

**How the Water Convention helps in
climate change adaptation?
The UNECE Guidance on Water and
Adaptation to Climate Change and
pilot projects programme**

Ms. Sonja Koeppel

UNECE Water Convention secretariat

Coordinator of climate change activities



Convention of the Protection and Use of Transboundary Watercourses and International Lakes

Climate change impacts in Central Asia

- IPCC AR4: climate change poses serious threats to Central Asia's environment, ecological and socio-economic systems, particularly because of the arid nature of the region.
 - Temperature increase: 1-2 °C since 1900
 - Glacier melting
 - Increased water scarcity
 - Increased flooding
 - Increase in water stress and competition expected

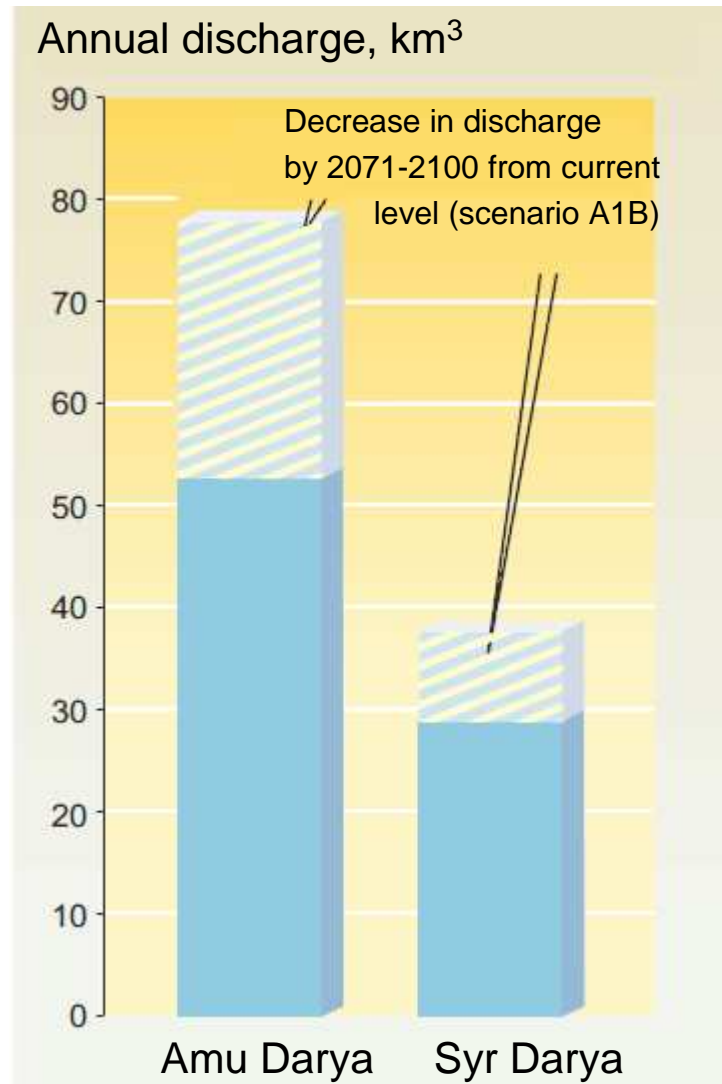


State of Glacier Systems in CA

Basin	Number of Glaciers	Area(km ²)	Volume (km ³)	Depth (m)
Issyk Kul Lake	614 (97.3%)*	538.11 (84.6%)	24.224 (83.1%)	45.02
Chu River	715 (94.8%)	582.12 (82.3%)	26.377 (80.4%)	45.31
Talas River	177 (88.5%)	112.91 (72.7%)	4.643 (71.5%)	41.13
Syr Darya River	2965 (95.2%)	1982.34 (84.1%)	100.973 (83.2%)	50.94
Chatyr Kul Lake	3 (100.0%)	2.61 (93.4%)	0.099 (92.6%)	37.75
Amu-Darya River	277 (99.6%)	604.36 (94.0%)	42.158 (93.5%)	69.76
Tarim River	1693 (94.6%)	2991.83 (85.3%)	219.055 (84.8%)	73.22
Balkhash Lake	1 (100.0%)	0.25 (82.3%)	0.008 (80.4%)	33.69
Total for CA	6445 (95.2%)	6814.53 (85.1%)	417.537 (84.6%)	61.27

*Changes against the 1960s (%)

Predictions of Discharge Decrease



- Currently, despite intensive degradation of glaciers and permafrost – discharge of the main CA rivers has not substantially changed in volume (though a significant temporal change!), moreover, due to a high melting rates in some basins even increased by 6-8%
- However, by 2050 discharge of the Amu Darya is predicted to be reduced by 10-15% and Syr Darya – by 5% due to climate change and anthropogenic impacts



Double uncertainty: climate change / transboundary cooperation

- Uncertainty regarding climate change impacts: common work on scenarios and models helps to better assess climate change impacts
- Uncertainty regarding actions of the riparian countries: cooperation and consultation helps to reduce it



Why transboundary cooperation in adaptation?

- Prevent negative impacts of unilateral adaptation measures in riparian countries, thereby preventing potential conflict
 - Enable more effective and efficient adaptation through
 - Wider knowledge base
 - Larger planning space: take measures in the basin where they have optimum effect
 - Possibility to share costs and benefits
- => Cooperation reduces uncertainty and costs!



Convention's legal basis for adaptation

Parties shall

- Prevent, control and reduce transboundary impacts including those related to adaptation to climate change or mitigation measures
- Use waters in a reasonable and equitable way, also in the face of climate change
- Cooperate on the basis of equality and reciprocity
- Cooperate through joint bodies which are an important venue for discussing adaptation measures



Convention's obligations relevant for climate change adaptation

- Follow the precautionary principle: adapt now despite uncertainty
- Set joint water quality objectives
- Use best available technology
- Exchange information, e.g hydrological and meteorological data on climate change impacts
- Develop joint monitoring and common research: joint modelling and scenarios
- Joint early warning and assessment systems, e.g. flood warning systems
- Assist each other: pilot projects programme



Background of the Guidance

- Climate change impacts on water resources are visible and first adaptation efforts are starting
- Few countries have developed adaptation strategies, none at the transboundary level
- => Decision by Meeting of the Parties in 2006 to develop a Guidance on Water and Adaptation to Climate Change
- Developed 2007-2009 by a drafting group, building on a survey on adaptation measures and needs, several consultations, workshops and expert review
- 80 contributors, 40 case studies



Target group for the Guidance

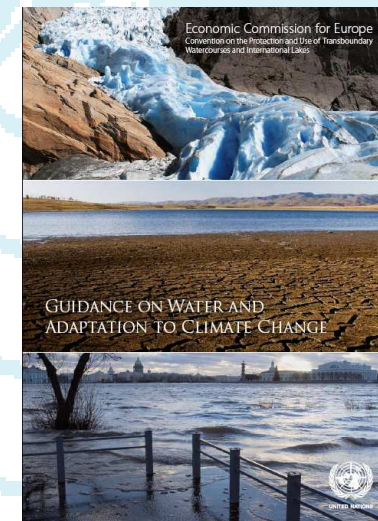


- Decision makers and water managers
- Officials, managers and stakeholders of other relevant sectors
- Focus on UNECE region and on countries with economies in transition, but also relevant for other regions

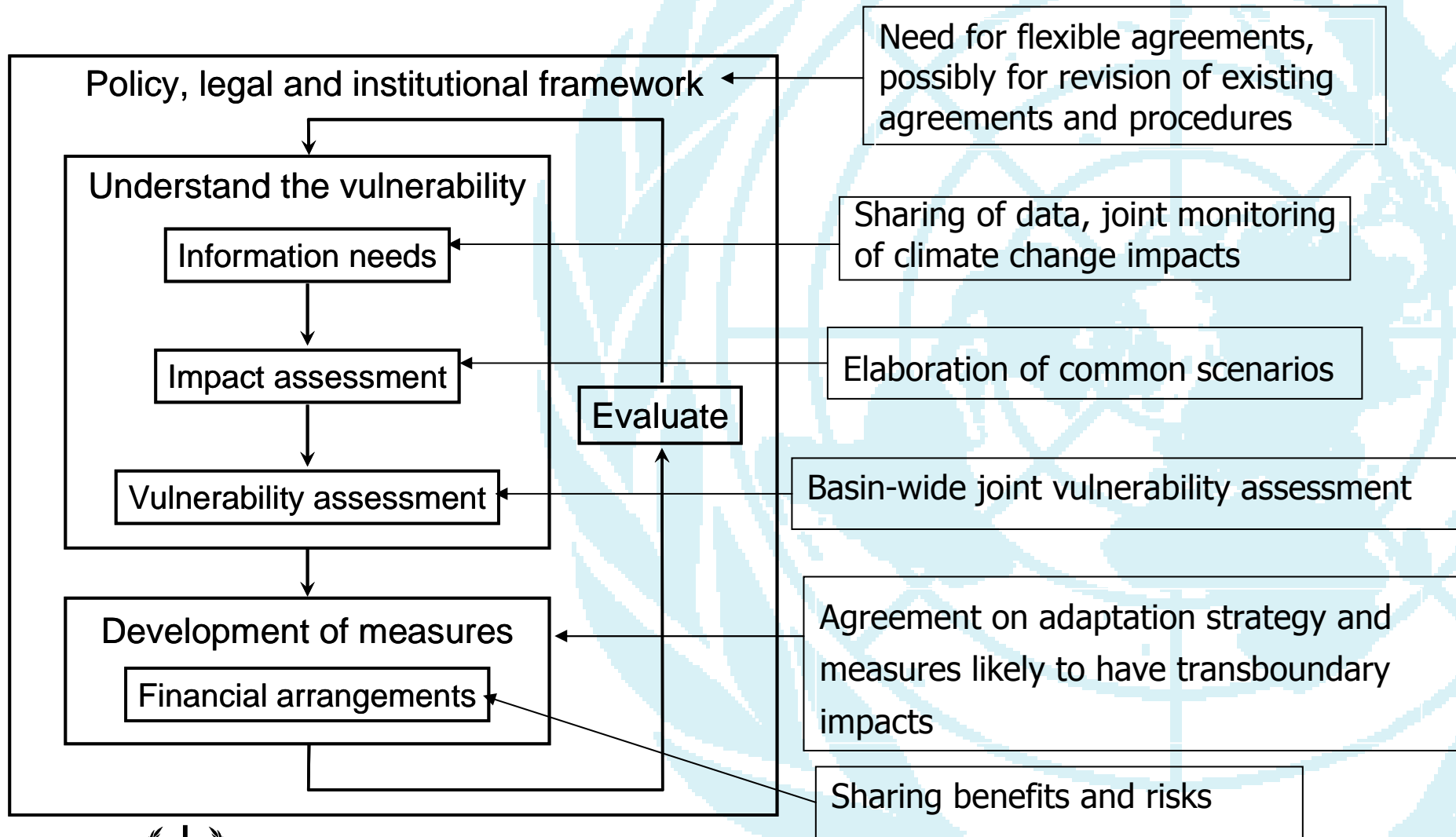


Objectives of the Guidance

- General roadmap towards adaptation of water management to climate change
- Needs to be tailored to specific local situations
- Step-wise approach
 - Assess impacts of climate change
 - Develop policy, strategic and operational responses
- Transboundary and health focus



Cooperation needs in every step of developing an adaptation strategy



Some key recommendations

- Consider climate change in the context of other pressures on water resources
- Institutional aspects: Mainstream climate change adaptation in existing policies, intersectoral cooperation, entrust joint bodies with responsibility for adaptation
- Measures:
 - planned at the basin level,
 - no/low-regrets,
 - cross-sectoral/cross boundaries,
 - flexible
- Effective adaptation strategies are a mix of
 - structural and non-structural
 - regulatory and economic instruments
 - education and awareness-raising measures



Implementation of the Guidance

- Adopted at MOP5 in Nov 2009
- Programme of pilot projects on adaptation in transboundary basins in EECCA and SEE
 - Focus mainly on developing adaptation strategy
 - Specific focus defined by countries; some focus on water scarcity, others on floods
- Platform for exchanging experiences
 - Regular workshops
 - Internet platform created



Objectives of the pilot projects programme

- Assist UNECE countries in implementing the Water Convention and the EU WFD under conditions of a changing climate;
- Support countries and especially those in transition in developing adaptation strategies and measures;
- Create positive examples showing benefits of and mechanisms for transboundary cooperation in adaptation;
- Support dialogue and cooperation on the design of an adaptation strategy in the transboundary context.
- Implement and test the Guidance



Structure and focus

- Geographic focus mainly on Eastern Europe, Caucasus and Central Asia and South-Eastern Europe
- Substantial focus mainly on developing adaptation strategy and less on implementing measures
- Specific focus defined by countries; some focus on water scarcity, others on floods
- Task Force on Water and Climate plays a facilitative and supportive, but not decision-making role
- Platform for sharing experience, good practices, lessons learnt



The pilot projects supported by the UNECE Water Convention and ENVSEC

- Eastern Europe: Dniester basin (Ukraine, Moldova) => flood risk management
Neman (Belarus, Lithuania, Russian Federation) => IWRM and adaptation
- Central Asia: Chu Talas Basin (Kazakhstan, Kyrzgyzstan)=> water scarcity
- South-Eastern Europe: Sava River basin (Bosnia-Herzegovina, Croatia, Serbia, Slovenia)=> flood risk management



Additional pilot projects

- Activities regarding water and climate change adaptation in the Rhine basin, shared by Austria, Belgium, France, Germany, Italy, Liechtenstein, Luxemburg, the Netherlands and Switzerland, implemented by the ICPR
- Project AMICE on the Meuse basin, shared by Belgium, France, Germany, Luxembourg, Netherlands, implemented by 17 partner organizations, lead by the EPAMA
- The project "Dauria going dry" on the Amur/ Argun/ Daursky Biosphere reserve, shared by the Russian Federation, Mongolia and China, implemented by the WWF Russia => ecosystems and environmental flow
- Activities on water and climate change on the Danube river basin, implemented by the ICPDR



Some first lessons learnt of the pilot projects programme

- In most basins some climate change impact assessments had already been done nationally, but using different methodologies – importance of joint scenarios, modelling and vulnerability assessment, but extent of harmonization depends on resources and time available
- Importance of thorough baseline study to identify completed or ongoing projects and relevant partners to be involved
- Importance of link between political and experts' level, e.g. through creation of a working group and regular meetings
- Cooperation is often easier to start at the expert level



Platform for exchanging experiences

- Exchange of experience and lessons-learned on the technical and strategic aspects of adapting water management to climate change
- Regular meetings of the Task Force on Water and Climate and workshops, next one end of April 2012
- Internet-based platform
- Core group on pilot projects





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Transboundary pilot projects on climate change adaptation

[Chu Talas](#)

[Danube](#)

[Dauria going dry](#)

[Dniester](#)

[Meuse](#)

[Neman](#)

[Rhine](#)

[Sava](#)

[english](#) [по-русски](#)

Welcome

[Добро пожаловать](#)

The programme of [pilot projects](#) on adaptation to climate change in transboundary basins under the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) has started in 2010 and aims to

- Support countries and specifically countries with economies in transition (in Eastern Europe, Caucasus and Central Asia as well as in South-Eastern Europe) in their efforts to develop adaptation strategies and measures; in transboundary basins
- Assist UNECE countries in implementing the Water Convention and the European Union (EU) Water Framework Directive (WFD) under conditions of a changing climate, also in light of the EU White Paper on adapting to climate change¹;
- Create positive examples demonstrating the benefits of and possible mechanisms for transboundary cooperation in adaptation planning and implementation, also beyond the UNECE region;
- Implement the Guidance on Water and Adaptation to Climate Change;
- Provide a forum for exchange of experience, good practices and lessons learnt regarding adaptation projects in different parts of the region.

[Guidance and tools](#)

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[Intranet](#)^{en}

News And Events

[Fourth Meeting](#) 14. april 2011.



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Guidance and tools

-  [Управление Риском Трансграничных Наводнений: опыт региона...](#)
-  [Transboundary flood risk management](#)
-  [Руководство по водоснабжению и санитарии в экстремальных ...](#)
-  [Guidance on water supply and sanitation in extreme weathe...](#)
-  [Руководство по воде и адаптации к изменению климата](#)
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The Guidance is available in English
and Russian at:

[www.unece.org/env/water/
publications/pub74.htm](http://www.unece.org/env/water/publications/pub74.htm)

Platform and other material:

www.unece.org/env/water

For more information please contact:

Sonja.koeppel@unece.org

