Working Group 10:

# WATER DIPLOMACY FOR PEACEFUL CLIMATE ADAPTATION

Extract from:

## Planetary Security:

Peace and Cooperation in
Times of Climate Change and
Global Environmental Challenges

## Conference Report

2 and 3 November 2015
Peace Palace, The Hague

# WORKING GROUP 10

# WATER DIPLOMACY FOR PEACEFUL CLIMATE ADAPTATION

*The purpose of the session was to explore how the efforts of water diplomacy at multiple levels can contribute to more effective resilience and adaptation to climate change. Climate change has long-term and short-term impacts whereby climate variability can result in increased frequency of droughts and flooding. Flooding in particular plays a fundamental role in regional identity and presents a window of opportunity for mutually beneficial regional cooperation. The panel and audience discussion centred on the question of how water diplomacy improves the ability to adapt to climate change and follow the path of cooperation rather than conflict, (globally and in the South Asia region, in particular).*

**Moderator:** **Torgny Holmgren**, Stockholm International Water Institute
**Speakers:** **Ahmad Rafay Alam**, Saleem, Alam & Co. / Punjab Environment Protection Council
**Jenny Clover**, Independent Consultant
**Malin Mobjöck**, Stockholm University
**Jamie Pittock**, The Australian National University
**Aaron Salzberg**, U.S. Department of State
**Rapporteur:** **Syed Muhammad Nishat ul Hassan Kazmi**, Centre for Research and Security Studies / Institute for Environmental Security
**Infographics:** **Philippe Rekacewicz**, Visionscarto.net



## 1. CHALLENGES

The challenge is in understanding and unpacking the nexus of water-food-energy and the environment and how the trade-offs can be negotiated to support sustainable development. Water has been described as the bloodstream of the biosphere;[39] it is fundamental in agricultural production and is an essential component in the generation of many types of energy. Nexus thinking promotes an understanding of the connections between water, food, energy and the environment and how any action in one of these sectors impacts and influences the other sectors.

The World Economic Forum (WEF) articulated the water-food-energy security problem as follows:

*"A rapidly rising global population and growing prosperity are putting unsustainable pressures on resources. Demand for water, food and energy is expected to rise by 30 to 50 percent in the next two decades, while economic disparities incentivise short-term responses in production and consumption that undermine long-term sustainability. Shortages could cause social and political instability, geopolitical conflict and irreparable environmental damage. Any strategy that focuses on one part of the water-food-energy nexus without considering its interconnections risks serious unintended consequence."*

Water is therefore integrally linked to food, energy and the environment, and if it is addressed in isolation from these other sectors, and climate change in particular, the solutions to our water problems will be naive and almost definitely result in perverse outcomes, which could potentially weaken rather than strengthen water cooperation and diplomacy objectives.

[39] Rockström et al, *Linkages Along Water Vapor Flows, Food Production, and Terrestrial Ecosystem Services* (1999) http://www.ecologyandsociety.org/vol3/iss2/art5/main.html#Introduction

**Some Facts:**

- Approximately 276 river basins cross international borders and serve as a primary source of freshwater for approximately 40 percent of the world's population. Globally about 30 to 50 percent of the world's population depend on groundwater sourced from 608 transboundary aquifer systems. Around 60 percent of the world's international river basins lack any type of cooperative management framework. Sharing these water resources equitably and fairly requires cooperation at both the technical and political level.

- Global consumption of water is doubling every 20 years, more than twice the rate of human population growth. According to the United Nations, more than one billion people, or about one-sixth of the world's population, lack access to good quality drinking water. Of these one billion, the vast majority is living in developing states. If current trends persist, by 2025 the demand for water is expected to rise by 56 percent more than the amount of water that is currently available.[40]

- Each of the past three decades has been warmer than the last, and warmer than any decade since we started keeping records. Sea levels are rising. Arctic ice cover is shrinking. Crop yields are changing – more often than not, getting smaller. It has been getting wetter, and storms and heat waves are getting more intense. Climate change will make food systems more volatile, exacerbate health problems, displace people, weaken countries' infrastructures, and fuel conflict. It will touch every area of life. Economic growth will slow as temperatures warm, new poverty traps will be created, and we will find that poverty cannot be eliminated without first tackling climate change.[41]



## 2. RESPONSES

Climate change, in conjunction with other global pressures such as population growth, urbanisation, increasing demand, environmental degradation and uneven economic development and inequity, poses as a threat multiplier to transboundary water management and cooperation.[42]

Conflict over shared water resources has a long and fascinating history. Interestingly, there is a globally accepted misperception that the next wars will be fought over water.[43] On closer examination of the evidence, there are in fact more instances of international cooperation than armed conflict over water.[44]

Aaron Wolf and his colleagues, in their research "Basins at Risk", examined the relationship between change and the institutions in the context of transboundary waters.[45] They found that where change exceeded the institutional capacity to absorb change, the potential for conflict (not necessarily armed conflict) was heightened. Their study systematically examined conflictive and cooperative events and found that cooperation was the most likely outcome in most circumstances at a ratio of about 2 to 1.

[40] Institute for Environmental Security (IES), *Recent trends in EU external action in the fields of climate, environment, development and security* (2011) http://www.envirosecurity.org/resa/RESA.pdf
[41] Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2014 Synthesis Report Summary for Policymakers* https://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf
[42] European Union Institute for Security Studies (EUISS), *EUISS Yearbook of European Security: Y-E-S 2015* http://www.iss.europa.eu/uploads/media/YES_2015.pdf
[43] Allan JA, *Water in the Environment/ Socio-Economic Development Discourse: Sustainability, Changing Management Paradigms and Policy Responses in a Global System* (2005) https://sustainability.water.ca.gov/documents/18/3334111/Water+in+the+Environment.pdf
[44] Yoffe S et al, *Geography of international water conflict and cooperation: Data sets and applications* (2003) http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.365.2469&rep=rep1&type=pdf
[45] Ibid

Two of the most obvious responses from a transboundary perspective at the international level, are the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses, which entered into force in August 2014 and the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (which recently broadened its membership to beyond the EU to a global audience). Other responses include over 400 signed international water treaties which cover a significant number of the world's transboundary watercourses[46] and in many cases cooperation is further institutionalised by the establishment of River Basin Organisations (RBOs) governing various aspects of shared water resources.[47]

Some of the basins that were identified as at risk by Yoffe et al (2003) are now no longer so classified, primarily as a result of institutional reform and the establishment of RBOs. There is, however, still much work to be done with regions at risk being those where there are unilateral development plans without cooperative mechanisms in place.

The Sustainable Development Goals (SDGs) can provide further impetus to the management of transboundary water resources directly through Goal 6.5, which states that by 2030 integrated water resources management should be implemented at all levels, and through transboundary cooperation as appropriate and indirectly through, among others, Goal 16, to promote peaceful and inclusive societies for sustainable development.

"[W]ar and armed conflict in the world is again climbing. Numbers of casualties in areas of struggle are simultaneously increasing and half of the world's poor live in conflict states".[48] Creating opportunities for international water cooperation can contribute to peacebuilding efforts; this is where the role of water diplomacy can play a significant role.



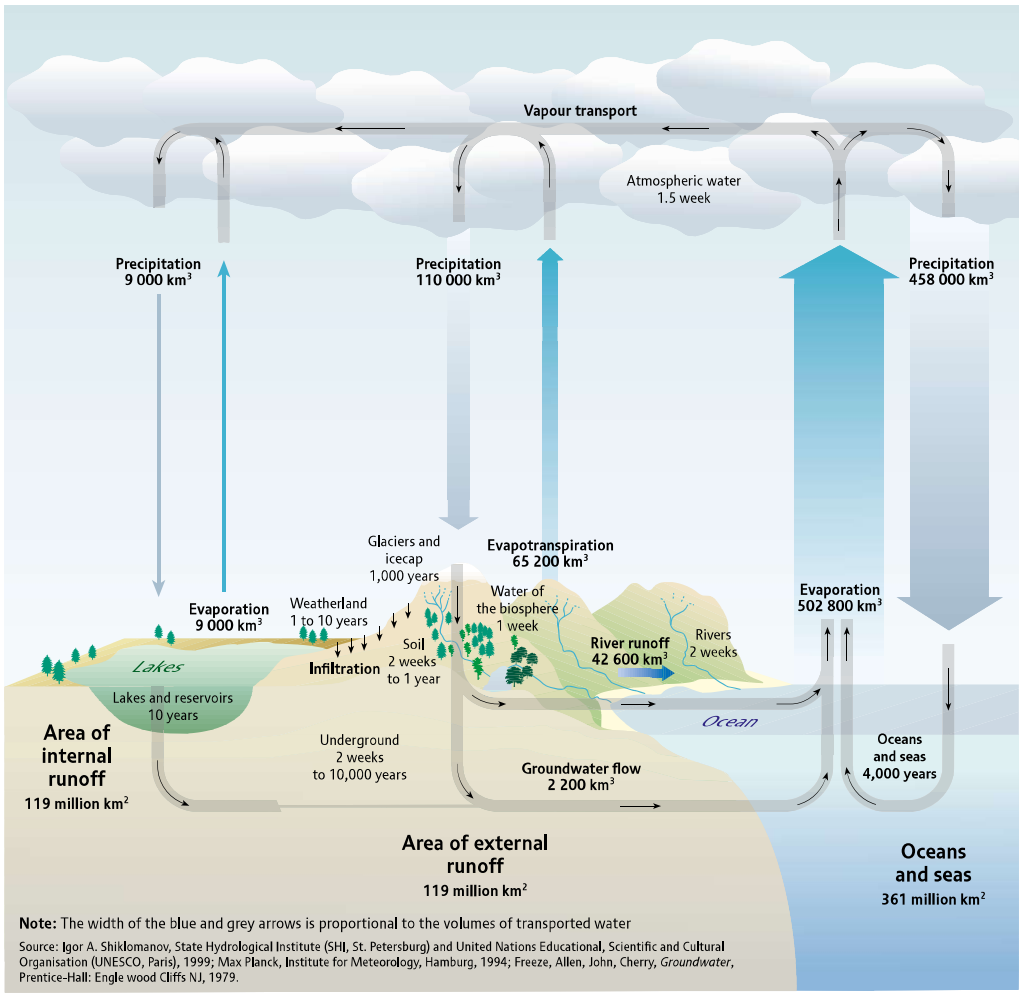
## 3. FURTHER READING

- World Economic Forum (WEF), Global Risks 2011 Sixth Edition: An initiative of the Risk Response Network *http://reports.weforum.org/wp-content/blogs.dir/1/mp/uploads/pages/files/global-risks-2011.pdf*

[46] Wolf A, *Regional Water Cooperation as Confidence Building: Water Management as a Strategy for Peace* (2004) *http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.132.2717&rep=rep1&type=pdf*

[47] Schmeier S, 'River Basin Organisations lost in Translation? Transboundary River Basin Governance between Science and Policy' (2014) in Bogardi J et al (eds), *The Global Water System in the Anthropocene: Challenges for Science and Governance* (2014)

[48] Folke Bernadotte Academy, 'Policy, Research and Development' (2015) *https://fba.se/en/how-we-work/research-policy-analysis-and-development/*

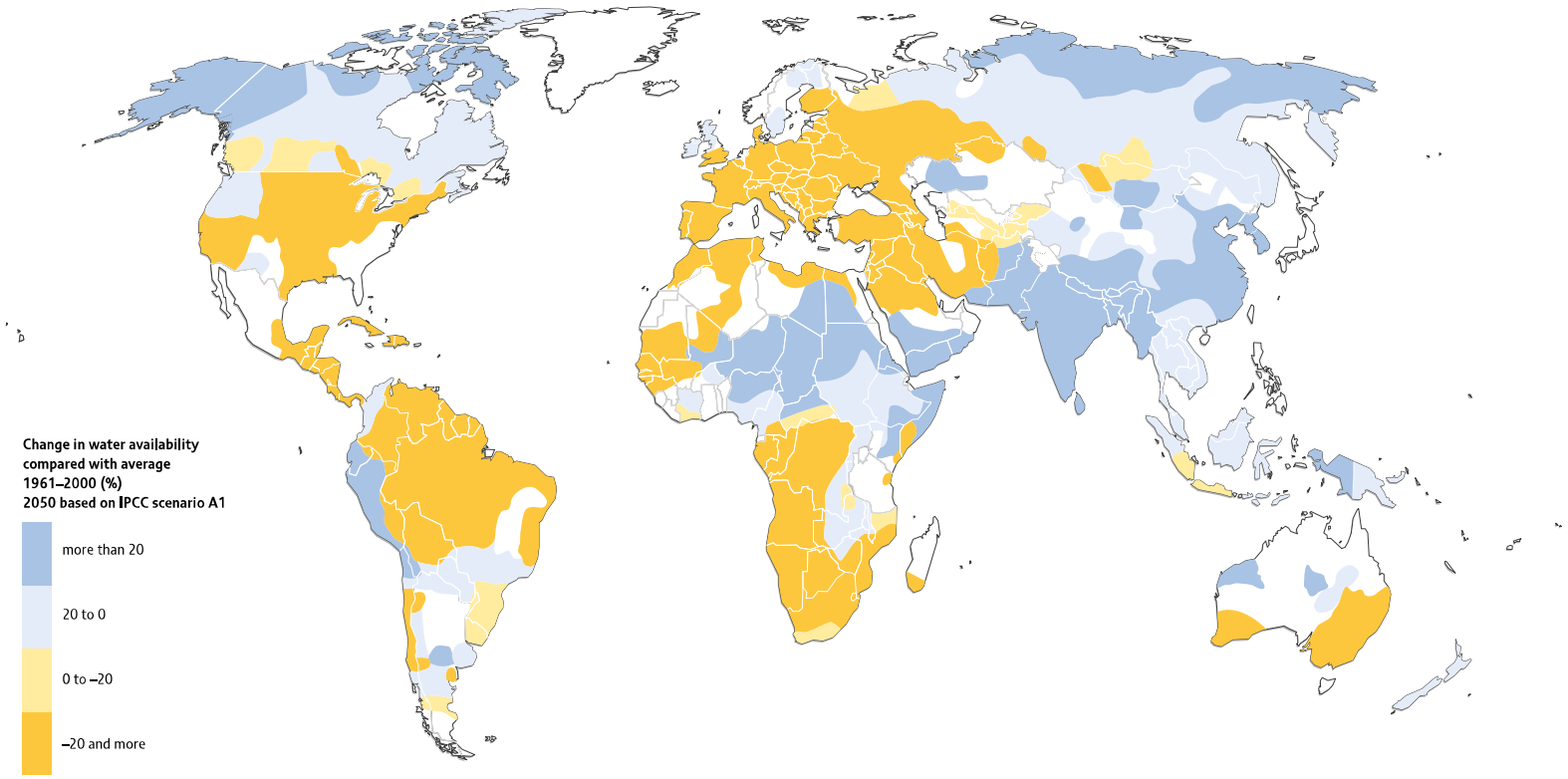



**Note:** The width of the blue and grey arrows is proportional to the volumes of transported water

Source: Igor A. Shiklomanov, State Hydrological Institute (SHI, St. Petersburg) and United Nations Educational, Scientific and Cultural Organisation (UNESCO, Paris), 1999; Max Planck, Institute for Meteorology, Hamburg, 1994; Freeze, Allen, John, Cherry, *Groundwater*, Prentice-Hall: Engle wood Cliffs NJ, 1979.

CREATED BY PHILIPPE REKACEWICZ - VISIONSCARTO.NET FOR PLANETARYSECURITY.NL

## Climate change will contribute to declining water availability




Source: Arnell 2004; WRI; FAO; Unesco.

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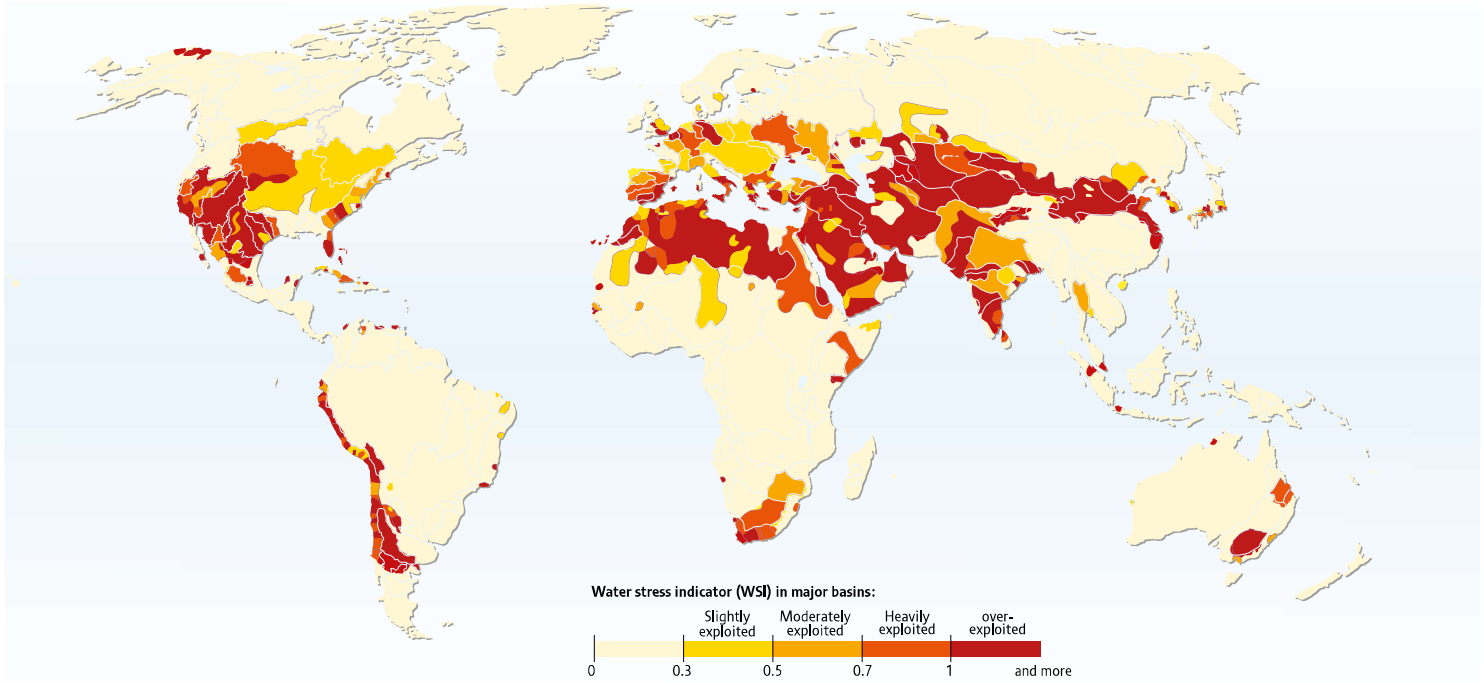


Sources: Smakhtin, Revenga and Döll, 2004; WRI; Unesco.

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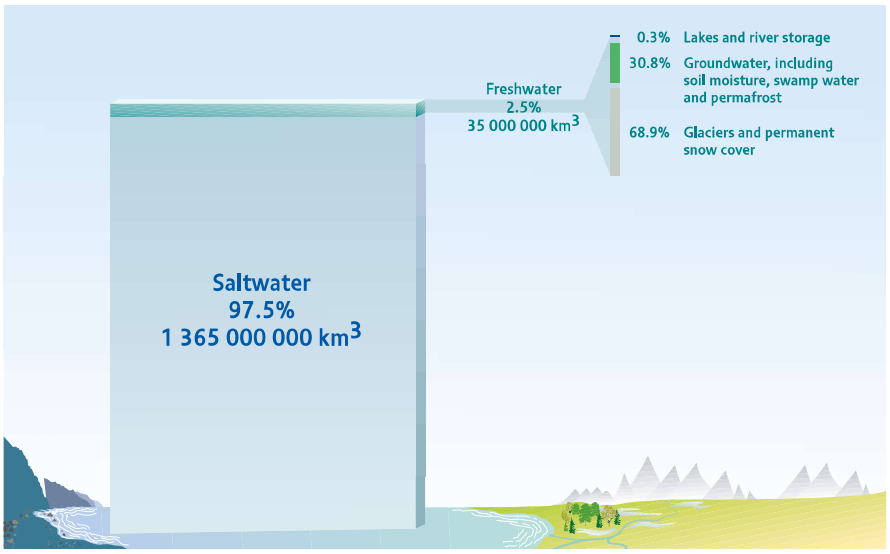


Source: Igor A. Shiklomanov, State Hydrological Institute (SHI, St. Petersburg) and United Nations Educational, Scientific and Cultural Organisation (UNESCO, Paris), 1999.

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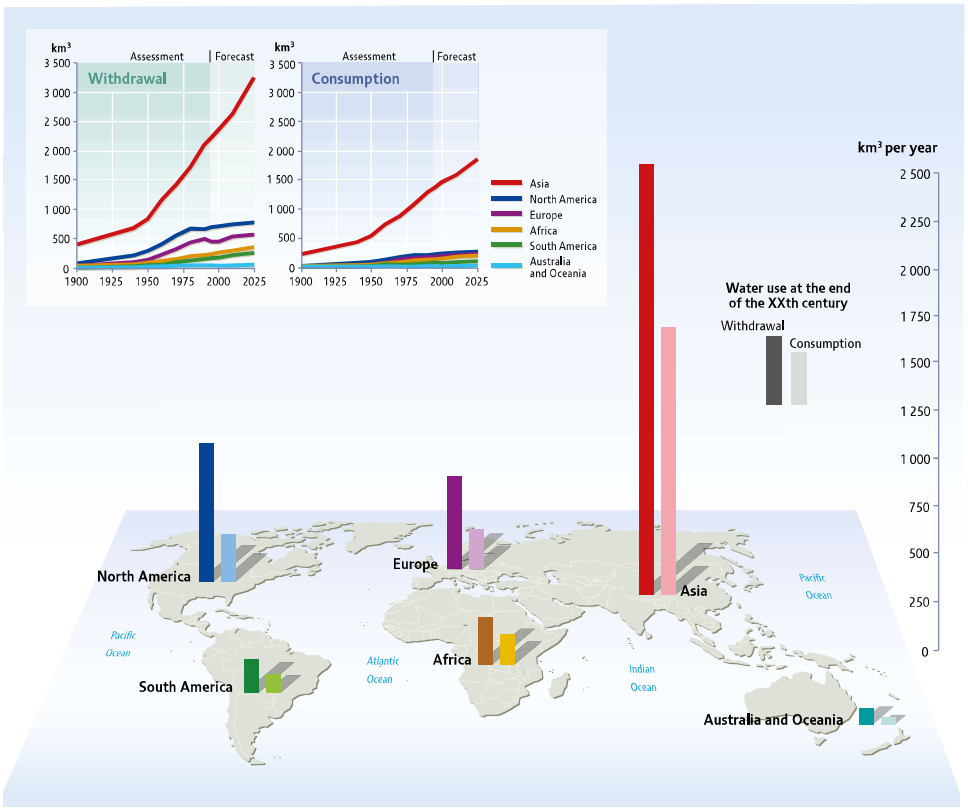


Source: Igor A. Shiklomanov, State Hydrological Institute (SHI, St. Petersburg) and United Nations Educational,Scientific and Cultural Organisation (UNESCO, Paris); *World Resources* - various years (WRI).

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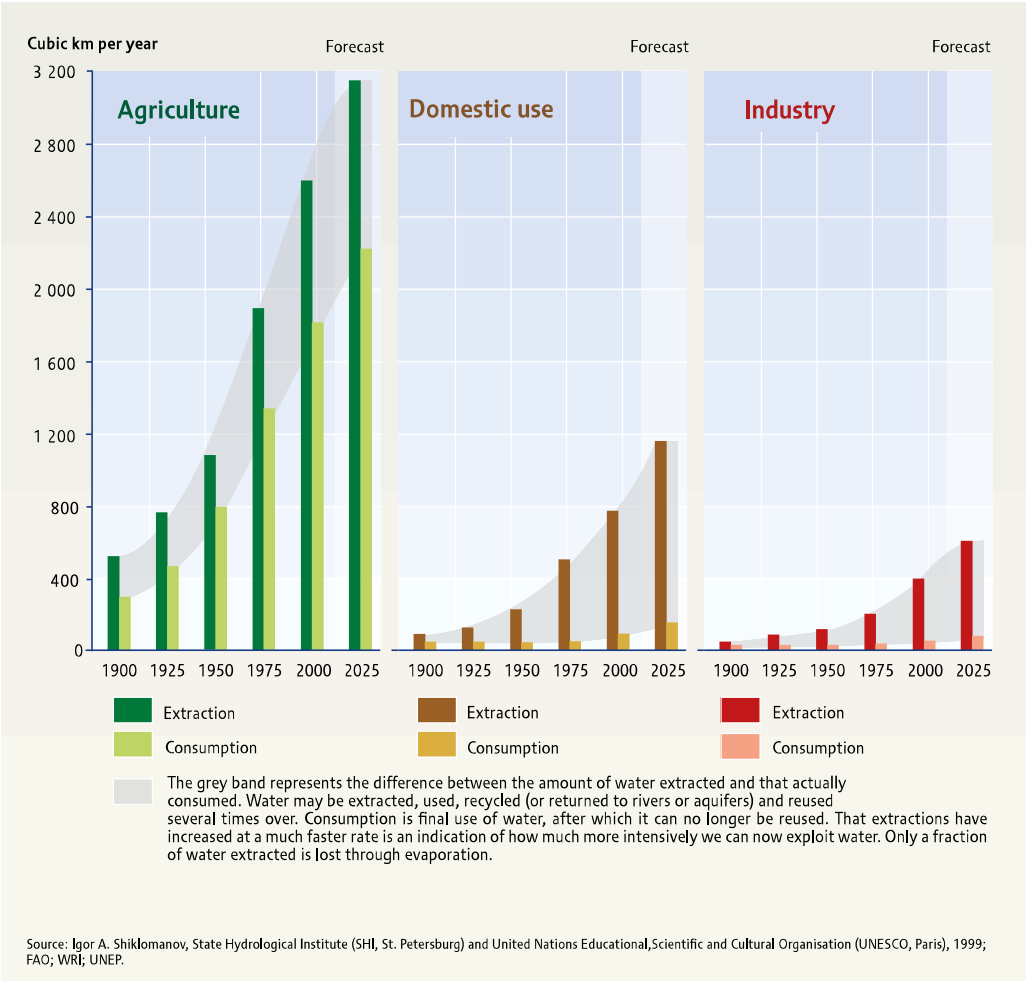


Source: Igor A. Shiklomanov, State Hydrological Institute (SHI, St. Petersburg) and United Nations Educational,Scientific and Cultural Organisation (UNESCO, Paris), 1999; FAO; WRI; UNEP.

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## 4. ANALYSIS

The session started off with speakers raising fundamental questions such as how the effects of water diplomacy (can) complement adaptation efforts for climate change? How can the dialogue on climate change be more inclusive – incorporating voices from the top to intermediate as well as community levels? Speakers emphasised that while Sustainable Development Goals also include goals and targets on both water and climate change – cooperation would be required across all sectors to achieve success by 2030.

Speakers recognised that the changing climate will have both long-term and short-term security impacts. These impacts if not mitigated can have serious consequences for the world community at large. Several speakers expressed that not much has been achieved since the Conference of Parties at Copenhagen (2009) and even now there is not enough evidence of serious efforts on the global level to address the Climate Challenge. While security dimensions of climate change have been discussed at various fora since the Copenhagen talks – it is fundamentally important to ask the question: Whose security and whose interests will be impacted the most? Understanding on these fundamental questions is important to frame more coherent responses.

It was noted that global warming will also inflict changes on the existing fresh water resources – both on quantity as well as quality of these resources. Speakers reckoned that though there is evidence to support more cooperation in transboundary water issues through the world, new challenges demand new approaches: e.g. exploring water cooperation at the domestic level (within provinces/communities). Such approaches are likely to mitigate social stress and strengthen resilience in societies.



Speakers also reflected on the unintended impacts of climate change response policies on other sectors. A case study of Mekong River Basin was shared with the Working Group participants. The audience was informed that about 88 dams were planned in the Mekong River between 2010-2030. But if all goes according to plan, there will be severe impacts on fisheries as various environmental impact assessments inform policy makers that about 23-37% of fish supplies will be lost. Thus these projects will clearly result in negative impacts on bio-diversity and food supplies and these losses will directly affect about 60 million people in the region. Speakers questioned if countries such as Laos develop these dams, from where will they bring the alternative food supplies – critical to the lives and livelihoods of the people of this region? It was also observed that such unintended impacts would not be limited to food security – but will cause long-term health issues for the population. If fish – which is a key source of protein, is replaced by pork or chicken, the health vulnerability of the population will increase particularly to bird and swine flu.

Panellists also reflected their experiences on water issues across various regions. It was noted that very often it is propagated that conflict on water is inevitable. It is important to note that conflict is not necessarily a bad thing. Conflict can incentivise cooperation and optimise benefits. In societies across the world, parties express their free will and settle disputes according to laws – a system which ensures cooperation, stability and thus strengthening peace and security.

Speakers emphasised the need for joint projects between countries. For example, a typical dam lasts about 100-200 years. If countries are bound together on a dam that may not only be good diplomacy but it will increase stability. Yet, there are several challenges that restrict progress and cooperation not only at the bi-lateral level but also domestically within states on sensitive questions such as water sharing. There are capacity constrains where developing countries do not have the experts to strategically ascertain and negotiate their interests in an effective manner. Very often there is little support on the political level to develop technical resources and build capacities of individuals. At the international level,

very few agreements exist (1997 United Nations Watercourses Convention, UNECE guidelines etc.) which can serve as model water laws and be regarded as real sources of international common law. Most of these instruments only cover surface water. It is important that agreements provide effective processes, which give predictability to all parties. They should ideally also include provisions, which allow reallocation of resources for the benefit of all.

Regional discussions on water also included the Southern African region, which is regarded as one of the most vulnerable to impacts of climate change. The increased droughts, floods, dropping crop yields have naturally tested resilience of people who greatly depend on water for their lives and livelihoods. Lack of reliable data is a major challenge as it affects planning of adaptation actions. Transboundary water issues often attract a lot of interest but little attention is given on small-scale conflicts, which result in political instability. The disconnect between national and local levels is indeed a real hurdle in devising meaningful strategies for adaptation actions.

Participants also discussed examples of effective water diplomacy such as the Indus Water Treaty between India and Pakistan as well as the Water treaty between Mexico and United States. India and Pakistan signed the treaty in 1960 through the support provided by the World Bank. The framework has withstood three wars and countless diplomatic deadlocks – and both parties regularly use the arbitration procedures to resolve outstanding water-related disputes. Similarly the water treaty between the United States and Mexico was signed over hundred years ago, yet the flexible amendment procedures have ensured that the treaty can be changed with the new developing realities. Such institutional mechanisms will be important so that sharing of resources between countries is possible.



## 5. CONCLUSIONS AND RECOMMENDATIONS

The following recommendations were presented by panellists and speakers through the discussion:

- Effective management of fresh water resources is crucial in times of increased water stress. This can be achieved when an inclusive and transparent process is adopted.

- Water is a technical challenge and political leaderships in developing countries must empower technical leaders to guide their countries. We need leadership and data resources to look at long-term implications of climate change. Water agreements must be flexible to include changes in water patterns so to increase long-term resilience.

- Domestic and International support, both are important for effectively dealing with water diplomacy challenges. Whereas the actors bear primary responsibility to lead the process, it is important that global institutions such as the World Bank, International Monetary Fund etc. remain committed in supporting emerging and developing countries.

- Data collection is very important for parties involved in transboundary water issues. Often, data on river flows is kept secret by countries. For effective diplomacy and climate adaptation to strengthen resilience on water, data must be collected and shared by all parties.

- Partnerships between public and private actors and private and local communities should be encouraged. Private companies often have the resources to team up with local actors to devise projects that enhance their capacities to better manage limited water resources. Developed countries can also help build capacities with the “Trade for Aid” frameworks.

- There is a great need for model water laws for effective transboundary water management worldwide. The 1997 UN Watercourses Convention and the draft articles on the Law of Transboundary Aquifers can together respond to many questions of surface and ground water and address associated challenges in times of climate change.

- Bringing the discussion to local level: Often in climate vulnerable developing countries much of the discussion takes place at the higher level (federal/state level) while the impacts are felt on the local level. It is imperative to devise innovative ways to tackle these gaps in strategy formation and implementation.

- Planetary security does not only refer to climate security. It means optimising water, food, land, energy as well as environmental health. We must bear in mind that mal-adaptation could be a likely consequence of single sector approaches and decisions.

*"We must not remove solutions from those who are most affected. Developing a conflict sensitive approach to CC mitigation and adaptation for preventing intra-state and local level conflicts means addressing the issue of eroding conditions for livelihoods caused by climate conditions and addressing structural violence in various regions, water poverty, which is embedded in class, race and gender." – Jenny Clover, speaker in the Working Group.*

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## Working Group 10

Rapporteur: **Syed Muhammad Nishat ul Hassan Kazmi,** Centre for Research and Security Studies / Institute for Environmental Security

Extract (pp 140-150) from:

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