



SEMINAR

Raising awareness and enhancing adaptive capacity of water resources planning and management to climate change impacts

November 14 - 15, 2011 – UNESCO, Paris

Upon invitation only

Presentation

In March 2012, the city of Marseilles will host the 6th edition of the **World Water Forum**, the greatest international gathering dedicated to water. This three-yearly process organized by the World Water Council brings together political and economic decision-makers, as well as representatives of the civil society, to raise the main thematic, regional, and political issues of water resources management around the world. Striving to be the “Forum of Solutions”, the 6th World Water Forum (WWForum6) has identified 12 Priorities for Action and aims at proposing concrete **solutions** and encouraging firm commitments from the different stakeholders.

As part of the thematic Priority for Action “Respond to climate and global changes in an urbanizing world”, the French Water Academy and UNESCO are co-leading target 3.3.2 untitled: “ By 2015, develop a set of internationally recognized methodologies to assess and handle uncertainties of impacts of climate change on surface and ground water and identify priorities of awareness-raising for improving integrated water resources management, in close partnership with IPCC, UNFCCC, IHAS and other relevant organizations, and establish a network of river basins and implement the methodologies in at least 10 river basin in key vulnerable regions.”

In order to identify solutions to be held to the WWForum6, this international seminar will bring together scientists and water basin managers from all over the world to discuss the ways for decision-makers to better deal with **uncertainties** related to climate change impacts on water resources in water planning and management.

Some concrete case studies will help highlight the needs of river basin managers in the field of adaptation to climate change. The participants will then work together on the definition of applicable **tools**, either to reduce the field of uncertainties or to integrate them in short and long term predictions for surface and groundwater systems.

This event aims at, on the one hand, increasing awareness and enhancing **knowledge** sharing between water and climate specialists, and on the other hand, opening a dialogue between scientists and river basin managers in order to develop a set of **methodologies** to integrate these uncertainties into water resources policy planning and implementation. This seminar will be a milestone towards enhanced **applicability** of climate adaptation measures in water resources planning and policy.

The main **outputs** of this innovative seminar will be to draw up clear propositions of contribution to the WWForum6, as well as to make a few recommendations to be held to some major international events on climate (COP17, Rio +20...).

Send a paper!

To submit a written contribution, fill in the online form:
http://www.academie-eau.org/fiche_actu.php?id=37

Co-leading

Jean-Luc Redaud (CGAAER / French Water Academy) and Anil Mishra (UNESCO-IHP)

Steering Committee

Académie de l'Eau, UNESCO-IHP, CGAAER, ONEMA, Confederación Hidrográfica del Ebro, Plan Bleu, MEDDTL, Météo France, Agence de l'eau Adour-Garonne, Cemagref, BRGM

Draft Programme

14 / 11 / 2011

- 08:30 - 09:00 Registration
- 09:00 - 09:30 Opening session
Chair: Anil Mishra, UNESCO
- Welcome - *Abdin Mohamed Ali Salih, Director, Division of Water Sciences, UNESCO*
 - Presentation of the WWForum6 and priority 3.3: Responding to global changes in an urbanizing world - *Stephane Simonet (WWForum6) and Henk van Schaik (CPWC, coordinator of priority 3.3)*
 - Target 3.3.2: Objectives, approach, action plan and programme of the seminar - *Jean-Luc Redaud, CGAAER / French Water Academy*
- 09:30 - 11:00 Introduction
Chair: Jean-Luc Redaud, CGAAER / French Water Academy
- Pragmatic approaches for water management under climate change uncertainty: A decision analytic approach to managing climate risks – Application to the Upper Great Lakes
Approches pragmatiques pour la gestion de l'eau en situation d'incertitude : L'approche analytique de la gestion des risques climatiques – Le cas des Grands Lacs Supérieurs
Eugene Z. Stakhiv, UNESCO-ICWaRM, Institute for Water Resources
 - Policies and institutions under uncertainty: The case of food security
Enjeux politiques et institutionnels en contexte d'incertitude: Le cas de la sécurité alimentaire
Jean-Marc Faurès, FAO - Land and Water Development Division
 - Uncertainty and policy planning
Incertitudes et décision publique
Robert Leonard Wilby, Loughborough University, UK
 - Question to the scientific community for water policy-makers to better take into account climate change impacts: The French experience
Question à la communauté scientifique pour une meilleure prise en compte des impacts du changement climatique par les responsables de la planification des eaux : l'expérience française
Xavier De Lacaze, MEDDTL, Water and Biodiversity Directorate
 - Discussion
- 11:00 - 11:30 Coffee break
- 11:30 - 13:00 Session 1: Methodological framework / *Cadre méthodologique*
Chair: Siegfried Demuth, UNESCO
- IPCC works progress
Avancées des travaux du GIEC
Hervé le Treut, IPCC / GIEC Expert
 - Recent progresses in downscaling methods
Progrès récents des méthodes de descente d'échelles
Eric Martin, Météo France - National Centre for Meteorological Research
 - Advances and gaps in knowledge about surface water flows
Progrès et difficultés de l'avancée des connaissances sur les écoulements en eau
Kuniyoshi Takeuchi, ICHARM
 - Groundwater in the Context of Global Change
Les eaux souterraines dans le contexte des changements globaux
Neno Kukuric, IGRAC
 - Discussion
- 13:00 - 14:30 Lunch Break (possibility to use the cafeteria of UNESCO)
- 14:30 - 16:00 Session 2: Case studies (I): Responding to climate change impacts on water resources
Etudes de cas : Faire face aux effets du changement climatique sur les ressources en eau
Chair: Jean-Louis Oliver, French Water Academy
- Innovative experiences of action research in the Garonne basin to anticipate global changes and prevent gaps between water needs and supplies (France) - *Françoise Goulard, Agence de l'Eau Adour-Garonne*
 - Climate change impacts on water management in the Ebro basin (Spain) - *Rogelio Galván Plaza, Ebro River Water Authority*
 - Bani basin (Mali) - *Jean-Emmanuel Paturel, Institute for Research and Development IRD*
 - Simulating the impact of climatic variability and anthropogenic pressure on runoff from a mountainous catchment in the Chilean Andes - *Denis Ruelland, CNRS / Hydrosociences Montpellier*
 - Discussion

16:00 - 16:30 Coffee break

16:30 - 18h00 Case studies (II)

Chair: Alice Aureli, UNESCO

- Climate Change Impacts and Adaptation Strategies in the Yellow River Basin - *Ramasamy Jayakumar, UNESCO Office Beijing*
- The impacts of climate change and rapid development on groundwater resources in the tropics: evidence from East Africa (UNESCO GRAPHIC project) - *Richard Taylor, University College London*
- Tunisia Northern Coastal basins: Precipitation variability and future projections for water resources management - *Zoubeida Bargaoui Kebaili, National Engineering School of Tunis*
- Addressing double uncertainty regarding climate change impacts in transboundary basins: the Programme of Pilot Projects on Adaptation to Climate Change in Transboundary Basins in Eastern Europe and Central Asia - *Sonja Koeppel, UNECE*
- Discussion

18:00 - 19:00 Cocktail

15 / 11 / 2011

09:00 - 10:30 Session 3: Solutions for the future / Solutions pour le futur

Panel discussion: Bridging the uncertainty issue with experiences from WWForum6 and other processes / Croiser la problématique de l'incertitude avec le WWForum6 et d'autres processus

Moderator: Henk Van Schaik, CPWC (Coordinator of group 3.3: Climate Change)

Participants: Sonja Koeppel, UNECE (European process), Karin Lexén, SIWI (Target 3.3.1), Olivier Bommealer, MEDDTL (TSG 2.4.4, Ecosystem valuation), Michela Miletto, WWAP (Target 3.3.3), Jean-François Donzier, INBO (European process), Kathleen Dominique, OECD

10:30 - 11:00 Coffee break

11:00 - 12h30 **Workshops:** Solutions for the future / Ateliers : Solutions pour le futur

WS 1 Which priorities for knowledge improvement to match the needs and expectations of surface or groundwater resources managers?

Quelles priorités dans l'amélioration des connaissances pour répondre aux besoins des gestionnaires de ressources en eau superficielles ou souterraines ?

Moderator: Eugene Z. Stakhiv, UNESCO-ICIWaRM, Institute for Water Resources

WS 2 Expectations and recommendations towards IPCC AR5 and the United Nations Framework Convention on Climate Change (UNFCCC)

Attentes et recommandations vis-à-vis du GIEC et de la Convention Cadre des Nations Unies sur les Changements Climatiques (CCNUCC)

Moderator: Richard Taylor, UCL

WS 3 Methodological recommendations to enhance the recognition of climate and implement a methodology for uncertainty management in water planning and management, relying on an international sub-network of river basins

Recommandations méthodologiques pour la prise en compte du changement climatique et l'application d'une méthodologie de gestion des incertitudes dans les plans d'aménagement et de gestion des eaux, s'appuyant sur un sous-réseau international de bassins versants

Moderator: Jean-François Donzier, INBO / RIOB

12:30 - 13:00 Plenary closing session: Report-out by the working groups and conclusions

Heading towards Marseilles 2012: Draft solution and key messages to WWForum6 and to the main international negotiations (Durban, Rio+20...)

Vers Marseille 2012 : Contributions au 6ème Forum Mondial de l'Eau et aux processus de négociation internationale (Durban, Rio+20...)

Chairs: Jean-Luc Redaud (CGAER / French Water Academy) and Holger Treidel (UNESCO-IHP)

Speakers: Eugene Z. Stakhiv (ICIWaRM), Richard Taylor (UCL), Jean-François Donzier (INBO)

13:00 Closing remarks

Gretchen Kalonji, Assistant Director-General for Natural Sciences, UNESCO

Pierre-Frédéric Ténière Buchot, Governor of the World Water Council

Practical Information

WHEN? From **November 14, 2011 (9:00 am)** to **November 15, 2011 (1:00 pm)**

WHERE? UNESCO Headquarters
7, Place de Fontenoy, 75007 Paris - France

ACCESS **Airports:** Roissy-Charles de Gaulle (tel: +33 (0)1 48 62 12 12) or Orly Airports (tel: +33 (0)1 49 75 52 52)
See www.adp.fr

Bus: No 28, 80, 82, 87 and 92. See www.ratp.fr

Train: Gare du Nord or Gare de Lyon
See www.sncf-voies.fr

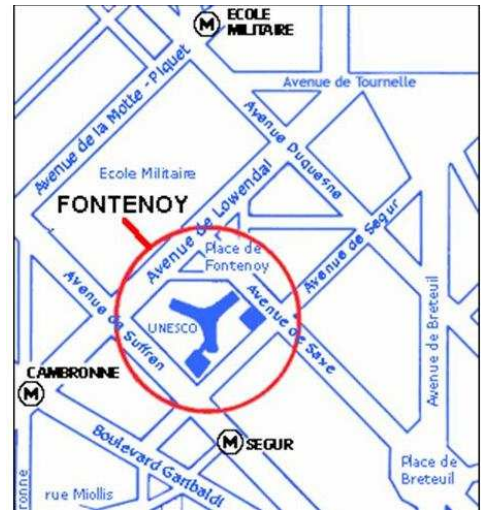
Metro: Ségur (line 10), Cambronne (line 6) or Ecole Militaire (line 8) metro stations

Taxi: Call +33 (0) 145 66 00 00, +33 (0) 149 36 10 10 or +33 (0) 147 34 00 00

LANGUAGE Simultaneous translation into French and English during the whole seminar except the workshops (English only)

ACCOMODATION Ask for a list of hotels near UNESCO headquarters

LUNCH Possibility to have lunch on the premises at the cafeteria or restaurant of UNESCO



Registration Form

Please fill in the form to express your interest in attending the conference.
On receipt of this form, you will be included in the final list of participants.

Please send to: Amélie Boissonnet: boissonnet.amelie@aesn.fr or by fax +33 (0) 1 41 20 16 09

Mr / Mrs / Ms - First Name*:

Family Name*:

Organization Name* (country):

Position:

Nationality:

E-mail*:

Will attend on: Monday Tuesday

Which workshop would you like to participate in? **Choose 1 workshop:**

1. Which priorities for knowledge improvement to match the needs and expectations of surface or groundwater resources managers?
2. Expectations and recommendations towards IPCC and the United Nations Framework Convention on Climate Change (UNFCCC)
3. Methodological recommendations to enhance the recognition of climate and implement a methodology for uncertainty management in water planning and management, relying on an international sub-network of river basins.

*Fields marked * are compulsory.*

Contact

Contact boissonnet.amelie@aesn.fr - Tel. +33 (0) 141 20 18 25

Information http://www.academie-eau.org/fiche_actu.php?id=37

International seminar

“Raising awareness and enhancing the adaptive capacity of water planning and management to climate change impacts”

November 14-15, 2011 – UNESCO, Paris

GUIDELINES FOR SUBMISSION OF CONTRIBUTIONS

| | |
|--------------|-------|
| Title: | _____ |
| Name(s): | _____ |
| Institution: | _____ |
| Address: | _____ |
| Phone no: | _____ |
| E-mail : | _____ |

Topic and approach

This call for contribution is set up for the preparation of the **6th World Water Forum (WWForum6)** which will take place in Marseilles, in March 2012. It is a contribution to the group 3.3 of the thematic process of the Forum, untitled: “Responding to climate and global changes in an urbanizing world”.

Within this thematic group, target 2 is focused on: “By 2015, develop a set of internationally recognized methodologies to assess and handle uncertainties of impacts of climate change on surface and ground water, and identify priorities of awareness-raising to improve water management, in close partnership with IPCC, UNFCCC and other relevant organizations, and implement them in the preparation of a network of at least 10 river basin management plans within key vulnerable regions”.

The general **purpose** of target 2 is, on the one hand, to increase awareness and enhance knowledge sharing between water and climate specialists, and on the other hand, to open a dialogue between scientists and water resources managers with a view of developing a set of methodologies for water planners to integrate uncertainties into water resources management plans and policies.

As a contribution to this target of WWForum6 you are cordially invited to present your paper covering one or several of the following **key issues**:

- What kind of responses, methodologies or tools are needed to help river basin managers better take into account climate change impacts on water resources at an operational level?
- How can groundwater resources contribute to adaptation measures to the impacts of climate change?
- Which theoretical approaches on climate-related uncertainties to develop, depending on the context?
- How to enhance scientific model precision, including downscaling, in order to decrease uncertainties for water management?
- Water planning in an uncertain future: How to enhance robust water policy under climate change?
- How to translate scientific models into operational solutions?
- Which solutions can be re-used, and how to adapt them to different contexts?
- How to take greater account of water-related issues within climate research and institutions, notably within IPCC?

Guidelines for drafting contributions

Your paper will present an innovative research, an original field study or a relevant methodology for water resources adaptive planning and management in the context of climate-related uncertainties.

1. On the one hand, possibly based on a case study presentation, you will identify the key issues related to the impact of climate change on water resources in a particular context; present some elements of scientific or institutional response which are being developed to tackle these challenges; and open the way for new tools and methodologies for water resources managers to better anticipate the near future.
2. On the other hand, you will make propositions for some methodological and practical means to improve dialogue and knowledge sharing within the scientific community and to enhance the applicability of adaptation measures to climate change on an operational plan.

Format of your presentation:

| | |
|--------|----------------------------|
| Format | Microsoft Word |
| Length | 800 to 1000 words |
| Fonts | Arial, 10 pt, single space |

Please try and make your presentation as concise and pragmatic as possible to fit into the WWForum6 "Solutions sheet". Indeed, **all relevant propositions will be collected in a solutions' overview to be held to WWForum6 in Marseilles, in March 2012.**

Here are some **guidelines** to help you structure your contribution or abstract:

PRESENTATION OF YOUR PROJECT OR STUDY

- If you are presenting a case study: briefly describe the context, the issues and problems to be solved
- Present the project or study: strategy designed in response to these challenges (objectives, action plan and methodology, expected outcomes) and implementation (resources mobilized, stages of realization...)
- Main results observed
- Constraints or obstacles to project design, implementation and management

CONCLUSIONS

- Conclusions drawn from your project or study
- Key questions raised

PROPOSITIONS FOR SOLUTIONS

- Expectations from the seminar to improve the adaptive capacities of water resources policy and management
- Orientations, recommendations or propositions for solutions in the prospect of WWForum6

REFERENCES, NOMENCLATURE AND ACRONYMS

Contact

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Séminaire international

“Raising awareness and enhancing the adaptive capacity of water planning and management to climate change impacts”

14-15 novembre 2011 – UNESCO, Paris

NOTE DE CADRAGE POUR LES SOUMISSIONS DE CONTRIBUTIONS

| |
|---------------------------|
| Titre : |
| Nom(s) : |
| Organisme d'affiliation : |
| Adresse : |
| Tél : |
| E-mail : |

Présentation de la démarche

Cet appel à contribution est lancé dans le cadre de la préparation du **6ème Forum Mondial de l'Eau (WWForum6)** qui se tiendra à Marseille en mars 2012. Il s'inscrit dans le groupe 3.3 du processus thématique du Forum, intitulé : « Faire face aux changements climatiques et globaux dans un monde qui s'urbanise ».

Au sein de ce groupe de travail, la cible 2 vise à : « D'ici à 2015, développer une série de méthodes reconnues mondialement pour évaluer et gérer les incertitudes des impacts du changement climatique sur les ressources en eau superficielle et souterraine et identifier les priorités en termes de sensibilisation des gestionnaires, en collaboration étroite avec le GIEC, UNFCCC et les autres organisations, et les mettre en œuvre de manière pilote dans le cadre d'un réseau d'au moins 10 plans de gestion de bassin dans les principales régions vulnérables ».

L'objectif de la cible 2 est, d'une part, de renforcer la sensibilisation et le partage des connaissances entre climatologues et hydrologues et, d'autre part, d'ouvrir un dialogue entre scientifiques et gestionnaires de bassin versant en vue de développer un ensemble de méthodologies permettant à ces gestionnaires d'intégrer les incertitudes liées au changement climatique dans les plans d'aménagement et de gestion des eaux.

Afin d'alimenter la réflexion sur cette thématique pour le WWForum6, nous vous invitons à soumettre une contribution traitant de l'une des **problématiques** suivantes :

- Quels types de réponses, de méthodologies et d'outils peuvent-ils aider les gestionnaires de bassin versant à mieux prendre en compte les impacts du changement climatique sur les ressources en eau sur le plan opérationnel ?
- Comment les ressources en eau souterraines peuvent-elles contribuer aux mesures d'adaptation aux impacts du changement climatique ?
- Quelles approches théoriques développer sur la gestion des incertitudes climatiques et dans quels contextes ?
- Comment améliorer la précision des modèles scientifiques de fonctionnement des systèmes hydrologiques, notamment en termes de descente d'échelles, afin de réduire les incertitudes ?
- Planifier en contexte incertain : comment renforcer la robustesse des politiques de l'eau dans le contexte du changement climatique ?
- Comment traduire les modèles scientifiques en solutions opérationnelles ?
- Quelles solutions répliquer et comment les adapter à des contextes différenciés ?

- Comment renforcer la prise en compte des problèmes de gestion de l'eau dans les institutions et les recherches sur le climat, notamment au sein du GIEC ?

Lignes directrices pour la rédaction

Votre contribution présentera un projet de recherche innovant, une étude de terrain originale ou une méthodologie pertinente pour la gestion adaptative des ressources en eau dans le contexte des incertitudes liées au changement climatique.

1. Dans un premier temps, en vous appuyant éventuellement sur une étude de cas, vous identifierez les points sensibles liés à l'impact du changement climatique sur le régime des eaux dans un contexte spécifique ; vous présenterez les éléments de réponse à l'œuvre sur le plan scientifique et institutionnel pour faire face à ces défis ; et vous ouvrirez des pistes de réflexion sur les outils qui permettraient à des gestionnaires de ressources en eau de mieux anticiper l'avenir dans les prochaines décennies.
2. Dans un deuxième temps, vous présenterez des propositions de moyens pratiques et méthodologiques pour faire progresser le dialogue et le partage des connaissances au sein de la communauté scientifique, et pour améliorer l'applicabilité des mesures d'adaptation au changement climatique sur le plan opérationnel.

Merci de bien vouloir respecter le **format** suivant:

| | |
|----------|---------------------------------|
| Fichier | Microsoft Word |
| Longueur | 800 à 1000 mots |
| Police | Arial, 10 pt, interligne simple |

Votre contribution doit être aussi concise et pragmatique que possible afin de correspondre au format du modèle de « Fiche solution » du 6^{ème} Forum Mondial de l'Eau. En effet, **les propositions pertinentes seront regroupées dans une note de synthèse de solutions qui sera présentée au WWForum6 à Marseille, en mars 2012.**

Voici quelques **lignes directrices** pour guider la structuration de votre contribution :

PRESENTATION DE VOTRE ETUDE OU PROJET

- Si vous présentez une étude de cas, rappelez brièvement le contexte, les enjeux et les problématiques en question
- Présentation de l'étude ou projet : stratégie adoptée en réponse à ces défis (objectifs, plan d'action et méthodologie, résultats attendus) et mise en œuvre (moyens mobilisés, étapes de réalisation...)
- Principaux résultats observés
- Contraintes ou obstacles rencontrés dans la conception, la mise en œuvre et la gestion du projet

CONCLUSIONS

- Enseignements tirés de votre projet ou étude
- Principales questions soulevées

PROPOSITIONS DE SOLUTIONS

- Attentes vis-à-vis de notre séminaire pour améliorer la capacité d'adaptation des politiques de l'eau
- Orientations, recommandations ou propositions de solutions en perspective du FME

REFERENCES, NOMENCLATURE ET ACRONYMES

Contact

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