

Topic 1.1 Session Summaries

**Adapting to climate change in water resources
and water services: understanding the
impacts of climate change, vulnerability
assessments and adaptation measures**

*Prepared by the Topic 1.1 Session Conveners:
The CPWC, GWP, IWA, the World Bank and the Spanish
Ministry of Environment, and Rural and Marine Affairs*

**Pending approval of the
Programme Committee Review**

- November 7th, 2008 -

Session 1.1.1 Summary Form

Session reference number (for example 1.1.1)	1.1.1
Media-friendly title (suggested by the co-organizers)	{In}convenient Climate Truths: regional and civic perspectives on adaptation to climate change.
Working title	{In}conveniences of Climate Change: regional and civic perspectives on adaptation to climate change
Duration	4 hours
Key question	How to address climate change in the context of other water management challenges?
Media-friendly session summary (3-5 sentences)	<p>The IPCC and Al Gore have made climate change a high priority concern in the political and public arenas, and sometimes even in the private sector to the extent that politicians, the public and the private sector ask water managers (how) to respond to this threat. In particular low lying deltas and small islands, mountainous areas and arid areas are vulnerable to climate change.</p> <p>Are these concerns realistic, and what are possible responses to these concerns?</p>
Session description (approximately 2 paragraphs)	<p>The discussions will evolve around the following questions:</p> <ul style="list-style-type: none"> – What ought to be (or has been) the response to the growing public sense of urgency to adapt to climate change? – Is climate change a promising entrance to integrate adaptation into current management practices, maintenance, planning and design? – How should climate change be considered and addressed in relation to the global, national and local water development goals (MDGs)? – What would be the specific role of political actors at various levels on stimulating action, awareness raising of the public about the urgency of adaptation, etc.? – How can the long term climate change implications be incorporated into the short-term political agendas? <p>The session will address these questions by a combination of presentations and panel discussions. The session will have 2 blocks:</p> <ol style="list-style-type: none"> 1. Regional perspectives from the Mediterranean, Europe, Asia and Latin America 2. Civic perspectives from Youth, Women, ICID, IHA
Confirmed convening organization(s) and contact information	<p>Cooperative Programme on Water and Climate (CPWC):</p> <p>Mr. Henk van Schaik and Ms. Marloes Bakker</p> <p>h.vanschaik@unesco-ihe.org; m.bakker@unesco-ihe.org</p> <p>+31 15 215 1882 and +31 15 215 1748</p>
Other associated organisations	<p><u>The session 1.1.1 convener group:</u></p> <p>WWC, IWA and IUCN</p>

	<p><u>The Topic 1.1 consortium and consultation group:</u></p> <p>- To be confirmed by the end of November 2008 -</p> <p>UNESCO, GWP, AWC, IAH, the Governments of Turkey, and Denmark, Munich Re, Munich Re Foundation, ICID, IGRAC, GWA, UNFCCC, FAO, REC, TSMS, JWP, UN-Water, the WHO and the UNU-EHS</p>
Session outline and time allocation	<p>It is envisaged to split the session into two parts of two hours, namely</p> <ul style="list-style-type: none"> – Regional perspectives (incl. cities) – Thematic perspectives (youth, nature, women, business, agriculture, hydropower) <p>In each of the sub sessions, brief introductions will be presented to the audience (for a total 1 hour) after which a discussion will be initiated among the presenters with active involvement of the public.</p> <p><i>Please note that the High Level Panel on Water and Climate will be a separate session on the issue of Political Actions on Adaptation to Climate Change. The High Level Panelists (Ministers, Mayors) will be a session with political leaders (ministers, Mayors) from the following countries e.g. Netherlands, Denmark, Indonesia, Turkey, Nile Basin, Mozambique, Bangladesh, Australia, Brazil, South Africa, Tanzania, and China.</i></p>
Contributions received that will be included in the session (with a word or two about how they are included)	<p><u>The organizations that submitted session proposals that will be included in session 1.1.1;</u></p> <p>University of Arizona, University of KwaZulu-Natal, Earth Charter Youth Group / Initiative Calabar, African Development Bank, Gender and Water Alliance, US Institute of Peace, and the South African Department of Water Affairs.</p> <p>8 out of the more than 80 proposals submitted to Topic 1.1 fit perfectly in session 1.1.1, and will be integrated – see p. 4 and further.</p>
Missing stakeholders (Those that you would like to include for greater balance but for whom you have no contacts)	<p><u>Major groups</u> missing in the session contributions are:</p> <ul style="list-style-type: none"> - farmers - workers and trade unions - business and industry (will be invited by CPWC) - indigenous people <p>Considering the topic of this session, representation from the workers and trade unions as well as business and industry have our preference to farmers and indigenous people.</p> <p>Furthermore, only Africa and the Americas are represented – the other <u>regions</u> (Asia-Pacific, Europe, in and around Turkey, MENA region and Arab region) are not.</p>
Expected	<p>The outcome of the discussions will be shared views on adaptation to</p>

outcomes, impacts and follow-up linkages with events and initiatives after the Forum	<p>climate change between the major regions and civic perspectives.</p> <p>Reporters will hand in their reports from all the discussions and their outcomes, which will be incorporated in the Synthesis Document.</p> <p>With these results in hand and the momentum created, the consortium of WWC, IUCN, IWA and CPWC will continue to position water and climate adaptation in the international agendas along other key global priorities (such as the MDGs) towards COP15 in order to close the existing gap between the global development agenda on water and the global climate agenda.</p>
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#	Title	Region	Submitted by	Organization / Institution	Email	Part of session in which proposal will be integrated
1	Inter-sectoral Contingent Water Trading Contracts As a Regional Climate Change Adaptation Strategy	Americas	Bonnie G. Colby	University of Arizona	bcolby@email.arizona.edu	Thematic perspectives
2	Youth, Water and Climate change	Africa	Esther Agbarakwe	Earth Charter Youth Group / Initiative Calabar		Regional Perspective
3	African Regional Perspectives	Africa	Tefera Woudeneh	African Development Bank	t.woudeneh@afdb.org	Regional Perspective

4	Socially inclusive adaptation to climate change	Asia-Pacific	Esther de Jong	Gender and Water Alliance	estherdejong@chello.nl	Thematic perspectives
5	Alleviating the Effects of Climate Change and Water Availability on Armed Conflict	Africa	Christopher Neu	United States Institute of Peace	cneu@usip.org	Thematic perspectives

6	Integrated Water Resources Management as a Medium For Adapting To Climate Change: Some Conceptual, Scaling, Impact Modeling And Adaptation Issues From A Southern Africa Perspective	Africa	Rowland Schulze	School of Bioresources Engineering and Environmental Hydrology, University of KwaZulu-Natal	-	Regional Perspective
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7	Global Change and Risk Management	Africa	Sebitso Lufuno / Harrison Pienaar	Department of Water Affairs and Forestry (South Africa)	SebitsoL@dwaf.gov.za	Thematic perspectives
8	Voluntary Agreements with the water sector: Clean Water, Combat Climate Change and Save Costs	Europe; Mediterranean; Turkey and surrounding countries	Marcel De Ruijter	Unie van Waterschappen (the Netherlands)	mruijter@uvw.nl	Regional perspectives (originally in finance session)

Session 1.1.2 Summary Form

Session reference number (for example 1.1.1)	1.1.2
Media-friendly title (suggested by the co-organizers)	Adaptation: Waiting for things to happen, or trying to be prepared?
Working title	Can we plan our way to adaptation?
Duration	4 hours
Key question	The key question for this session is “can we plan our way to adaptation?”
Media-friendly session summary (3-5 sentences)	<p>The overall climate change context is clear: if mitigation is about energy, adaptation is about land and water. Climate change impacts us directly through water (wetter or drier, more frequent floods and droughts, rising sea levels), but also indirectly through human activities which depend on water. Can we plan our way to be well prepared?</p> <p>Integrated Water Resources Management (IWRM) is a widely accepted approach to deal with water across all its uses and function for our environment. Can we build our strategies and plans for adaptation on this approach?</p>
Session description (approximately 2 paragraphs)	<p>The key questions for the session are:</p> <ul style="list-style-type: none"> - How – and when - do we get the relevant climate information for planning at specific locations (countries, basins, communities)? - Until we get that, and in the absence of trustworthy information, how do we identify the most vulnerable groups, and hence where to focus? - In the range of possible future scenarios, what criteria do we use to select the actual planning scenario? - How do we balance immediate actions for building resilience to change and disasters, with longer term actions to prepare for anticipated impacts? - How do we “integrate” adaptation into IWRM plans – and IWRM into national adaptation plans – both existing (missing this linkage) and future? <p>The session will address these and other questions by a combination of presentations, posters and panel discussions. Key blocks of discussion will be</p> <ul style="list-style-type: none"> - General approach to and tools for planning adaptation - Adaptation planning at the national level - Adaptation planning in the trans-boundary context
Confirmed convening organization(s) and contact information	<p>Global Water Partnership (GWP) assisted by UNEP-DHI Centre</p> <p>Prof. Torkil Jonch Clausen and Mr. Niels Ipsen</p> <p>tjc@dhigroup.com; nhi@dhigroup.com</p> <p>+45 2068 4812; +45 4516 9200; +45 4516 9518</p>
Other associated organisations	<p><i>Main partners</i> (well defined by November):</p> <ul style="list-style-type: none"> - UNEP/Global Environment Facility (GEF) - UNECE

	<ul style="list-style-type: none"> - ANBO (African Network of Basin Organizations) - Government of the Netherlands (VROM, V&W) - ICIMOD, Nepal - CONAGUA, Mexico - EU-Newater (Univ. Of Osnabruck) - Gebze+CMCC Institutes, Turkey <p><i>Potential partners</i> (les well defined by November):</p> <ul style="list-style-type: none"> - LGED; Bangladesh - Univ. Of Columbia/UNESCO <p><i>Contributing individuals</i> (organizational status not clear)</p> <p>Note: This list (early November) is tentative and based on 24 proposals submitted for this session by end of October. For many of these proposals it is not yet clear whether the proposer is a lone individual or an established organization, and it is not clear for all proposals whether they represent solid work and experience, or ideas and speculations. This needs to be verified before the final group of partners can be identified</p>
Session outline and time allocation	<p><i>General lead-in presentations, setting the stage..... 1 hour</i></p> <ul style="list-style-type: none"> - GWP technical Committee: Perspective Paper - Newater: Adapting through adaptive and integrated water resources management - Brief overview of posters for the session: Models and Decision Support Systems for adaptation <p>Panel discussion</p> <p><i>National adaptation planning..... 1 hour</i></p> <ul style="list-style-type: none"> - Netherlands (Government ministries) - Mexico (CONAGUA) - Turkey (Gebze and CMCC) <p>Panel discussion</p> <p><i>Planning adaptation in a trans-boundary setting..... 1 hour</i></p> <ul style="list-style-type: none"> - A Guidance document for the European Region (UNECE) - Adaptation strategies in African trans-boundary basins (ANBO) - Addressing climate change impacts in the Amazon and Plata basins (UNEP/GEF) <p>Panel discussion</p> <p><i>Moderated final discussion, based on key questions</i></p> <p><i>Wrap-up and way forward 1 hour</i></p> <p>Note: The note above applies: this is tentative., pending communication with proposers</p>
Contributions received that will be included in the session (with a word or two about how they are included)	<p><i>With reference to attached excel spreadsheet – p. 11 and further (24 proposals):</i> (Tentative- to be verified in communication with proposers)</p> <p>Included as main partners/presenters:</p> <ul style="list-style-type: none"> - 3,4,6,13/20,15,21,22/23,24 + EU-Newater (not on list) <p>To be considered for <i>poster</i> presentations/panel participation:</p> <ul style="list-style-type: none"> - 2,9, 10,14,16,17 <p>To be considered for possible <i>panel</i> participation:</p> <ul style="list-style-type: none"> - 11,12,18,19 <p><i>Excluded/exported</i> in spreadsheet received, not considered:</p> <ul style="list-style-type: none"> - 1,5,7,8, <p>Notes above apply: tentative</p>

Missing stakeholders (Those that you would like to include for greater balance but for whom you have no contacts)	<ul style="list-style-type: none"> - GWP regional/national networks - NGOs - UNFCCC/Nairobi Programme on Adaptation - Danish Government/Danida (land-water-adaptation process)
Expected outcomes, impacts and follow-up linkages with events and initiatives after the Forum	<p><i>Not yet considered – need to be decided in light of accepted contributions and in dialogue with main partners</i></p> <p>A few thoughts (<u>tentative</u>):</p> <ul style="list-style-type: none"> - Preparation of short <i>Statement</i> from the session addressing a few key questions and proposed answers to them - Revision/update of <i>Perspective Paper</i> and Background Papers for session in light of discussion - Contact to the <i>UNFCCC/Nairobi programme</i> on adaptation with a view to contribute messages on adaptation planning, and support to adaptation planning from the Adaptation Fund - Contact to the <i>Danish Government/Danida</i> in their policy development process on land-water-adaptation

#	Title	Region	Created By	Email	Session	Decision	Comments
1	The Israeli Holistic approach towards the challenges of water security in the 21st century	;#Africa;#Americas;#Asia-Pacific;#Europe;#Mediterranean;#MENA / Arab Region;#Turkey and surrounding countries;#	Ronit Golovaty (Israel Export & International Cooperation Institute)		2 or 3	3	Seems very specialised. Little focus on IWRM
2	Adaptation Challenges in Complex River Basins: Lessons Learned and Unlearned		Roger Pulwarty		2 and/or 3	3	Note that the other contribution from Roger Pulwarty "Decision Support & Early Warning...." may be more relevant.
3	Guidance towards climate-proofing of water management	;#Europe;#	Jos Timmerman (RWS-RIZA);#24082	jos.timmerman@rws.nl	2 and/or 3	2	Guidance doc - may also serve as support doc for key questions
4	Mainstreaming adaptation strategies to climate change in managing African transboundary river,basins	;#Africa;#	Jean Boroto;#1696	ruhizaboroto@gmail.com	2 and/or 3	2	Hightly relevant in accordance to draft doc. Prepared by TJC
5	Climate Change increases the urgency for more sustainable water resources management	;#MENA / Arab Region;#	Safwat Abdel-Dayem (Arab Water Council)	safwat@mwri.gov.eg	2 or 3	1 or 3	Seems relevant for session I.

6	'Climate and Waterschappen'	;#Europe;#	Patricia Phefferkorn	Marcel De Ruijter;#23988	2 or 3	2 and/or 3	The contributors propose both sessions
7	The crucial role sustainable water practices in Agriculture can play in both minimizing negative eff		RONI BENENSON;#1572	Roni.Benenson@netafim.com	2 or 3	3	Apparently focus on agricultural sector. Unclear what the content is
8	Wetlands ecosystems and climate change adaptation: soft responses to hard questions	;#Africa;#	Chris Baker (Wetlands International);#22245	chris.baker@wetlands.org	2 and/or 3	3	NGO on wetland proposes both session 2 & 3. Proposed under session 3 (more in the area of local actions)
9	Global Analysis of Climate Change impacts on Water Availability	;#Africa;#	Driss Ennaanay;#24304	driss@stanford.edu	2 (model)	Recommend for another component	Other component. Model/recearh
10	Adapting to water scarcity for Yemen's vulnerability communities due to the climate change Using WEA	;#Americas;#Turkey and surrounding countries;#	Abdulla Noaman	abnoman@yemen.net.ye	2	?	Model - DSS applied on a basin.
11	Adaptive to climate change in water resources	;#Asia-Pacific;#	GM Akram Hossain	gmakram68@gmail.com	2	3	Project discussion.
12	Climate Change and Coastal Cities	;#Asia-Pacific;#	Santosh Ghosh (Center for Built Environment)	sghoshcbe@rediffmail.com	2	2	Relevant

13	WATER RESOURCES AFFECTED BY CLIMATE CHANGE: TURKISH PERSPECTIVE	; #Turkey and surrounding countries; #	Senem Bayar (Gebze Institute of Technology, Department of Environmental Engineering)	Senem Bayar (Gebze Institute of Technology, Department of Environmental Engineering); #1559; #Güleda Engin (GEBZE INSTITUTE OF TECHNOLOGY); #1314	2	2	Relevant
14	Decision-support and Early Warning Systems in Changing Environments		Roger Pulwarty		2	2	Note that the other contribution from Roger Pulwarty may be more relevant for session 3.
15	Impact of climate change and variability on water resources in the Plata and Amazon basins	; #Americas; #	Johanne Jelnes; #25024	Johanne.Jelnes@unep.org	2	2	

16	Analysis of climate change trend and possible impacts in the Upper Brahmaputra River Basin-	;#Asia-Pacific;#	Anita Bartosch;#25029	Anita.Bartosch@uni-jena.de	2	2	
17	Integrating climate change induced pressures into the design of effective water management policies	;#Europe;#	Rodrigo Oliveira;#25005	roliveira@echiron.com	2	2	
18	Science for the prediction and management of risk in a changing hydrologic environment	;#Europe;#	Anil Mishra;#25030	a.mishra@unesco.org	2	2	
19	From Concepts to Practice: Tangible strategies for adapting to climate change in the water sector	;#Asia-Pacific;#MENA / Arab Region;#	Marcus Moench (ISET);#19606	moenchm@i-s-e-t.org	2	2	
20	The governance of water resources in a climate change scenario	;#Turkey and surrounding countries;#	Angela Neri;#25081	Neri.angela@minambiente.it	2	?	
21	The Himalayan Water Towers: Science and Policy for Adaptation to Climate Change	;#Asia-Pacific;#	Ramesh Vaidya;#25083	rvaidya@icimod.org	2	2	

22	Mexican National Plan on Climate Change	;#Americas;#	Jose Antonio Rodriguez Tirado (Comision Nacional del Agua)	José Luis Luege Tamargo (Comision Nacional del Agua);#18133	2	2	NB ! Similar to nr. 22
23	CONAGUA	;#Americas;#	Ricardo MARTINEZ LAGUNES	ricardo.martinez@conagua.gob.mx; rimarlag@gmail.com	2	2	NB ! Similar to nr. 21
24	Is Strategic Environmental & Climate Adaptation Assessment (SECAA) the now-needed added value to IWRM for climate proofing in policy making and planning?	Global, with special reference to a) global delta's in huge development interactions, b) developing countries and c) EU/North Sea Region.	Netherlands Government Ministry of Transport, Public Works and Water Management (V&W); Correspondent: Mr Niels Vlaanderen	niels.vlaanderen@minvenw.nl	2	2	

Session 1.1.3 Summary Form

Session reference number (for example 1.1.1)	1.1.3
Media-friendly title (suggested by the co-organizers)	Thinking Beyond the Water Box: What adaptation to global and climate change?
Working title	Climate Change & Adaptation: Think beyond the Water Box
Duration	4 hours
Key question	What are the pro's and con's of response options (i.e., hard and soft methods and costs) to adapt to global and climate change?
Media-friendly session summary (3-5 sentences)	How will local climate adaptation be done in practice? Climate change impacts on local level will look differently depending on where in the world you live and how much money you have to adapt. For example, the Netherlands and Bangladesh have much of the same problems in common when it comes to climate change but completely different financial resources to deal with the problems. This session will give the framework for the vulnerabilities and the solutions and be an opportunity for strengthening global coalition building for climate adaptation on the ground to support local action..
Session description (approximately 2 paragraphs)	<p>This session will explore innovative local level measures for addressing the multi-scale and multi-disciplinary challenges associated with climate change impacts, adaptation, vulnerability and mitigation.</p> <p><i>Adaptation needs to think beyond the water box</i> Broadening the portfolio of response options is essential if water resource managers and water service managers are to adapt successfully to global and climate induced changes in the water resources. The session aims to exploring portfolios of local adaptation measures (structural and non structural) – their pros and cons and the various costs.</p> <p><i>Examples of adaptation measures</i></p> <ul style="list-style-type: none"> • Storage • Demand management • Technical innovation • Public awareness raising and communication • Need for capacity building • Institutional and legal arrangements • Increasing society's resilience by measures to adapt to a changing climate • Investments in monitoring and surveillance systems • Investments in research to reduce key policy-relevant uncertainties <p><i>Adaptation needs to be site specific:</i></p> <ul style="list-style-type: none"> • snowpack dependent water services • drying (arid) areas • areas with increasing run off and precipitation • mitigation measures • Low, middle or high income country
Confirmed	International Water Association: Åse Johannessen

convening organization(s) and contact information	Ase.Johannessen@iwahq.org +31 70 315 0797 or +31 62 92 95 99 3 (cell)
Other associated organisations	GEF, IUCN, ICID, WWF
Session outline and time allocation	<p>Outline and time allocation</p> <p>Short outline: Sub session 1 – framing the issue (1.5 h) Sub session 2 – sharing knowledge about different adaptation measures (1.5h) Sub session 3 – coalition building – how to connect local actions globally (1h)</p> <p><u>SUBSESSION 1: FRAMING</u></p> <p>Principles and cross-cutting adaptation themes important for response options</p> <p><u>A keynote to lay out key principles</u>, including:</p> <ul style="list-style-type: none"> • What is vulnerability? (How are people vulnerable in different ways and how vulnerabilities add up into 'bundle of stresses' such as lack of assets and education in addition to gender aspects). • What measures reduce exposure to climate hazards? What reduces sensitivity to impacts? What is needed to build adaptive capacity? <p><u>Keynote that gives a rapid 'world tour' of examples of hard and soft approaches</u>, including engineered infrastructure, natural infrastructure, stakeholder participation, mainstreaming in development, etc.</p> <p><u>Facilitated Panel that identifies key principles and links them to challenges in specific contexts</u> (vulnerability hot spots and others)</p> <p>The panel should provoke debate and input from the rest of the room to be able to represent views that are part of the forum but not included in the panel.</p> <p><u>SUBSESSION 2: SHARING</u></p> <p>This subsession is organized in the form of a bazaar, to be able to get a flavor of the different local adaptation measures, like browsing different goods in a bazaar. The session stresses the need for portfolios of measures; therefore the bazaar should build portfolios for specific contexts (eg. for mountains, deltas, small islands, drylands, cities... other.) This will be possible where you go to a specific area of the bazaar for your interest and liking (spices, clothes, food, lamps etc) or here: groups. Different groups of contributors will be allocated according to different types of climatic conditions.</p> <p>Suggested groups:</p> <p><u>1) Cities under threat from rising water and floods</u></p> <ul style="list-style-type: none"> • New urban design (Rotterdam (urban design flood waters) • Prepare for disasters (Asia Pacific /New Orleans (disaster preparedness) • Low income country solutions

2) Cities under threat of droughts

- Portfolios for water security through risk spreading, supply augmentation, reducing consumer demand, recycling of wastewater, desalination, city parks, sharing and optimizing water between rural and urban areas, reduce loss, Reuse technologies, relevant for Australia, California, Africa

3) Drying rural areas

- Agriculture in arid areas drought adaptation: crop types, irrigation techniques, increased water use efficiency
- Diversification of livelihoods for poor communities in southern Africa (Sahel & Southern Africa)
- Storage – groundwater, small and large scale surface storage (Rainwater harvesting)
- Pastoralist adaptation

4) Mountainous regions / Snowpack dependent water services/ (hydropower and dams)

- Andean, Himalayan, Alpine snow pack diminishing, Using traditional knowledge to adapt to climate change

5) Areas with increasing run off and precipitation/ sea level rise/islands

- Making space for water, reconstructing flood plains, parks etc
- New ways of thinking about infrastructure, (houses on stilts) and use of soft ecosystem infrastructure (mangroves as storm protection)
- Relying on traditional knowledge
- Disappearing islands, disappearing nations

6) Mitigation measures

- Climate change mitigation measures that increase the efficiency of a utility can be applied to vulnerable infrastructure and demonstrate co-benefits by providing hazard mitigation against extreme events. (eg Wetland restoration).

7) Transboundary settings

Suggestion for format of bazaar:

Each group has a 'facilitator' and a rapporteur who stays in the group. The group feed their inputs into specific session outputs, such as (suggestions): a) strategy document with main principles of costs and benefits and b) action plan for coalition building. The facilitated process could identify synergies, complementarities, key choices in building portfolios for each context. Contributors could prepare specific questions they have to address about pros and cons; eg.

- What are costs and benefits;
- How does uncertainty affect the measures and how is it managed?
- What are essential elements of portfolios in each setting?

a) Carousel bazaar

Each carousel will take 30 minutes (incl breaks) and each person will only make 4 such carousels.

b) Group bazaar

The groups stay the same for the entire 2 hours. This division can continue in the next session to discuss coalition building between the groups.

	<p>Suggestion: poster and a table for materials per submission</p> <p>SUBSESSION 3: CONNECTING</p> <p>Turning talk into action This subsession builds coalitions or action plans that can turn talk and planning into action. The main question is: What coalitions are relevant and should be formed?</p> <p>Some suggestions:</p> <ul style="list-style-type: none"> • Connecting delta cities • Connecting water professionals for urban water solutions – IWA specialist group on climate change and the task groups • Connecting agriculture • Connecting actions for groundwater • All under one portal – global community of practice (divided in the categories above for exchange of information) <p>Again context specific, but questions for round tables:</p> <ul style="list-style-type: none"> ○ Identify gaps in the coalition – who else needs to be part? ○ What resources must be mobilized and how? ○ How do we find mechanisms that support low and middle income country efforts? ○ What are practical proposals for action? ○ What are barriers to action? ○ What policies are needed to facilitate action? <p>Suggestion for format of session: This process could start beforehand the session, so the participants at the forum can give input into a real and concrete proposal.</p> <p>During the forum there will be round tables for discussions in different rooms for the relevant proposed coalitions</p> <p>There are two options: a) No report back but each group works in their own round table b) Report back and synthesized in plenary of Conclusions from round tables. This could take the form of a panel with 4-5 people from different climatic conditions.</p>
<p>Contributions received that will be included in the session (with a word or two about how they are included)</p>	<p><i>See also p. 23 and further</i></p> <p><u>SUBSESSION 1: FRAMING</u></p> <ul style="list-style-type: none"> • Drying countries: <i>Region: MENA / Arab Region - Safwat Abdel-Dayem (Arab Water Council)</i> • Cities: <i>Europe, John Jacobs/ or IWA</i> • Transboundary setting: <i>Region: Europe - Jos Timmerman (RWS-RIZA)</i> • Green infrastructure: <i>'Soft' ecosystem infrastructure John Mathews (WWF) or Wetlands International or IUCNI</i> • <u>Local community vulnerability and efforts:</u> <i>Laurel Firestone (Community Water Center)</i> <p><u>These contributions are invited to be part of a panel that identifies key principles and links them to challenges in specific contexts</u> (vulnerability hot spots and others) They will not speak with a focus on their project, but can</p>

take it as example to illustrate key principles.

SUBSESSION 2: SHARING

The following contributions will be grouped together and discuss and share different adaptation strategies as a base for starting to connect in subsession 3. No substantial presentations of their own projects are expected – much time should be left for discussion.

Suggested groups:

1) Cities under threat from rising water and floods

- a) *"Climate Change and Coastal Cities" - Region Asia Pacific - Santosh Ghosh (Center for Built Environment)*
- b) *"Connecting Delta Cities" Region: Europe, John Jacobs - also for subsession 3 connecting*

2) Cities under threat of droughts

- a) Unaccounted for water: *"Can we afford losing fresh water in an era of water scarcity?" - Ronit Golovaty (Israel Export & International Cooperation Institute)*
- b) Dryland adaptation (infiltration, gardening, recycling): *"Options for adaptation to water scarcity in the urban sector due to climate change - an integrative..."- Region: Mediterranean - Ronit Golovaty (Israel Export & International Cooperation Institute)*

3) Drying rural areas

Paddy /agriculture

- a) *"A strategy for Irrigation and Drainage adopted to climate change in Asia" Asian Regional Working Group of ICID, Dr. Shinsuke Ota. (have not received the abstract yet, only this title)*
- b) *"Response options for agriculture: hard and soft methods and costs to adapt to climate change" - Juliet Christian-Smith (Pacific Institute)*

With case studies of actual adaptations in Mediterranean climates throughout the world. It would review both hard methods, e.g. increased infrastructure and desalination, and soft methods, e.g. water conservation and efficiency, conjunctive use, and utilizing climate information systems for irrigation.

Ecological sanitation

- c) *"Ecosanitation is an adaptation option to climate change" Region: CEE and EECCA, Ganna Tsvietkova (Mama 86 and WECF)*

Groundwater

- d) *"Can groundwater enable communities to adapt to water scarcity caused by climate change?"- Region: Global - Alice Aureli (United Nations Educational Scientific and Cultural Organisation) (might be able to plug in in other groups.*

(Increasing aquifer storage)

- e) *"Tool for regional-scale assessment of groundwater storage improvement in adaptation to climate change (TRUST)."*
Region: Europe (Italy) - Daniela Sacchiero (SGI)

4) Mountainous regions / Snowpack dependent water services/ (hydropower and dams)

- a) Participation methodologies for communities: *"Retreating Subtropical Glaciers in the Andes: Adapting to a Diminishing Water Supply in Indigenous C"* Region: Americas Julia Z. McDowell
b) Rainwater harvesting: *"Traditional Irrigation Tanks Renovation in India to mitigate climate change"* Region: Asia-Pacific - A. Gurnathan
c) Dams *"Climate Change, Friend or Foe?"*- Region: Asia Pacific - Shripad Dharmadhikary

Areas with increasing run off and precipitation/ sea level rise/islands

Coastal erosion *Sand Motor: Building with Nature* Regions: Europe & applicable to Delta areas around the world, Koen Oome

Making space for water (physical aspect) *"Climate adaptation in the IJsseldelta"* - Region: Europe - Arjan Otten (if they want to be in this session still)

'Soft' ecosystem infrastructure *"From assessment to action: guiding principles and lessons for freshwater climate adaptation"* Region: Americas; Asia-Pacific; Europe; Mediterranean; Turkey and surrounding countries – John Mathews (WWF)

Local level coastal zone restoration in SE Asian coasts & Peat land flow regulation

"Wetlands ecosystems and climate change adaptation: soft responses to hard questions" Chris Baker (Wetlands International)

Simple Peatland restoration techniques in the Ruoergai marshes. Chris Baker Wetlands International –

Bottom up processes - Informal Community adaptation efforts to become formalised - Experiences from Small Island Developing States (SIDS), Central America and Africa. *"Can local methods provide global solutions? Bridging informal and formal Governance Regimes."* Johanne Jelnes

Mitigation measures

- Local level coastal zone restoration in SE Asian coasts - the GreenCoast project. – Chris Baker Wetlands International

Transboundary settings

"Transboundary water and climate management issues: the Ganga Basin and the Kosi River" - Region: Asia/Pacific but also applicable to most other areas - Nepal Water Conservation Foundation and ISET

	<p><i>“Guidance towards climate-proofing of water management” - Europe - Jos Timmerman</i></p> <p><i>“Impact Assessment & Adaptation Strategies of Paddy & Water Management due to Global Climate Change” – Region: Asia-Pacific - Yen-Ming Chang</i></p> <p>Subsession 3 – connecting as showcasing networking around agriculture</p>
<p>Missing stakeholders (Those that you would like to include for greater balance but for whom you have no contacts)</p>	<p>GLISPA or SOPAC</p> <p>UNDP</p> <p>ICIMOD</p> <p>Australian or Californian water companies (cities under threat of droughts)</p> <p>IFPRI</p> <p>SWITCH /UN-Habitat (developing country cities adaptation)</p> <p>WEF</p> <p>AWWA</p>
<p>Expected outcomes, impacts and follow-up linkages with events and initiatives after the Forum</p>	<p>Coalitions for adapting to climate change</p> <ul style="list-style-type: none"> • Connecting delta cities • Connecting water professionals for urban water solutions – IWA specialist group on climate change and the task groups • Connecting agriculture • Connecting actions for groundwater • All under one portal – global community of practice (divided in the categories above for exchange of information)

	Title	Region	Created By	Email	Session	Decision	How it fits in the session	Subsession
1	Inter-sectoral Contingent Water Trading Contracts As a Regional Climate Change Adaptation Strategy	; Americas;	Bonnie G. Colby; 25018	bcolby@email.arizona.edu	1 and 3	Not in session 3	Not included as the focus is on a regional scale but still think the participants would be interested in taking part of the guidebook	
2	The Israeli Holistic approach towards the challenges of water security in the 21st century	; Africa; Americas; Asia-Pacific; Europe; Mediterranean; MENA / Arab Region; Turkey and surrounding countries;	Ronit Golovaty (Israel Export & International Cooperation Institute)		2 or 3	Not in session 3	Security measures cannot be a direct measure to cope with climate change - it is to cope with threats from human threats. To limit the number of contributions and given that this submission is slightly off topic (although vulnerability is also from human made threats) this contribution is not selected.	
3	Climate Change increases the urgency for more sustainable water resources management	; MENA / Arab Region;	Safwat Abdel-Dayem (Arab Water Council)	safwat@mwri.gov.eg	2 or 3	Accepted	This contribution would be a good contributor to the panel in subsession 1 to represent dry areas and talk about vulnerabilities and principles for coping measures. In subsession 2 it could be part of the drying areas group	1,2

4	Adaptation Challenges in Complex River Basins: Lessons Learned and Unlearned		Roger Pulwarty		2 and/or 3	Not in session 3	This contribution is on a higher level (river basin) than local level and more on planning than local actions. It could possibly fit in the panel in subsession 1 representing the different geographies mentioned (murray darling etc 0 but with the multitude of sessions to choose from this alternative may be the least concrete of them.	1
5	'Climate and Waterschappen'	; Europe;	Patricia Phefferkorn	Marcel De Ruijter; 23988	2 or 3	Not in session 3	Too much national level to be included in session 3	
6	Mainstreaming adaptation strategies to climate change in managing African transboundary river,basins	; Africa;	Jean Boroto; 1696	ruhizaboroto@gmail.com	2 and/or 3	Not in session 3	Too much upstream and high policy level rather than actual local actions for transboundary basins.	
7	The crucial role sustainable water practices in Agriculture can play in both minimizing negative eff		RONI BENENSON; 1572	Roni.Benenson@netafim.com	2 or 3	2or 3	Fits in subsession 2 but I would need more information	

8	Guidance towards climate-proofing of water management	; Europe;	Jos Timmerman (RWS-RIZA); 24082	jos.timmerman@rws.nl	2 and/or 3	Accepted	This contribution is very relevant for the subsession 3 - forming alliances and the guidance can be used by the alliance working with transboundary issues. The presenter could also be represented in the panel in subsession 1	1,3
9	Wetlands ecosystems and climate change adaptation: soft responses to hard questions	; Africa;	Chris Baker (Wetlands International); 22245	chris.baker@wetlands.org	2 and/or 3	Accepted	This is highly relevant for subsession 2 with good practical examples of local adaptation measures. Also could be in the panel together with WWF to represent soft ecosystem infrastructure	2,1
10	Response options for agriculture: hard and soft methods and costs to adapt to climate change		Juliet Christian-Smith; 25032	jchristiansmith@pacinst.org	3 (research)	Accepted	Very relevant for subsession 2 for agriculture	
11	TREND ANALYSIS OF REFERENCE CROP WATER CONSUMPTION (ET _o) IN THE GAP AREA	; Turkey and surrounding countries;	Sevgi Donma	Tahsin Tonkaz (Harran Üniversitesi); 25034	3 and research	Not in session 3	Too much research	

12	DHI water environment health		anr@dhigroup.com		3 and research	Recommend for another component (research)	I would need more informaiton here to be able to place it.	
13	COMPARISON OF VULNERABILITY in different SECTORS OF HYDRAULIC BASINS TO IMPACTS OF CLIMATE CHANGE	; Europe;	Dounia Mrad; 25068	mrad_dounia@yahoo.fr	3 (research)	Not in session 3	Research	
14	Impact Assessment & Adaptation Strategies of Paddy & Water Resources Managemt. due to Climate Change	; Asia-Pacific;	Hsin-ya Ho	hyh@tiiwe.org.tw	3 (research)	Accepted	Too high level discussions and little on the ground adaptaiton measures but relevant for building alliances in subsession 3	3
15	Options for adaptation to water scarcity in the urban sector due to climate change - an integrative	; Mediterranean;	Ronit Golovaty (Israel Export &International Cooperation Institute)		3	Accepted	Very relevant to dry urban areas in subsession 2	2
16	Can we afford loosing fresh water in an era of water scarcity?		Ronit Golovaty (Israel Export &International Cooperation Institute)	golovaty@export.gov.il	3	Accepted	Very relevant to dry urban areas in subsession 2	2

17	Wastewater treatment and climate change	; Europe;	Claudia Wendland	Claudia.Wendland@wecf.eu	3	Not in session 3	This is mitigation and not adaptation	
18	Urban Wastewater Methane Gas Capture Project	; Americas;	Ricardo Cadario	cadario.ricardo@saguapac.com.bo	3	Not in session 3	This is mitigation and not adaptation	
19	From assessment to action: guiding principles and lessons for freshwater climate adaptation	; Americas; Asia-Pacific; Europe; Mediterranean; Turkey and surrounding countries;	john matthews		3	Accepted	Very relevant to the subsession 1 (principles) and possibilities to provide examples for subsession 2 but unclear which one precisely. Ask John.	1,2
20	Utilizing the right to water without constitutional guarantees	; Americas;	Laurel Firestone (Community Water Center)		3	Accepted	Very relevant to illustrate the vulnerability of communities and a practical example of how to help them making their voice heard for their right to clean water in panel session 1 - how to illustrate this as part of a special geography I cannot see, perhaps good to ask her - which group would be most useful - I can see drying cities (california) but her case sure applies to rural areas as well	1, 2

21	"A strategy for Irrigation and Drainage adopted to climate change in Asia" Asian Regional Working Group of ICID, Dr. Shinsuke Ota.				3 9research)	Not in session 3	I have not seen a full submission and cannot make a judgement if it should be included or not. For now it looks too research oriented to be included.	
22	Can local methods provide global solutions? Bridging informal and formal Governance Regimes.		Johanne Jelnes; 25024	Johanne.Jelnes@unep.org	3	Accepted	This is an important contribution to subsession 2 as it represents Bottom up processes - Informal Community adaptation efforts to become formalised - Experiences from Small Island Developing States (SIDS), Central America and Africa. We need to ask them which group they would like to take part of to showcase this	2
23	Climate adaptation in the IJsseldelta	; Europe;	Arjan Otten; 24837	a.otten@overijssel.nl	3	Not in session 3	The contributors have asked to be in another session - otherwise they would have fitted perfectly under subsession 2	
24	Connecting Delta Cities	; Europe;	John Jacobs; 25042	Jcj.jacobs@gw.rotterdam.nl	3	Accepted	Very relevant for subsession 3 and subsession 1 as part of the panel	1,3

25	Retreating Subtropical Glaciers in the Andes: Adapting to a Diminishing Water Supply in Indigenous C	; Americas;	Julia Z. McDowell; 25056	julia@aguasustentable.org	3	Accepted	really relevant to subsession 2 and melting snowpack	2
26	Traditional Irrigation Tanks Renovation in India to mitigate climate change	; Asia-Pacific;	A. Gurunathan; 25074	dhantank@airtelmail.com, dhantank@gmail.com	3	Accepted	very relevant to subsession 2 and melting snowpack	2
27	Can groundwater enable communities to adapt to water scarcity caused by climate change?	; Europe;	Alice Aureli (United Nations Educational Scientific and Cultural Organisation); 21759	a.aureli@unesco.org	3	Accepted	Great suitability for subsession 3 but need to ask them which group they would like to sit with (perhaps several) to represent groundwater in different geographies	
28	ADAPTION SATRATEJIES FOR CLIMATE CHANGE	; Mediterranean; Turkey and surrounding countries;	Kevser ŞENTÜRK (General Directorate of State Hydraulic Works - Turkey)	Mikdat KADIOĞLU; 840	3	Accept pending modifications (not detailed enough yet)		

29	Understanding the impact of climate change, vulnerability assessments and adaptation measures	; Africa;	Zeynep Saglam (5th World Water Forum - Turkey 2009)	Chris Moseki; 25131	3	Accept pending modifications (not detailed enough yet)		
30	Climate Change, Friend or Foe?	; Asia-Pacific;	Shripad Dharmadhikary; 25140	manthan.shripad@gmail.com; shripad2@gmail.com	3	Accepted	Relevant to subsession 2 but unsure how to put it in the group - along with snowpack dependencies?	2
31	Sand Motor: Building with Nature		Koen Oome	kja.oome@pzh.nl	3	Accepted	suitable for adaptation measures for subsession 2	2
32	Ecosanitation is an adaptation option to climate change		Ganna Tsvietkova	atsvet@mama-86.org.ua	3	Accepted	subsession 2 under drying areas - rural or cities	2
33	Tool for regional-scale assessment of groundwater storage improvement in adaptation to climate change (TRUST).		Daniela Sacchiero	daniela.sacchiero@sgi-spa.it	3	Accepted	good for subsession 2 and 3 as a practical tool for groundwater and to replicate it in a network	2,3

34	Transboundary water and climate management issues: the Ganga Basin and the Kosi River	Nepal Water Conservation Foundation and ISET			3	Accepted	subsession 2	2
35	Climate Change and Coastal Cities	; Asia-Pacific;	Santosh Ghosh (Center for Built Environment)	sghoshcbe@rediffmail.com	3	more 2 than 3 - (2=planning) about identifying problems and adaptation strategies and building in at policy level	subsession 2 in the group of cities and rising sea level	

Session 1.1.4 Summary Form

Session reference number (for example 1.1.1)	1.1.4
Media-friendly title (suggested by the co-organizers)	Pay me now or pay me (more) later! Can Climate Change Adaptation be financed?
Working title	How, by whom, where and when to put the money?
Duration	4 hours
Key question	How can climate change adaptation be financed?
Media-friendly session summary (3-5 sentences)	According to studies by UNFCCC and others, the additional investment and financial flows needed for adaptation to climate change are likely to amount to tens of billions of dollars annually for the coming decades that are mostly required in the poor countries of the South. Several proposals have been put forward to identify additional sources of funding, but currently existing international financing mechanisms are small compared to the magnitude of needs. More appropriate funding is expected by the South that needs to be new and additional, predictable, equitable, and adequate. A partnership arrangement between North and South could be considered, aimed at helping developing countries in their transition to carbon-constrained and climate resilient economies.
Session description (approximately 2 paragraphs)	<p>Based on concrete examples, part of this session will be an information sharing forum consisting of key finance-related experts that provides concrete answers and solutions.</p> <p>It is envisaged to split the session into two parts, namely</p> <ul style="list-style-type: none"> (i) on the identification and evaluation of issues and priorities, including commitment, absorption capacity, and investment programming of governments, and (ii) on sources of financing and mechanisms for planning and implementation of adaptation options, including dissemination of best practice.
Confirmed convening organization(s) and contact information	<p>The World Bank, KfW, & The European Investment Bank</p> <p>Vahid Alavian, Juergen Welschhof & Christoph Gleitsmann</p> <p>valavian@worldbank.org, Juergen.Welschhof@kfw.de, & c.gleitsmann@eib.org</p> <p>+1 202 473 3602, +49 69 7431-2640, & +352 4379 82739</p>
Other associated organisations	

Session outline and time allocation	See p. 34.
Contributions received that will be included in the session (with a word or two about how they are included)	6 out of the more than 80 proposals submitted to Topic 1.1 would theoretically fit in session 1.1.4 – 2 of them were selected; see page 33 and further.
Missing stakeholders (Those that you would like to include for greater balance but for whom you have no contacts)	<p><u>Major groups</u> missing in the session contributions are:</p> <ul style="list-style-type: none"> - farmers - workers and trade unions - business and industry - indigenous people <p>Considering the topic of this session, representation from all of the missing major groups is preferred.</p> <p>Furthermore, no contributions from the MENA and Arab region were received.</p>
Expected outcomes, impacts and follow-up linkages with events and initiatives after the Forum	A more clear and factual understanding of the governance, financing needs/gaps, and sources of financing. Also a more realistic picture of the adaptation options currently is being financed as part of an integrated approach to water investment in various countries.

Session 1.1.4 – Draft Detailed Plan
Based on 28-11-2008 discussion among the conveners. Subject to further revision.

Time Allocation	Running Time	Topic	Activity Description	Remarks
:20	:20	Introduction	Welcome, orientation, follow up to Stockholm, program, expected outcome	Juergen
:50	1:10	Government (barrower) perspective?? (need a more descriptive title)	Government (developed and developing countries) commitment, expectations, capacity to absorb/implement, and program adaptation in development strategy. <ul style="list-style-type: none"> • Paper (tbd) • Facilitated panel discussion 	Christoph -- panellists tbd
:50	2:00	Priorities in and adaptation options	Sector and regional priorities in water investments subject to climate change risk and associated adaptation options <ul style="list-style-type: none"> • Submission 5?? • Paper - Risk-based investment decision making (World Bank) • Facilitated panel discussion 	Facilitator (tbd) -- panellists tbd
:10	2:10	Break, over-run, flexibility		
:50	3:00	Sources and mechanisms for financing	<ul style="list-style-type: none"> • Water and climate adaptation paper (revised and focused) • Submission 1?? • Facilitated panel discussion 	Facilitator (tbd) -- panellists tbd
1:00	4:00	Open Discussion	Facilitated panel and audience participation/debate. Discussion will be focused on response to the key session questions.	Facilitator (tbd) -- panellists tbd

#	Title	Region	Submitted by	Institution	Email	Decision	How will proposal be included?
1	Financing adaption to climate change: The Dutch-Romanian bridge in developing a local tax system	Americas; Asia-Pacific; Europe	Marcel De Ruijter	Unie van Waterschappen (the Netherlands)	mruijter@uvw.nl	Included	Included in section on 'Sources and mechanisms for financing'
2	Voluntary Agreements with the water sector: Clean Water, Combat Climate Change and Save Costs	Europe; Mediterranean; Turkey and surrounding countries	Marcel De Ruijter	Unie van Waterschappen (the Netherlands)	mruijter@uvw.nl	Not related to financing adaptation, focuses on voluntary energy savings actions	Recommend for another session: session 1.1.1

3	Learning Centre - Mini-Seminar: Techniques for Structuring PPP Projects in the Water and Sanitation		Jeff Wuorinen	Institute for Public Private Partnerships, Inc.	jwuorinen@ip3.org	APPP discussion, not related to finance	Excluded
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4	The Clean Development Mechanism - The perfect tool to bridge the divide between the global developm	Africa	Susanne Wong	International Rivers	susanne@internationalrivers.org	Focus is on hydropwer/energy, does not address financing	Excluded
5	Adaptation in the Water Resources Sector: Issues in Financing, Planning and Vulnerability Assessment	Africa	Roger Calow	UK's Overseas Development Institute	R.Calow@odi.org.uk	Included	Included during topic 'Priorities in and adaptation options'
6	Paying Water Bill, Paying the cost of alternative	Africa	Mark-Adeyemi Adedayo	Ogun State Water Corporation	dayowumiayo@yahoo.co.uk		Pending

Session 1.1.5 Summary Form

<p>Broader Issue/Context</p>	<p>An exchange of expertise and up-to- date status information from different countries suffering droughts around the globe, can help in providing technical solutions to common drought problems. Moreover, climate change is expected to increase likelihood and intensity of droughts, and affect regions that have not traditionally dealt with this extreme phenomenon. Addressing droughts from an international perspective, based on accumulated management experience, is essential to mitigate impacts.</p> <p><u>Potential Contribution to the World Forum:</u> Drought planning and its management is directly linked to water related issues, and the Forum's objectives of`</p> <ul style="list-style-type: none"> - Collaboration, cooperation and solidarity among sectors and communities. - Developing effective and long-lasting solutions to the lack of water, which interests the whole world as a global threat. - Contributing to bringing together men and women defending the same cause, fostering collaborations between institutions at all levels in order to define policies and allowing for the setting up of concrete actions. - Bringing together all the competencies on water. - Creating enhanced understanding and improved information exchange between and amongst water users, decision-makers, the media, water practitioners and experts, at local, regional and global levels. - Creating or reinforcing existing connections and interactions between the various uses and sources of water. - Bridging of gaps in water technology, financing, capacity and management, with shared knowledge and experience. <p>Shifting from a drought management, as an emergency or crises situation, to a planned and structured one, can help in mitigating socio-economic and environmental drought impacts. This, in turn, contributes to combat desertification in areas where water scarcity and droughts converge. Technical experiences can help in establishing appropriate agriculture and land planning practices, taking into account drought effects, preventing associated damages.</p>
<p>Key Question</p>	<p>Address Drought issues globally</p>

Session Development Description/ Outline	<p><u>Thematic focus:</u></p> <ul style="list-style-type: none"> - Drought Planning and Management, experiences around the globe, and the success of applying drought management plans. - Importance of mobilising funds and raising public and political awareness to improve drought management and foster water saving measures. <p><u>Draft Program:</u></p> <p><u>Welcome and introduction</u></p> <ul style="list-style-type: none"> - WWC representative, Representative of Spanish Ministry of Environment and Rural and Marine Affairs, - Drought impacts globally, expected effects of Climate Change: IPCC representative. <p><u>Technical presentations: <i>Social, economic and environmental impacts of recent droughts, and case studies on drought management</i></u></p> <ul style="list-style-type: none"> - The experience of drought management in Spain, Ministry of Environment, and Rural and Marine Affairs - Current drought effects in Chile, Water Director, Ministry of Public Works - African experience, drought effects and agricultural impacts in Morocco. - The Australian experience, drought legislative and mitigation measures. <p><u>Round table and debate</u></p> <ul style="list-style-type: none"> - Short presentations from different sectors (water users, NGOs, researchers, local administrations), and direct debate with public.
(Types of) Organizations to be involved in session development	<p>Water users, NGOs, researchers, representatives of private sector and local and national water administrations</p>
What is being bridged here?	<p>Drought Planning and Management, experiences around the globe</p>
Next steps and timeline	<p>Key events for topic development and consultation process</p> <p>Preparatory meetings. Consultation with EU experts, from the Water Scarcity and Droughts Expert Network (Common Implementation Strategy, Water Framework Directive), CODIA (Conference of the Iberoamerican Water Directors), INBO (International Network of Basin Organizations) and other interested international entities.</p>
Contact information for coordination of this session	<p>Name: Teodoro Estrela, Deputy Water Director</p> <p>Organisation: Spanish Ministry of Environment, and Rural and Marine Affairs</p> <p>Country: Spain</p> <p>E-mail: buzon-intersgpusa@mma.es</p> <p>Tel:+34914535339</p>

Annex I: Submissions recommended for another component: Topic 1.1 Poster session

	Title	Perspective	Region	Created By	Email	Session
1	riverbank erosion	Riverbank erosion causing a number of people homeless	; Asia-Pacific;	Aysa Akter (n/a)		n/a
2	global water resource management	By a global view of the problem we can find a solution more close with the sustainable Life.	; Europe;	Jean-Marc Hauth (Association des biefs du Pilat)		n/a
3	Impact Assessment & Adaptation Strategies of Paddy & Water Management due to Global Climate Change	Impact assessment & adaptation of paddy & water management due to climate change.	; Asia-Pacific;	Yen-Ming Chang	hyh@tiiwe.org.tw	3 and research
4	Adapting to climate change in water resources: understanding the impacts of climate change, vulnerab	We will show how the climate change will have impact on the flood intensity and frequency. How it will change the onset and recession of the floods. We will also show how droughts will increase in future and also happen in the monsoon season. Basically we will show the impacts of the various CGM model results on the change in precipitation and temperature in Bangladesh. The cropping pattern and type of crops required to adapt to this change. The change in land classification due to climate change will be high lighted.	; Asia-Pacific;	Abu Saleh Khan; 1700	ask@iwmbd.org	research
5	Impact Assessment &	Impact assessment & adaptation of paddy & water resources	; Asia-Pacific;	Hsin-ya Ho	hyh@tiiwe.org.tw	3 (research)

	Adaptation Strategies of Paddy & Water Resources Managemt. due to Climate Change	management due to climate change.				
6	Responses to climate variability and change in dryland areas	Humanitarian & livelihoods perspectives	; Africa;	philippe crahay	pcrahay@actioncontrelafaim.org	applied research project
7	Influences of North Atlantic Oscillation on Flow and Precipitation Data in Konya Basin	The contribution will be as a presentation in session.the presentation try to show how the North Oscillation would influence on flow and precipitation in Konya basin	; Turkey and surrounding countries;	Sevgi Donma	Muharrem Fırat Yılmaz; 25050	research
8	Investigation of NAO Signals in Hydrological Data of East Black Sea and Çoruh Basins	The contribution is proposed as a paper presentation in sessions of Topic 1.1 for consideration	; Turkey and surrounding countries;	Ubeyd Sezer	Şemsi Cem Güney; 25047	research
9	Response options for agriculture: hard and soft methods and costs to adapt to climate change	We would bring an overview of actual, on-the-ground adaptations to climate change in the agricultural sector. Based in California, we conduct interdisciplinary research and partner with stakeholders to produce solutions that advance environmental protection, economic development, and social equity - in California, nationally, and internationally.		Juliet Christian-Smith; 25032	jchristiansmith@pacinst.org	3 (research)

10	Global Analysis of Climate Change impacts on Water Availability	I will bring a vision of engineer, scientist, researcher and a well being believer. I believe that water is a strategic good that has a significant impact on human beings. Water is needed for drinking, irrigation-food, hygiene-health, and hydropower. It is also a powerful enemy when flooding occurs, lives are lost, households are destroyed and agriculture and commercial buildings are lost. With population growth and economies' growth, water demand will increase but climate change significantly affects water supply. Such debate will bring lights to incorporate science findings and policy-finance decisions to tackle climate change impacts.	; Africa;	Driss Ennaanay; 24304	driss@stanford.edu	2 (model)
11	Vulnerability of Key Water Use Sectors in the South Saskatchewan River Basin (Alberta and Saskatchewan)	The integration of physical and social science to assess the vulnerability of a major Canadian river basin to changes in water supply as a result of climate change.	; Americas;	Lawrence Martz; 25049	lawrence.martz@usask.ca	research
12	TREND ANALYSIS OF REFERENCE CROP WATER CONSUMPTION (ET _o) IN THE GAP AREA	This presentation aims to discuss the crop water consumption re-evaluation in terms of climate change. it also shows the calculation of crop water consumption using different methods in southeast anatolia.	; Turkey and surrounding countries;	Sevgi Donma	Tahsin Tonkaz (Harran Üniversitesi); 25034	3 and research

13	EFFECTS OF CLIMATE CHANGE ON SUSTAINABILITY OF LAND AND WATER MANAGMENT OF LOWER SEYHAN IRRIGATION P	This paper aims to analyze the historical structural change of Lower Seyhan Irrigation Project such as irrigation water use, irrigation efficiency, crop pattern, salinity and groundwater level and how the system would be effected global warming.	; Turkey and surrounding countries;	Sevgi Donma	Sevgi Donma; 24982	research
14	COMPARISON OF VULNERABILITY in different SECTORS OF HYDRAULIC BASINS TO IMPACTS OF CLIMATE CHANGE	In the present work we tried to compare the hydraulic basin vulnerability this is done by applying it to the water system in the region of Souk-Ahras (East of Algeria) to impacts possible of climate change. We focus on sectors that seem to be the more touched by the impacts possible of climate change, notably water resources and related activities(Drinking water , industrial use, irrigation), the rained agriculture. A matrix of ordering of hydraulic basin vulnerability lives to screw of impacts possible of climate change has been established in order to describe a real situation of basins and give previsions of impacts of climate change in the future.	; Europe;	Dounia Mrad; 25068	mrاد_dounia@yahoo.fr	3 (research)

15	A THREE DIMENSIONAL CIRCULATION MODEL FOR LAKE VAN	Lake Van provides an important proxy climate record for this archaeologically important part of the world, but it is under a significant pollution threat because of the domestic and agricultural pollution it receives. This study aims to provide a physical limnological framework to guide future environmental assessment efforts as well as paleoenvironmental reconstruction studies, and to determine the thermal and hydrodynamic characteristic of Lake Van in the climatological perspective. In that way, it will be possible to determine instant variations and to generate future scenarios.	; Turkey and surrounding countries;	Melike Koktas	Ufuk Utku Turunçoğlu (ITU (Informatics Institute)); 25060	research
16	Influences of North Atlantic Oscillation on Flow and Precipitation Data in Konya Basin	The contribution will be as a presentation in session.the presentation try to show how the North Oscilation would influence on flow and precipitation in Konya basin	; Turkey and surrounding countries;	Sevgi Donma	Muharrem Fırat Yılmaz; 25050	research
17	EFFECTS OF CLIMATE CHANGE ON SUSTAINABILITY OF LAND AND WATER MANAGMENT OF LOWER SEYHAN IRRIGATION P	This paper aims to analyze the historical structural change of Lower Seyhan Irrigation Project such as irrigation water use, irrigation efficiency, crop pattern, salinity and groundwater level and how the system would be effected global warming.	; Turkey and surrounding countries;	Sevgi Donma	Sevgi Donma; 24982	research
18	Historical climate risk, climate models, scenarios			Giasuddin Ahmed Choudhury	gchdhury@cegisbd.com	research

19	Enhancing the capacity of Turkey to adapt to climate change			Atila Uras	atila.uras@undp.org	research
20	Water and food: the impact of water scarcity and climate change on agriculture			Juliet Christian-Smith	jchristiansmith@pacinst.org	research