

Water security and climate change

The North-South dimensions of water security
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Dr. Tuula Honkonen

UEF // University of Eastern Finland



What is water security that includes also a climate change perspective?

What threats climate change entails to water security?

How to account for water security risks posed by climate change?

Water security

Individual and state security aspects.

Conflicts.

“the reliable availability of an acceptable quantity and quality of water for health, livelihoods and production, coupled with an acceptable level of water-related risks” (Sadoff & Muller, 2009)

Different framings of the issue: human vulnerability and needs vs sustainability and ecosystems.

Water security

Core issues (Wouters et al, 2009):

- availability of water;
- access to water; and
- conflict over water use.

Sources (influenced by climate change) of conflict:

- Problems in water quantity and quality.
- Conflicts between water uses.
- Consequences of extreme events and preparation for these.

Threats posed by climate change to water security

Climate change strengthens the fact that freshwater resources are commonly unevenly and irregularly distributed.

Expected impacts: floods; droughts; pollution of water; changes in seasonal variability; changes in nutrient flows; changes in groundwater resources... even an increased risk of terrorism.

Science has been able to provide a basic understanding of how the hydrological cycle will change at the global level and that the impacts will be dramatic. However, the impacts will not be on the same scale in every freshwater basin in the world.

Increased uncertainties, stress and potential for conflicts.

How to prepare for water security risks posed by CC?

Recognition of risks and conflicts at all levels.

Freshwater basin governance and legal management of the problems that affect/contribute to water insecurity.

Inherent interdependence among riparians.

Sustainable use of water resources (for both ecosystem viability and human utilization of water).

Priorization of water uses where possible.

Securing (human) rights to water.

A holistic approach and long-term perspective needed.

How to prepare for water security risks posed by CC?

Strengthened governance:

- Information
- Effective institutions
- Capacity-development

Hydrosolidarity:

An innovative approach that embraces collective action, interdependence, and shared responsibility. Common interests and benefits among parties.

An opportunity for cooperation? Instead of a security concern.

How to prepare for water security risks posed by CC?

Agreements on transboundary freshwater resources and adaptation

Transboundary freshwater basins are very significant on global and regional scales.

Climate change is only one factor in the relevant regulatory environment.

Agreements prevent conflicts:

- Regulate the utilization and protection of transboundary water resources.
- Cooperation and coordination of action.
- Information-sharing.

How to prepare for water security risks posed by CC?

In the face of climate change, the agreements need to be flexible and dynamic to allow them to react to unexpected changes etc.

Means for agreements to address water security and climate change:

- flexible water allocation strategies;
- response strategies for extreme events;
- constructive ambiguity of obligations;
- gathering and sharing of information;
- adaptable joint institutions;

How to prepare for water security risks posed by CC?

- financial resources;
- amendment and review procedures; and
- soft law instruments.

The importance of institutional structures in addition to the treaty text.

Adaptive management of adaptive governance.

An example: the Lake Saimaa and River Vuoksi Discharge Rule.

Climate change is, to a large extent, water change.

Thank you!



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