses and to take steps to ensure that a sufficient amount of good quality water for personal and domestic uses is affordable for all and can be collected within a reasonable distance from a person’s home.’

However, regarding sanitation, the report highlights that ‘Human rights instruments offer little guidance as to the scope and content of the term “sanitation”. CSD should call upon the international community to develop more robust indicators and guidelines as to what the right to access to sanitation entails.

Some stakeholders pointed out that the report makes no comment on human rights obligations relating to water for agricultural and industrial purposes. As the right to development has clear implications for the right to access to water, this is an area that requires further discussion, research and clarification.

## **Water and Climate Change**

The main **obstacles and constraints** in this area are outlined below:

### ***Increasing climatic threats***

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<sup>3</sup>[http://www.unhcr.ch/tbs/doc.nsf/0/a5458d1d1bbd713fc1256cc400389e94/\\$FILE/G0340229.pdf](http://www.unhcr.ch/tbs/doc.nsf/0/a5458d1d1bbd713fc1256cc400389e94/$FILE/G0340229.pdf)

<sup>4</sup> <http://daccessdds.un.org/doc/UNDOC/GEN/G07/136/55/PDF/G0713655.pdf?OpenElement>

<sup>5</sup> On 28<sup>th</sup> March 2008 the human rights Council adopted by consensus a resolution on human rights and access to safe drinking water and sanitation. Through this resolution the Council established a new Independent Expert on the issue of human rights obligations related to access to safe drinking water and sanitation. The Independent Expert will work for 3 years.

Climate change poses a serious threat to achieving international commitments on water and sanitation, as melting glaciers, changes in precipitation patterns and increased droughts will combine to have an impact on availability and sustainability of water resources. Global temperature increase of 3-4°C could cause floods resulting in 330 million climate refugees and changed run-off patterns and glacial melt will force an additional 1.8 billion people to live in a water scarce environment by 2080

### ***Climate Change and Water Strategies***

Strategies for adapting to climate change that will inevitably happen need to be scaled up. In many cases, existing knowledge on natural climate variability could be used as a base line. As yet there is no sufficient integration of climate change risk assessment with water resource management – governments, especially in already vulnerable and water-stressed areas, need to address the issue of climate change in relation to access to safe drinking water and sanitation as well as for access to water for productive uses (agriculture, energy, industry etc). With the right adaptation measures in place, some regions may even experience positive effects of climate change in relation to, for example, agricultural production. This can be very important, as other regions will suffer from production losses.

### ***Information, data and knowledge***

- i. Access to reliable hydrological and meteorological data and climate risk information is insufficient in many parts of the world
- ii. Water management practitioners have not had access to relevant information or training to plan for climate change
- iii. Appropriate modeling techniques for the effect of climate change on water resources are not in place in all countries
- iv. Climate change and its potential effect on water resources is not sufficiently addressed on a regional/local level, and is rarely included in local/regional/city scenarios.

### ***Financing***

Financing for adaptation is insufficient both from a donor perspective and in terms of the prioritising of adaptation in national financial plans: By mid-2007, actual multilateral financing delivered within the initiatives set up under the UNFCCC reached US\$26 million, less than 10% of total committed financing for adaptation through the multilateral funds (*US\$279 million*).

## ***Next Steps for CSD***

### ***Climate Change and Water Strategies***

The following steps could be considered by governments to develop ambitious and coherent climate change strategies in relation to water management:

- i. Development of National and, where appropriate, Transboundary Adaptation Plans of Action to incorporate sustainable water management, national and transboundary contingency plans, climate proofing and new infrastructure where necessary. Financial aspects should be included in such plans.
- ii. Incorporation of assessment of climate change impacts in National Water Policy and/or Management Plans (including Integrated Water Resources Management plans currently under preparation or implementation in many countries).
- iii. Scaling up of investment related sustainable integrated water resource management, which contributes to building resilience to climate variability and change.

### ***Information, data and knowledge***

- i. Governments should consider making concerted efforts to increase their support and enhance relationships with metrological institutions to be able to gain state-level and basin level data and statistics
- ii. Governments need to strengthen international cooperation on the sharing of hydrological data, in accordance with WMO Resolution 25 on free and open exchange of hydrological data. A similar agreement has been in place for meteorological data for decades.
- iii. Training on climate change risk assessment must be provided to all water management practitioners so that it can be taken into account in their work. This will help to 'climate-proof' infrastructure development and improve long-term planning capacity in general..
- iv. Funds should be earmarked by governments for the development of institutions for disaster risk management, with special emphasis given to climate change. Integral to any risk assessment relating to climate change is analysis of the sustainability of water resources and supplies. Governments should commit funds to a global Water and Climate Change Impact Assessment Conference, where latest research and knowledge can be shared and capacity for integrating climate change with sustainable water management can be enhanced.

### ***Financing***

Donor governments must reassert their commitments to financing for climate change adaptation as agreed through the Kyoto Protocol.

National governments must also prioritise climate change adaptation in their national financial strategies, and mobilize funds on a country level for building resilience to climate change in the water sector

## **International Watercourses**

The main **obstacles and constraints** in this area are outlined below:

### ***Poor Freshwater Governance***

The world's 263 transboundary river basins are home to 40% of the world's population, cover half the Earth's surface, cross the territories of 145 countries, and generate around 60% of global freshwater flow. To name just a few examples, Brazil alone shares 74 water basins; 54 international rivers run

between India and Bangladesh. Many of these basins suffer from poor and uncoordinated management in the absence of adequate water governance arrangements. Though numerous treaties are in force in particular river basins, many fail to incorporate important principles and rules governing the use, management, and protection of international watercourses. Moreover, around 60% of international watercourses are not governed by agreements and 80% of the existing agreements do not involve all co-riparians (UNEP 2006).

### ***Conflict and Inadequate Interstate Cooperation***

As pressure on water resources increases and the effects of climate change on the hydrological cycle become more pronounced, the necessity for interstate cooperation regarding international watercourses becomes ever more important. Nonetheless, the lack of effective and adequate frameworks governing international watercourses, as described above, can fuel tensions and lead potentially to conflict between co-riparians. The poor, women and children, will be most vulnerable to such conflicts. Interstate disputes already represent not only a challenge to freshwater conservation, but also an obstacle to the achievement of the development and water management goals established or restated by CSD-13.

Recognizing the need for the cooperative and equitable management of the world's international watercourses and the role a global governance framework could play in that regard, the UN General Assembly adopted, in May 1997, the Convention on the Law of the Non-Navigational Uses of International Watercourses (UN Watercourses Convention). More than one hundred countries voted in favor of the convention and thirty-eight governments sponsored its adoption. Counting today 16 contracting states, the convention requires 35 parties to become effective.

The Convention provides the framework through which to enhance good water management practices in international watercourses and to enable states to cooperate on their management, development, and protection. The convention's well-developed body of substantive and procedural rules aims at peacefully solving and preventing interstate disputes. Moreover, the convention guides co-riparians through the cooperation process for the sharing of water resources and related benefits in an equitable and reasonable manner. Once in force and widely implemented, the convention will improve relations among watercourse states, e.g., by requiring regular information exchange and interstate consultations before the implementation of major planned measures.

The CSD-13 did not address the process for entry into force and implementation of the UN Watercourses Convention. From a broader perspective, discussions among key stakeholders on a global freshwater governance framework have been limited. CSD-16 is thus a key opportunity for re-engaging the world's governments in the ratification and future implementation of the convention and for raising transboundary water issues to the top of the international political agenda.

## ***Next Steps for CSD***

### ***Poor Freshwater Governance***

To avoid a situation in which lack of interstate co-operation on water resources hinders the achievement of international commitments on water and sanitation, the following steps could be highlighted at CSD16 and taken up by the EcoSoc Annual Ministerial Review in July 2008 or at the CSD in 2009:

- i. Governments should recognise cooperation between watercourse states as necessary to foster peace, stability and sustainable development, and discuss at greater length the challenge of freshwater governance in international watercourses and the role of the UN Watercourses Convention in that regard.
- ii. Governments should evaluate the role of the UN Watercourses Convention role in adding value to their existing watercourse agreements and arrangements, in governing their interstate relations in the absence of applicable agreements and arrangements, and in informing and fomenting the adoption of new or revised basin-specific or regional cooperation frameworks,
- iii. Governments should express their support and commitment to the entry into force and implementation of the UN Watercourses Convention, as well as report on their progress towards ratification or accession, through interventions at CSD-16.
- iv. A recommendation urging states to become parties to and implement the UN Watercourses Convention should be included in the outcome document of CSD-16.

### ***Conflict and Inadequate Interstate Cooperation***

In order to implement effectively the UN Watercourses Convention and other existing cooperation frameworks, with a view to averting the potential for conflict and sharing in the benefits from better levels of interstate cooperation, governments should:

- i. Pass national laws establishing principles of cross-border dialogue and exchange in the management, use, and protection of international watercourses
- ii. Learn from and follow the examples of successful regional cross-border dialogues on transboundary integrated river basin management, especially through mechanisms of South-South or North-South cooperation and exchange on water issues.
- iii. Seek equity and win-win solutions in trans-boundary water management negotiations, based on the principles and procedures established by the UN Watercourses Convention and applicable regional or watercourse agreements or arrangements.
- iv. Adopt new or revised watercourse agreements or arrangements, taking into account the UN Watercourses Convention, and establish joint water bodies, as appropriate.
- v. Strengthen ongoing discussions on transboundary water issues, seeking to set up basin-wide dialogues and watercourse agreements, where existing frameworks fail to include all watercourse states within a given international watercourse.
- vi. Promote and engage in the adoption of regional water frameworks and, where appropriate, in the harmonization of existing watercourse agreements, taking into account the principles and rules of the UN Watercourses Convention.
- vii. Emphasise participatory processes of dialogue
- viii. Develop joint financing schemes.
- ix. Set up national or cross-border research and monitoring projects and plans and share hydrological and other relevant information, in accordance with WMO Resolution 25 on Free and Open Exchange of Data, as well as with Art. 9 of the UN Watercourses Convention.
- x. Take into account climate change adaptation, biodiversity conservation and sustainable use, and desertification prevention and mitigation, especially in regards to obligations under the respective multilateral environmental agreements, when implementing the UN Watercourses

Convention, as well as existing watercourse agreements or arrangements.

## **Virtual Water and Water Trading**

The main **obstacles and constraints** to implementing commitments in this area are outlined below:

### ***Knowledge and Communication***

Though extensive research on virtual water has been conducted and peer-reviewed, in many cases this has yet to filter down and influence policy on a country level. Online information and tools exist to help individuals, organisations, businesses and countries to assess their water footprints, but these are not incorporated into overarching national water strategies.

### ***Standardized Methodology and Indicators***

As yet there is no single standard methodology for assessing water footprints and virtual water content. This is partly to do with the complexity of assessing water footprints and virtual water, taking into account blue, green and grey water; the use of domestic water resources; the use of water resources outside a country etc.

### ***Global Framework for Water Trading***

As yet there is no global framework for dealing with virtual water trading<sup>6</sup> – the logical extension of measuring the virtual water in products. The Middle East and North Africa region has significantly expanded its imports of agricultural produce to cope with water scarcity since the 1970s. However, this development exists independently of any macro global water trading system that could assess the water needs and water capacity of different countries and recommend production and import/export accordingly.

## ***Next Steps for CSD***

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<sup>6</sup> The World Business Council on Sustainable Development publication Water Scenarios to 2025 suggests that within twenty years we could be trading in Virtual Water in a similar way to that of carbon trading

### ***Standardized Methodology and Indicators***

CSD could ask UN Water in association with UNESCO-IHE Institute for Water Education, UN Statistics Division, Institute for Water Education and other relevant stakeholders to co-ordinate an international working group to develop recommendations for a standardized methodology for assessing water footprints and virtual water. This could include agreed definitions for and defined methodologies for assessing:

- i. Blue, green and grey water
- ii. Production-site Measurements
- iii. Consumption-site measurements.
- iv. Water embedded in the raw materials and/or other inputs required for manufacturing products
- v. Water required to use a product or service

### ***Knowledge and Communication***

The same working group could be responsible for initiating the following activities:

- i. An online resource providing detailed information on agreed standards, available tools, information and research
- ii. Capacity-building workshops to provide information and training on standards for assessing water footprints and virtual water, and the implications of this for virtual water trading
- iii. Establishing suggestions for a governance system that is credible and legitimate to undertake monitoring, reporting and validation of results of any claim to have met the standard

### ***Global Framework***

In order to develop the potential of virtual water trading to enhance water security, an international working group could be established to make recommendations on what kind of body or process could be set up to deal with global trade in virtual water. Academics specialising in the theory of virtual water trading are already suggesting that ultimately a Virtual Water Trading Council should operate under the auspices of the WTO: this would serve as a scrutinising body for the international trade in water, ensuring that flows of water between countries are sustainable and that water-importing countries allocate their precious internal water resources effectively. The development of any such regulatory body requires further research, consultation and negotiation. CSD could call governments to:

- i. Agree to set up a global working group to conduct further research and consultations into such a body/process around virtual water trading, and report to the CSD in 2012
- ii. This might lead to recommendations for setting up an intergovernmental framework negotiating process which would be informed by the latest research to make binding international agreements on virtual water trading, and allocate responsibility for its administration and scrutiny accordingly.