



International Hydrological Programme

43rd session of the IHP Bureau
(Paris, 3 – 5 June 2009)

REPORT ON UNESCO-IHP PARTICIPATION IN THE 5TH WORLD WATER FORUM

Item 8.3 of the provisional agenda

Summary

This document is intended to inform the members of the IHP Bureau of UNESCO's participation in the Fifth World Water Forum (WWF5), which took place in Istanbul, Turkey, from 16 to 22 March 2009, and of its main outcomes.

Decision required: Paragraph 72.

The Bureau may wish to make comments regarding UNESCO's participation in the WWF5 and its main outcomes. The Bureau also may wish to note with satisfaction the active participation and significant contribution of IHP to the WWF5, in particular to its preparatory processes, as well as the key role played by IHP in ensuring UNESCO's leadership in the UN system in the area of freshwater.

INTRODUCTION

1. UNESCO's active participation and strong presence in the 5th World Water Forum (WWF5), held in Istanbul, Turkey, from 16 to 22 March, reaffirmed UNESCO's commitment and leadership role in promoting science, education and capacity building to address global water challenges. The WWF5 brought together about 25,000 participants from around the world, representing governments, UN organizations, international and regional organizations, NGOs, academia, business and industry, the media and youth. The WWF5, organized under the overarching theme "*Bridging Divides for Water*", included the following main components: political; thematic; regional; and the Water Expo.

2. UNESCO was represented by its International Hydrological Programme (IHP), the World Water Assessment Programme (WWAP), UNESCO-IHE Institute for Water Education and water-related category 2 centres, greatly enhancing the visibility and impact of various UNESCO initiatives on water.

BACKGROUND

3. The World Water Forum, organized every three years by the World Water Council in close collaboration with the authorities of the hosting country, is the largest international event on water. It primarily serves four main purposes:

- To raise the importance of water on the political agenda
- To support the deepening of discussions towards the solution of water issues
- To formulate concrete proposals and bring their importance to the world's attention
- To generate political commitment

4. The successive editions of the World Water Forum have served as stepping-stones towards global collaboration on water problems. The Forum offers the water community and decision-makers from all over the world the unique opportunity to make recommendations for ensuring the security of water resources in the different parts of the world.

5. The 1st World Water Forum was held in Marrakech, Morocco, in 1997. This Forum led to the preparation of a "Vision for Water, Life and the Environment in the 21st Century", whose results were discussed during the 2nd World Water Forum in 2000 in The Hague, Netherlands. In March 2003, the 3rd World Water Forum in Kyoto, Japan, clearly stated its resolution to involve all stakeholders through, for example, the creation of a "Virtual Water Forum" and the gathering of thousands of testimonies within the "Voices of Water." The 4th World Water Forum was organized for the first time on the American continent in Mexico City, gathering approximately 20,000 participants.

UNESCO DELEGATION

6. UNESCO delegation was led by the Director-General and included the staff of IHP from the Headquarters and the UNESCO Field Offices, the WWAP, UNESCO-IHE, Office of the Director-General and the Bureau of Public Information. In addition, effective support from UNESCO category 2 water-related centres, consultants and experts ensured the high visibility for the Organization and smooth logistical arrangements.

HIGHLIGHT EVENTS

Heads of State Summit (16 March)

7. On the Opening Day of the Forum, 16 March 2009, the Heads of States Summit was organized for the first time within the framework of the World Water Forum. The Director-General of UNESCO participated in the Heads of State Summit and delivered a statement. The Summit, with participation of seven Heads of State, the Director-General of UNESCO, the Under-Secretary-General for Economic and Social Affairs of UN, and other eminent persons, provided an occasion for creating new synergies to address the global water challenges. As the main outcome of the Summit, the Heads of State adopted a high-level appeal for action to governments around the world citing the importance of water and the role it plays in development and society.

Launching of the 3rd Edition of the World Water Development Report (16 March)

8. The triennial World Water Development Report (WWDR) is a flagship product of UN-Water, the UN inter-agency coordinating mechanism on freshwater. It is prepared by the UNESCO-led and hosted WWAP. The 3rd edition of WWDR was launched on the opening day of the 5th World Water Forum by the Director-General of UNESCO. Over 1,100 participants attended this event, in which the President of Tajikistan, the First Vice-President of Brazilian Congress, the Water Resources Minister of Zambia and the Undersecretary of the Ministry of Environment and Forestry of Turkey addressed the meeting. The media covered extensively the event:

Launching Ceremony of “IWRM Guidelines at River Basin Level” (16 March)

9. In a special event on the Forum Opening Day, the Director-General launched “IWRM Guidelines at River Basin Level”, an important UNESCO publication produced with contributions from Japanese and international experts. During the Launching Ceremony, the Director-General presented the set of IWRM Guidelines to His Imperial Highness the Crown Prince of Japan in his capacity as Honorary President of UN Secretary-General’s Advisory Board on Water and Sanitation. The Guidelines propose a ‘Spiral Model’ of IWRM, which illustrates the evolving and dynamic nature of the IWRM process. The compilation of ‘Key for Success’ and ‘Good examples’ can be used in practice to successfully implement IWRM at the river basin level.

UNESCO’s INTERNATIONAL HYDROLOGICAL PROGRAMME AT THE WWF5

10. UNESCO-IHP’s active participation in, and strong presence at, the WWF5 was felt across the political, regional and thematic processes of the Forum. In addition, UNESCO’s booth in the WWF5 Water Fair was one of the most-visited stands in the UN Pavilion. As a member of the International Steering Committee of the Forum, UNESCO-IHP also actively contributed to the preparation of the Political and Thematic processes of the WWF5 during the past 18 months.

POLITICAL PROCESSES

11. UNESCO-IHP, as the Co-Chairs of the Forum’s Political Process Committee in cooperation with the Turkish Ministry of Foreign Affairs, successfully led the preparation of the WWF5 Political Processes. The organization of the WWF5 was significantly different

from the previous Forums as it brought together policy-makers of different levels. Based on UNESCO-IHP's proposal, the Forum's Political Processes worked at four political levels:

- Heads of States
- Ministerial
- Parliamentary
- Local Authorities.

12. The main outcomes of the WWF5 Political Processes include the Istanbul Ministerial Statement and the Istanbul Water Consensus, which were prepared and elaborated with important contribution by UNESCO-IHP from the very first draft to their adoption.

Heads of State Summit (16 March)

13. Heads of State Summit was a first-time event in the 16-year history of the World Water Fora. The Summit, with participation of seven Heads of State, the Director-General of UNESCO, the Under-Secretary-General for Economic and Social Affairs of UN, and other eminent persons, provided an occasion for creating new synergies to address the global water challenges. As the main outcome of the Summit, the Heads of State adopted a high-level appeal for action to governments around the world emphasizing the importance of water and the role it plays in development and society.

Main outcomes and recommendations: Emphasizing that global changes are seriously threatening the availability and quality of water resources, the Heads of States, *inter alia*:

- stressed the urgent need of new policies, adaptation strategies, and institutional reforms with the effective contribution of local elected administrations and water users, international commitments, financial mechanisms, technology and innovation in order to address global water issues.
- affirmed their political will to take rapid action and appealed to everyone to join in meeting global water challenges.

“Parliaments for Water” meeting (18-19 March)

14. “Parliaments for Water” meeting, bringing together over 260 parliamentarians from around the world, stressed the importance of addressing issues relating to the impact global changes on water resources, transboundary waters, decentralization, and the right to water and sanitation. At the meeting, Mr. Narcio-Rodrigues da Silveira, Vice President of Parliament, Brazil, called for creating the “World Water Parliament”, under the auspices of the World Water Council (WWC) and UNESCO-IHP to strengthen efforts for addressing global water challenges. Another output of the Parliamentary meeting was the creation of the Water Legislation Helpdesk, an online clearinghouse of information to educate and inform Parliamentarians on water and water-related issues.

Main outcomes and recommendations: The proposals emerging from the Parliamentary meeting called for, *inter alia*:

- recognizing right to water and sanitation as a human right;
- establishing a fund to focus on water programs in the framework of the MDGs;
- promoting investment for sustainable water projects and infrastructure;
- allocate adequate budget resources to water and water-related issues;
- protection of the environment and reduction of pollution in the framework of sustainable development;
- establishing rules and guidelines for using transboundary water resources in a sustainable manner to avoid any conflict;
- encourage technology transfer to those countries where the needs are most.

Ministerial Conference (20-22 March)

15. Ministerial Conference, culminating an elaborate set of Preparatory Committee meetings, was held with the participation of over 70 Ministers responsible for water, environment and sustainable development and over 130 delegations from countries around the world. The PrepCom meetings were convened by the Turkish government and were held at various UN institutions, with UNESCO hosting its first and fourth meetings in its Headquarters in Paris in September 2008 and March 2009, respectively. The Ministers, who met in Istanbul to conclude the negotiations of the PrepCom meetings, adopted the Istanbul Ministerial Declaration, which represents a major step towards in addressing global water challenges.

16. The Ministerial Declaration includes commitments to the most pressing water issues, including: the need to intensify efforts to achieve MDG targets; addressing issues on human rights to access to water; prioritizing water and sanitation in national development plans; cooperation on transboundary water resources; and respecting international instruments on protecting water resources during conflicts. The Istanbul Water Guide, containing a set of 50 policy recommendations mirroring the issues addressed by the Thematic Process of Forum, was concluded at the 3rd PrepCom meeting in Rome and was taken note in the Ministerial Declaration. These are not legally binding documents, but rather present the current status of consensus that will be presented to various intergovernmental processes (CSD, Johannesburg+10).

Main outcomes and recommendations: The Istanbul Ministerial Declaration recognized the need to achieve water security and the specific challenges facing different parts of the world, especially Africa, in meeting the MDGs and attaining an acceptable level of water security for socio-economic development. In the Declaration, the Ministers and Heads of Delegations shared the view on, inter alia:

- to intensify efforts to reach internationally agreed goals such as the MDGs and to improve access to safe and clean water, sanitation, hygiene and healthy ecosystems in the shortest possible time through appropriate policies and adequate financial resources at all levels;
- to further support the implementation of IWRM at the level of river basin, watershed and groundwater systems, within each country, and, where appropriate, through international cooperation to meeting economic social and environmental demands equitably;
- to support country-led development projects in different sectors related to water, especially with regard to energy and food security and poverty eradication;
- to strengthen the prevention of pollution from all sectors in surface and groundwater, appropriately applying the polluter pays principle, while further developing and implementing wastewater collection, treatment and reuse;
- to respect international law providing protection for water resources, water infrastructure and the environment in times of armed conflict and cooperate in its further development, as necessary;
- to resolve to work to prevent and respond to natural and human-induced disasters, including floods and droughts;
- to take, as appropriate, concrete and tangible steps to improve and promote cooperation on sustainable use and protection of transboundary water resources through coordinated action of riparian states.

Local and Regional Authorities Meeting (18-19 March)

17. Local Authorities meeting, bringing together some 91 local authorities and 200 mayors, discussed and adopted the Istanbul Water Consensus, which emphasized the role

of local and regional authorities to achieve water security and the MDGs. In the Istanbul Water Consensus, good quality water supply and sanitation was also highlighted as a basic human right among the principles contained therein. Over 50 cities around the world have signed onto the Istanbul Water Consensus and now that the document has been finalized a signature campaign will commence in order to increase the number of cities aiming to meet the targets set by the Consensus.

Main outcomes and recommendations: The Istanbul Water Consensus for Local and Regional Authorities acknowledged, inter alia, that:

- Good quality water supply and sanitation is a basic human right;
- Water is a public good that should be under strict public control;
- A consistent approach at the local, regional and national levels is needed to adapt to global change and achieve equitable and optimal sustainable management of water resources;
- Water security should be based on the principle of equitable and reasonable allocation;
- Capacity building, creative finance mechanisms, and regulatory frameworks should facilitate access to water and sanitation; and

18. The Istanbul Water Consensus called on national governments and international institutions to:

- Shift water security higher in national and international policy priorities;
- Speed up the implementation of commitments made on access to water and sanitation and the fight against poverty;
- Develop innovative financing mechanisms and regulatory frameworks to facilitate access for local and regional governments to direct financing and increase financing for local water and sanitation infrastructure;

19. Recognizing the urgent need to develop effective strategies, the Mayors and local/regional elected representatives, signing this Istanbul Water Consensus on behalf of our local/regional governments, express our clear political will to prepare for these challenges by committing to undertaking now whatever is in our current scope of authority and capacities and pledge to do our utmost to contribute to improved water governance and steer our local policies and approaches towards increased sustainability in water management and hydraulic infrastructure development.

THEMATIC PROCESS

20. UNESCO-IHP was widely represented, as session co-convener and expert contribution, in Forum's thematic sessions, organized under the six main themes:

- Theme 1 "Global Change and Risk Management"
- Theme 2 "Advancing Human Development and the MDGs"
- Theme 3 "Managing and Protecting Water Resources"
- Theme 4 "Governance and Management"
- Theme 5 "Finance"
- Theme 6 "Education, Knowledge and Capacity Development"

UNESCO-IHP as Co-Coordinator of Theme 6: Education, Knowledge and Capacity Development

21. UNESCO-IHP was the lead organization and co-coordinator of Theme 6 "Education, Knowledge and Capacity Development" jointly with the Turkish Women's Cultural Organization (TURKKAD), in which 23 sessions were convened on five major topics:

- Topic 6.1 “Education, knowledge and capacity development strategies”
- Topic 6.2 “Water science and technology”
- Topic 6.3 “Using professional networks and associations to strengthen the water sector”
- Topic 6.4 “Data for all”
- Topic 6.5 “Water and culture”

Theme 6 – Thematic Opening (16 March)

22. Thematic opening of the Forum’s six themes, including Theme 6 “Education, Knowledge and Capacity Development”, took place in the thematic opening plenary on Monday afternoon, 16 March. Mr A. Szollosi-Nagy, UNESCO-IHP, and Ms Elif Erhan, TURKKAD, Theme 6 Co-Coordinator, introduced the Theme’s objectives and outlined the objectives of the main issues to be addressed in the Theme’s topics and sessions.

Theme 6 – Topics and Sessions (20-21 March)

23. On the theme’s five major topics, 23 sessions were organized concurrently on Friday, 20 March and Saturday, 21 March. The theme’s sessions encouraged knowledge transfer, capacity building, and scientific and technological innovations in addressing challenges faced in managing and protecting water resources to meet human and environmental needs. The importance of awareness raising and education for all stakeholder groups was also addressed in the theme discussions. The theme also explored incorporating cultural traditions, indigenous practices, and societal values in water resources management practices.

24. Topic 6.1 “*Education, knowledge and capacity development strategies*” discussed whether capacity development be done differently if we want to improve water management and water supply and sanitation services. The opening plenary session of the topic set the stage for the dialogue focusing on the topic’s main issues. The topic wrap-up and synthesis session highlighted the need to: include water in educational curricula; consider gender-sensitivity; conduct local needs assessments; and incorporate non-traditional means for communication and capacity-development. On this topic, four sessions were organized, addressing:

- Knowledge for all, all for knowledge
- Institutional capacity development: getting the balance right for equitable water allocation
- Get involved! Whose and what empowerment will ensure the provision of sustainable water services?
- Water education and schools: bridging divides for future generations

25. Topic 6.2 “*Water science and technology: appropriate and innovative solutions for the 21st century*” examined how water would be managed in 50 years time. It explored the role of: future technologies, the need for a more integrated approach and the importance of stakeholder engagement, for successful water management in the 21st century. The topic wrap-up and synthesis session encouraged the development and promotion of new technologies. On this topic, three sessions were convened, focusing on:

- Thinking outside the water box:
- Decision making in an uncertain world (achieving greater use and impact of research through the learning alliance approach and other multi-stakeholder approaches)
- Integrated water management - can we get there?

26. Topic 6.3 *“Using the assets of professional associations and networks to achieve the MDGs”* explored the potentially significant role that professional associations and networks could play in achieving the Millennium Development Goals (MDGs), noting that their role at present is small. This topic discussed the question of whether the development community viewed professional associations as underutilized assets and how professional associations and networks could be used, encouraged and supported to become key contributors to the achievement of the MDGs. The topic wrap-up and synthesis session entitled “Road less travelled (no more)? Summing it all up” underlined that the gap between development groups and professional networks must be bridged. On this topic, three sessions were organized, addressing:

- Connecting the dots: how to get to the MDGs with the help of professional associations?
- Showcasing success: how professional networks and associations are making an impact?
- No more money down the drain: should investments be linked to professional associations’ backstopping?

27. Topic 6.4 *“Data for all”* reviewed the means that are available to collect, analyze and make available the wide range of data and information that are needed for this purpose. The topic wrap-up and synthesis session proposed the development of an integrated and holistic framework to address economic, legal and institutional factors affecting data collection and management. On this topic, four sessions were organized, addressing:

- Data needs and data acquisition
- Data integration and dissemination: from data to information
- Barriers to data availability
- Action to ensure data for all

28. Topic 6.5 *“Water and culture”* aimed to explore the interdependencies between sustainable solutions to water problems and diverse water cultures that are flourished around similar environmental conditions and the inter-linkages between water and culture, considering the value of culture in creating diverse water cultures, in addressing challenges faced in managing and protecting water resources which meet human and environmental needs. The topic wrap-up and synthesis stressed the importance of educating the educators, and highlighted that the knowledge of elders is important. On this topic, four sessions were held, focusing on:

- Cultural diversity: key to water sustainability
- Water and history: understanding the water cultures of past civilizations and deriving lessons for the present
- Fostering socio-cultural perspectives in water sciences and management: identifying bridges and barriers
- Traditional water management and global environmental change: charting sustainable paths for the future

Theme 6 – Thematic Wrap-up (21 March)

29. The thematic wrap-up session, convened jointly by UNESCO-IHP and TURKKAD and with contributions by UNESCO-IHP and UNESCO-IHE, highlighted education, knowledge and capacity development strategies for bridging the divide in science, technology and education for a paradigm shift in water resources management.

Main outcomes and recommendations: Theme 6 called for enhancing knowledge and capacity building within the water sector, improving data gathering, sharing and dissemination mechanisms, promoting innovative and knowledge-based, integrated

approaches to, and informed decision-making in, water resources management, and actively engaging professional associations and all stakeholders. In particular:

- There is a need to include water in educational curricula at all levels. Strategies for improving water education should consider gender-sensitivity, conduct local needs assessments, incorporate cultural considerations and incorporate non-traditional means for communication in water education and capacity-development, and encourage youth involvement.
- Innovation and new developments in technology will lead to more sustainable solutions to meeting the water challenges ahead. We need to think outside the water box in order to stimulate innovative approaches, ideas and technologies in the water sector, and to bring about a change in how water would be managed in the future.
- It is important to mobilize professional associations and communities of practice to achieve the MDGs. Professional associations represent a huge number of people with a vast array of experience, with a critical role in generating the dialogues, information analysis, and experience sharing needed to support sustainable water management practices. In addition, the gap between development groups and professional networks must be bridged, through: building bridges with networks across sectors; twinning strong and weak associations; and partnerships with rural associations and community-based organizations.
- We need to develop an integrated and holistic framework to address economic, legal and institutional factors affecting data collection and management. The lack of integrated water data is a systematic impediment to informed decision making related to the sustainable use of water resources. Data is needed to provide information not just about water quantity, both on the surface and underground, but also about its quality, social and economic relations as well as environmental dimensions.
- Incorporating cultural traditions, indigenous practices, and societal values in water resources management practices is important. Traditional water management technologies have an important role to play, also in supporting community participation in water management.

UNESCO-IHP as Coordinator of Topic 3.1 “Basin Management and Transboundary Cooperation

30. In Theme 3 “Managing and Protecting Water Resources and their Supply Systems to Meet Human and Environmental Needs”, UNESCO and INBO coordinated and organized five sessions on “Basin Management and Transboundary Cooperation”:

- Session 3.1.1: Boundless Basins: What are the successes and failures of hydro-solidarity?
- Session 3.1.2: How can stakeholder be involved in basin management and transboundary water cooperation?
- Session 3.1.3: How can cooperation over transboundary surface and groundwater resources be achieved in a sustainable and equitable manner?
- Session 3.1.4: Which are the operational tools that allow achieving transboundary cooperation and sound basin management?
- Session 3.1.5: Wrap-up and Synthesis: How can we bridge the divide between various users whose lives depend on common water resources? And how should we just do it!

31. Based on practical experiences, the sessions’ dialogues addressed the critical conditions for the enforcement of transboundary water cooperation and basin management, answering pertinent questions such as: How to achieve hydrosolidarity? How to involve stakeholders in decision-making processes? Which tools and mechanisms are needed to reach these objectives? Issues, such as whether “international” and “transboundary” are

equivalent when referring to water resources, the methods for financing and implementing common infrastructures, the ratification of the United Nations Convention of 1997 or the management of transboundary aquifers, were discussed.

32. The topic sessions took place on 20 and 21 March 2009. The five sessions, of which half of the time was devoted to formal presentations and the other half to debates, allowed various interesting contributions to be presented, as well as many diverging views to be expressed.

33. Taking account of the various interventions in Topic 3.1, as well as the many contributions received on the Forum's Virtual Meeting Space or sent directly to the session coordinators by the 213 session stakeholders, some interim findings and recommendations, reflecting the opinion of the majority, can be summarized as follows:

- Strong political will and long term commitment are pre requisites for sustainable basin management and transboundary cooperation in the face of global changes.
- Significant progress has already been made since the 1990s. The gained experience allows now to say that integrated water resources management at the level of river and aquifers basins is a real advantage.
- The progress made so far is insufficient to meet the requirements of a globally changing world. Adaptive strategies focused on maintaining the integrity of river basins and aquifer systems should become the norm in national and international policy. This will require:
 - Surface water to be managed in river and lake basin units and groundwater to be managed in aquifer systems units;
 - Essential quantitative and qualitative information on resources, to be obtained and made accessible. This information should be used as the objective basis for dialogue, negotiation, decision-making and evaluation of undertaken actions, as well as coordination of financing from the various donors;
 - The participation in decision-making of the concerned Governmental Administrations and local Authorities, the representatives of different categories of users and associations for environmental protection or of public interest.
 - Focusing on long-term objectives and implementing well conceived management plans or master plans in given time horizons;
 - Significant increase in training and educational programmes for responding to the adaptation needs in cooperation building and basin management;
 - Mobilization of financial resources to suit the different and diverse needs of countries based on their socio economies, cultural priorities, and geopolitical considerations.
- As global inventories of transboundary basins, transboundary aquifer systems and their technical and social peculiarities become clear, through the global programmes supported by PCCP, World Water Assessment Programme, ISARM, EU-WFD, EUWI, INBO-AP, the GEF and others, available conventions and agreements should be ratified by the riparian States. Furthermore adapted cooperative institutions should be created and cooperation agreements crafted at global and basin and aquifer level to achieve necessary and sound cooperation.
- Existing and developing international legal instruments and adapted tools and experiences concerning transboundary water resources management should be further disseminated through efforts of agencies and networks promoting cooperation around water resources.

UNESCO-IHP as Coordinator of Topic 6.2 “Water Science and Technology: Appropriate and Innovative Solutions for the 21st Century”

34. In addition to being the Co-Coordinator of Theme 6 “Education, Knowledge and Capacity Development”, UNESCO-IHP was the Coordinator of Topic 6.2 “Water Science and Technology: Appropriate and Innovative Solutions for the 21st Century”.

35. This topic examined how water would be managed in 50 years time. It explored the role of: future technologies; the need for a more integrated approach; and the importance of stakeholder engagement for successful water management in the 21st century. On this topic, three sessions were convened on:

- Sessions 6.2.1: Thinking outside the water box
- Session 6.2.2: Decision making in an uncertain world (achieving greater use and impact of research through the learning alliance approach and other multi-stakeholder approaches)
- Session 6.2.3: Integrated water management - can we get there?

36. Discussions of these sessions were summarized during the topic wrap-up and synthesis session, highlighting main recommendations and messages. The discussions focused on the following lead questions:

- Which innovative and stimulating approaches, ideas or technologies from sectors ‘outside the water box’ can we use to speed up water sector innovations?
- What are the merits and challenges of connecting water actors together?
- How can technologies help us in achieving the vision – what are promising trends, what are possible caveats? What limits us from managing the urban water cycle in an integrated way?

37. The topic discussions highlighted the following key messages and recommendations:

- We need to adopt a more holistic and integrated approach to solving our water management problems. Harmonization of approaches will require a different approach to planning and development, but will allow us to consider a continuum of options (centralized and decentralized), that will lead to more sustainable solutions.
- Technology is important. By embracing new developments in technology, we will be able to generate optimal water management solutions and strategies that are robust, adaptable and sustainable under these future global change pressures. In addition, technology and management should go together.
- We must learn from other sectors to stimulate innovative breakthroughs in the water sector. We need to “think outside the water box”. It is needed to “break the moulds”—technological, organizational and conceptual—to stimulate innovative approaches, ideas and technologies in the water sector. “Youth is a powerful agent of change.” Investing in youth is crucial if we want to bring about a change in how water would be managed in the future.
- “Deconstructing preconceptions” about the way water is managed is important to bring about the change needed for a better water resources management. With increasing global change pressures coupled with existing un-sustainability factors and risks inherent to conventional water management strategies, countries in the future will experience difficulties in efficiently managing scarcer and less reliable water resources. In order to meet these challenges we need to radically change the way we think about water management.
- To create the necessary imperative for change, it is important to bring together all stakeholders involved with, or who have interest in water management issues. These multi-stakeholder platforms will guide innovations that will substantially contribute to a

reduction in the vulnerability of countries and their capacity and preparedness to cope with global changes.

UNESCO-IHP contributing to other Themes and Sessions

Session 1.1.2 “Adaptation to climate change: Waiting for things to happen or trying to be prepared?” (17 March)

38. UNESCO-IHP contributed to the session as a panel speaker. The session dealt with practical guidelines for action in planning adaptation to climate change, with a focus on impacts to and through land and water.

Main outcomes and recommendations: The session addressed the following questions:

- Waiting for things to happen or trying to be prepared? 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 being well prepared? Integrated Water Resources Management (IWRM) is a widely accepted approach to deal with water across all its uses and to function for our environment. Can we build our strategies and plans for adaptation on this approach?

Session 1.1.3 “Local Actions - Thinking beyond the water box: What adaptation to global and climate change?” (17 March)

39. Session 1.1.3 was aimed at presenting and discussing local actions on adaptation to climate change. The session was organized by the International Water Association. UNESCO-IHP participated in the framework of UNESCO’s Groundwater Resources Assessment under the Pressures of Humanity and Climate Change (GRAPHIC) project. During a roundtable discussion on drying rural areas various local adaptation measures, including Managed Aquifer Recharge (MAR), rainwater harvesting, enhanced irrigation techniques and adapted crop species, wastewater reuse, as well as economic instruments, such as rainfall insurances were discussed. The round table agreed on the high potential of recharge enhancement to increase not only the security, but also the quality of water supply in water scarce regions.

Main outcomes and recommendations: The session’s key messages and recommendations included:

- The UNFCCC Bali Action Plan recognizes small islands, developing countries and sub Sahara Africa as hotspots. The participants in the meeting supported the consideration of densely populated low lying deltas where half the global population lives as hot spots. Also mountainous areas such as the Himalayas affected by glacier melt should be considered hot spots. This should be reported to the COP process.
- Groundwater as the world’s largest available storage of freshwater could play an important role in terms of adaptation to the impacts of climate change, but this potential is still largely underused.
- A twin track approach is recommended for adaptation: (1) start now with coping and adaptation, using the best knowledge available. (2) Continue research and use more knowledge and innovation once available innovation.
- Enabling mechanisms for adaptation include technical measures (innovation), governance (legal provisions), financing arrangements and building with nature.
- The understanding about the impacts of climate change upon water is considered as a challenge in addition to and on top of other challenges including those of population growth, economic development and environmental stress.

- Adaptation measures to climate change need to be tailored to local conditions and include typically a broad portfolio of structural and non structural measures.

Session 1.3.2 “Technologies for Water-related Disaster Management” (18 March)

40. In the framework of the International Flood Initiative and Phase II of the Asia Pacific FRIEND “Flood design and early warning system in SEAP” implemented in cooperation with HTC Kuala Lumpur and ICHARM Japan, UNESCO Office in Jakarta participated in Topic 1.3 “Dialogues as an effective and interactive process between government, science and civil society to prevent and mitigate disasters”, in particular in Session 1.3.2 “Technologies for water related disaster management”.

Main outcomes and recommendations: Session 1.3.2 “Technologies for water related disaster management”, chaired by ICHARM, highlighted significant recommendations, proposals, commitments and initiatives such as: a) promoting the wise combination of new technologies and existing ones to manage water-related disaster risk reduction; and b) placing a priority on sustainability and accessibility of technologies, both new and conventional, when their effectiveness is considered.

REGIONAL PROCESSES

Americas (17 March)

41. UNESCO, through the International Hydrological Programme for Latin America and the Caribbean (IHP-LAC), was one of the organizations responsible for putting together the program for the Regional Session of the Americas and actively contributed to the session, by chairing the different sections of the session and by presenting the case-study on the Guarani Aquifer, the first case study identified by the UNESCO-OAS ISARM Americas Programme, as the representative case study for the South American region. The Regional Document of the Americas was presented at the session. UNESCO, through IHP-LAC, coordinated the preparation of the chapter on South America of this report and participated in the edition of the overall document. UNESCO-IHP/Project WET Programme on Water Education for the Americas and the Caribbean had a booth at the Water Fair in the Education Village. In addition, UNESCO IHP-LAC was one of the five major exhibitors at the stand of the Americas in regional section of the venue. A major highlight was the presentation of the first number of the scientific journal Aqua-LAC.

TRAINING SESSIONS AT THE WWF5 LEARNING CENTRE

Training for journalists “How to improve communication and media reporting on water and cooperation” (15-20 March)

42. Training for journalists “How to improve communication and media reporting on water and cooperation” was organized for selected ten trainees. The trainees reported on various matters related to UNESCO’s presence in the Forum, transboundary water issues and the outcomes of the Forum.

Training on “Integrated urban water management: How to address governance challenges” (18 March)

43. Training on “Integrated urban water management: How to address governance challenges” was organized with participation of 26 participants. The training aimed at enhancing knowledge and skills on integrated urban water management, focusing on how to

address governance challenges, which is fundamental for a paradigm shift towards sustainable use and management of water resources in urban areas. Lectures were delivered on a well-selected range of topics and complemented by case studies from different regions of the world, offering insights into challenges facing urban water systems and approaches to sustainable urban water management.

SIDE-EVENTS

Africa's Experiences in Regional Cooperation from the North Western Sahara and Iullemeden Aquifer Systems (18 March)

44. The side-event "Africa's Experiences in Regional Cooperation from the North Western Sahara Aquifer System (NWSAS) and Iullemeden Aquifer System (IAS)", organized jointly by the Sahara and Sahel Observatory (OSS) and UNESCO-IHP presented the progress and achievements made in two projects funded by the Global Environment Facility (GEF). UNESCO-IHP co-executed both projects and supported the participation of two experts from OSS in the World Water Forum. The establishment of a cooperation and consultation mechanism between the aquifer sharing states, including a joint database and exchange of data is one of the major steps achieved in the North Western Sahara Aquifer System project. In the Iullemeden Aquifer System project great achievements have been made in terms of data collection and data harmonization between the countries. However, a joint consultation mechanism has not yet been established and common management tools are still lacking. OSS expressed their interest to continue activities in the IAS. The event highlighted the importance of trust as a basis for cooperation, and joint management of internationally shared groundwater resources and acknowledged the positive outcomes of the two projects.

Great Man Made River Project (18 March)

45. A side-event "Great Man Made River Project", organized by UNESCO-IHP and Great Man Made River Authority, presented the achievements of the Great Man-made River project. This event presented the achievements of the Great Man-Made River project. Libya consists mostly of desert terrain. The Libyan Sahara desert is one of the last real wildernesses on the planet earth. Only the narrow coastal strip receives sufficient rainfall to make it suitable for agriculture and it is where 90 % of the population resides and where the capital, Tripoli, is situated. Rapid development of coastal areas and increased population have placed a severe strain on the coastal water supply. The existence of vast fossil aquifers in the south and south-east areas of the country has prompted the building of a huge pipeline to convey water to the coastal areas. Started in 1980 the Great Man-Made River project is the largest engineering scheme currently being carried out in the world. The Great Man-Made River Authority (GMRA) was invested with the responsibility of extracting water from the aquifers in the South and conveying it for use in the Libyan coastal belt. This enormous project comprising subsystems in the Eastern and Western parts of the country supplies water to the cities of Tripoli, Benghazi, Sirt and other settlements and also increases the irrigated land. At completion, the system will carry more than 5 million cubic meters of water a day and will be composed 4,000 km of 4-meter diameter pipelines and two aqueducts of 1,000 km. Since 1990, UNESCO has been contributing to the training of engineers and technicians, the setting up of a training centre and the establishment of a technical documentation centre.

Promoting Practical Use of the IWRM Guidelines (20 March)

46. UNESCO-IHP organized a side-event/workshop on Promoting Practical Use of the IWRM Guidelines. The workshop focused on the need to develop IWRM guidelines for climate change, urban water use and hydroelectric power generation in a river basin context. In addition, the Steering Committee Meeting of the IWRM Guidelines concluded that includes the Guidelines need to be improved and followed by implementing capacity-building activities in cooperation with Network of Arian River Basin Organization (NARBO) and other partner organizations and experts.

IWRM Implementation through Effective Stakeholder Engagement (20 March)

47. The Hydrology for Environment, Life and Policy (HELP) cross-cutting program of UNESCO-IHP organized a side event on IWRM Implementation through Effective Stakeholder Engagement. Key issues discussed in this side event include transparency of data and models, urban water pricing in least developed countries and difficulties in ensuring water as a human right. Examples from HELP basins in Asia and Africa were used to highlight the related difficulties and to scope a way forward.

Implementation of the Integrated Water Resources Management Guidelines at the River Basin Level (21 March)

48. A side event on the Implementation of the Integrated Water Resources Management Guidelines at the River Basin Level was organized by UNESCO-IHP to seek first hand feedback on the use of the newly launched guidelines. The participants' feedback indicated the need for IWRM guidelines for climate change, urban water use and hydroelectric power generation in a river basin context. Participants suggested that UNESCO develop training materials to facilitate ready implementation of these guidelines.

OTHER EVENTS

Launch of the “Transboundary Aquifers of the World” Map, 2009 Update (19 March)

49. The Launch of the “Transboundary Aquifers of the World” Map (2009 Update) was organized by IGRAC (water-related cat 2 centre) in the UN-Water Pavilion. The event emphasized the importance of visualizing the state-of-the-art knowledge on groundwater resources as a basis for drawing attention to the issue of transboundary groundwater management. The intention of the map is to provide a global overview of these important shared resources and to encourage their further assessment.

Launch of new books of the UNESCO-IHP Urban Water Series (19 March)

50. Launch of new books of the UNESCO-IHP Urban Water Series took place at the UN-Water Pavilion, presenting the two new titles in the series:

- Urban Water Security: Managing Risks (edited by Blanca Jimenez and Joan Rose);
- Integrated Urban Water Management: Arid and Semi Arid Regions (edited by Larry Mays).

Policy Brief on “Mainstreaming Cultural Diversity in Water Resources Management” (19 March)

51. Policy Brief on “Mainstreaming Cultural Diversity in Water Resources Management” was launched at the UN-Water Pavilion. The Brief, developed by expert advisory group on

IHP project on Water and Cultural Diversity, outlines recommendations of actions that can be taken in order to ensure that an active recognition of, and respect for, cultural diversity is mainstreamed into water resources management. Participants of the launch, in particular indigenous peoples, took note of the recommendations and explored linkages between the Brief and the International Indigenous Water Declaration.

Side-event on Water and Cultural Diversity (18 March)

52. A side-event on “Water and Cultural Diversity” was organized at the UN-Water Pavilion. The session focused on diverse meanings of water, and the linkages between culture, history and sustainability. Some of these presentations will become contributions to a book titled “Water, Cultural Diversity and Global Environmental Change: Emerging Trends, Sustainable Futures?”, to be published early 2010.

Roundtable on Bridging Divides: Promoting Cultural Diversity as Key to Water Sustainability (21 March)

53. A roundtable on “Bridging Divides: Promoting cultural diversity as key to water sustainability” was organized by UNESCO-IHP. The participants discussed, inter alia, the importance of recognizing how culture was frequently and fundamentally discussed in many sessions of the Forum and is therefore not just a fringe concern. Some of the points for mainstreaming cultural diversity into water resources management will be taken up and further discussed at an International Symposium to take place in October 2009 in Kyoto, Japan.

4th Steering Committee of IWRM Guidelines at River Basin Level (19 March)

54. The Steering Committee meeting highlighted that the Guidelines to be improved and followed by implementing Capacity Development activities in a mutual cooperation with Network of Arian River Basin Organization (NARBO) and other partner organizations and experts.

THE WORLD WATER ASSESSMENT PROGRAMME AT THE WWF5

55. The Official launching ceremony of the 3rd edition of the United Nations World Water Development Report took place on Monday, 16 March, with the participation of the UNESCO Director-General and other distinguished speakers. In addition to its central product the 3rd edition of the United Nations World Water Development Report, launched on the opening day of the Forum (16 March), WWAP issued a host of accompanying publications to the main report, including a Case Studies Volume, 17 Side Publications and 10 Messages for Stakeholders. WWAP also organized 3 side events on: case studies; findings and key messages of the WWDR-3; and side publications.

56. WWAP also organized two closed meetings involving WWAP’s Technical Advisory Committee (TAC) and the Production Team of the WWDR-3 in order to discuss a strategy to spread the Report’s key messages to stakeholders and start the planning process for the 4th edition of the WWDR; and held a private meeting with the ad-hoc delegation of the European Parliament.

WWAP Case Studies: “Facing the Challenges” (17 March)

57. In this event, the WWAP Secretariat presented its new Case Study Volume “Facing the Challenges” accompanying the 3rd edition of the UN World Water Development Report

(WWDR-3). The volume features the findings of 20 basin and nation-wide projects developed in Africa, Asia, Europe, Latin America and Pacific Islands highlighting the state of water resources and identifying critical issues. The event focused on the lessons learned from eight case studies: Bangladesh, China, Republic of Korea, Estonia, Basque Country (Spain), Turkey, Zambia and La Plata River Basin, and attendees participated in question-and-answer with WWAP case study partners.

WWDR-3: Findings and Key Messages (18 March)

58. Following the official launch of the 3rd edition of the United Nations World Water Development Report (WWDR-3), "Water in a Changing World", that took place on 16 March, WWAP provided the opportunity for the Forum's participants to discuss the contents of the Report during a well-attended side event held on 18 March in Feshane. After a comprehensive presentation of the Report, participants discussed its findings and key messages with the production team and also proposed subject matter that will be taken into consideration in the next edition of the Report.

WWDR-3 Side Publications Series (18 March)

59. During this side event, the World Water Assessment Programme (WWAP) together with partner organizations presented a selection of 14 Side Publications produced in parallel to the 3rd edition of the United Nations World Water Development Report (WWDR-3), "Water in a Changing World". These original contributions provide more focused, in-depth information, scientific background knowledge, policy guidelines and interface with other, less conventional water sectors. A wide range of topics were covered, from cooperation in the transboundary context to capacity development, IWRM, sanitation, climate change, water-related disasters, etc. Side Publications are an on-going process. 17 were released during the 5th World Water Forum, and others will be published soon.

Meeting with the ad-hoc Delegation of the European Parliament (19 March, closed meeting)

60. The European Parliament was represented at the 5th World Water Forum in Istanbul with ad-hoc Delegation composed mainly by Members of the Environment, Public Health and Food Safety, Energy and Development committees. During the meeting, WWAP's presented its activities and publications (including WWDR-3, "Water in a Changing World", Side Publications and Message Series) to the Parliamentarian Delegation. In addition, potential future cooperation on WWAP's core themes has been discussed.

Meeting of WWAP's Technical Advisory Committee (20 March, closed meeting)

61. Nine of the eleven members of the TAC met in Istanbul to review the production process of the WWDR-3 and discuss the ways to disseminate its key messages and reach the stakeholders. Their comments on the process and suggestions for the next report were included in a document that was discussed the same day by the Production Team (see below). TAC members agreed to work closely with the WWAP Secretariat to ensure

Meeting of the WWDR-3 Production Team (20 March, closed meeting)

62. The WWAP Secretariat and the core Production Team met to discuss the production process of the WWDR-3, its strengths and weaknesses and start thinking about WWAP's next phase and next edition of the Report in order to build on this experience and improve the process over time. The discussions were based on a quick review of the consultative process and the compilation of comments received from contributors to the Report and from

TAC members after a consultation on the overall production process. The main outcome of the meeting is a document on Lessons learnt from WWDR-3 and Suggestions for WWDR-4 that will be discussed during the first preparatory Meeting for the production of the WWDR-4 to be held in Paris in April 2009.

UNESCO-IHE INSTITUTE FOR WATER EDUCATION AT THE WWF5

63. The UNESCO-IHE Institute for Water Education was also intensely involved in the Forum at different levels. They were coordinators of the main topic dealing with water education (Topic 6.1: Education, knowledge and capacity development strategies) which had three substantive sessions. They were co-conveners of Session 2.3.2 “How can food market measures boost rural development and poverty alleviation?” and of Session 3.1.3 “New Design Criteria for Extreme Events/Climate Change”. Their involvement in Session 6.2.2 “Decision making in an uncertain world” was pivotal featuring examples from several projects, including UNESCO-IHE through the SWITCH project. In addition UNESCO-IHE was quite active in advocacy and promotional activities in the Forum, including hosting the joint UNESCO stand, arranging interviews and other media events, and organizing a UNESCO-IHE alumni reunion at the Forum.

UNESCO AT THE WWF5 WATER FAIR (16–22 March - UN Pavilion)

64. A UNESCO stand, comprising UNESCO-IHP, the UNESCO-IHE Institute for Water Education and the Regional Centre for Urban Water Management (RCUWM-Tehran) operating under the auspices of UNESCO, was set up within the UN-Water Pavilion at the WWF5 Water Fair. A wide variety of UNESCO water-related publications, CD-ROMs and outreach material were displayed and widely disseminated at the UNESCO stand that was one of the most-visited at the UN Pavilion, attracting a large number of visitors from various water sectors, IGO and NGO partners as well as water professionals seeking opportunities for new partnerships and programmes.

65. In addition, some key new publications were launched in the UN-Water Pavilion in the presence of the authors, including.

- IWRM Guidelines at River Basin Level
- Water and Ethics
- Handbook on Integrated Water Resources Management at Basin Level
- Managing and Transforming Water Conflicts
- Water and Peace for the People
- Managing Water Resources: Methods and Tools for a Systems Approach.
- Urban Water Security: Managing risks
- Integrated Urban Water Management in Arid and Semi-arid Regions
- Water and Humanity: A Historical Overview (first volume of the UNESCO History of Water and Civilization)
- Water and Peace for the People
- Managing and Transforming Water Conflicts
- Policy Brief on “Mainstreaming Cultural Diversity in Water Resources Management”

66. The UNESCO stand in the Forum Water Fair promoted the dissemination and distribution of results of UNESCO’s water-related programmes and initiatives, greatly enhancing the visibility and outreach of UNESCO activities.

WORLD WATER DAY – 22 MARCH

High-Level Roundtable “Adapting to Climate Variability in Transboundary Basins” on the World Water Day

67. UNESCO was the co-lead organization within the UN system for the activities of World Water Day 2009, to be commemorated under the theme “Transboundary Waters” on 22 March.

68. On the World Water Day 2009, UNESCO organized a high-level roundtable event with the support of the United Nations Economic Commission for Europe and the UN-Water Secretariat. The topic of the roundtable was “Adapting to Climate Variability in Transboundary Basins”. This roundtable was held on 22 March 2009 in Istanbul, Turkey.

69. The objective of the roundtable was to raise awareness and the political focus required for increased cooperation on shared water resources. The event started with a screening of One Water, an award-winning documentary by Ali Habashi. Ministers, policy makers and other high level figures, as well as the audience, addressed issues of adaptation and management of global challenges and changes in a transboundary water context. The dialogues focused on how the United Nations, intergovernmental political processes and international legal mechanisms could contribute to real progress on the ground and how governments could be made more responsive to urgent water management issues. A movie entitled “One Water”, on the challenges of managing transboundary waters was projected at the beginning of the session.

VISIBILITY OF UNESCO AT WWF5

70. UNESCO’s presence at the WWF5, particularly on the occasion of the launching of the WWDR3, received widespread coverage from the international and local media and press. Since its press-launch on 12 March 2009, WWDR3 has triggered several hundreds of press dispatches in six official UN-languages, including Le Monde (front page main story), Agence France Presse (France), Le Temps (Swiss), Reforma (Mexico), Xinhua (China), El Mundo (Spanish), The Economist (UK), Al Jazeera (Qatar), Associated Press (US) among others. UNESCO staff also gave interviews to international and local media on the WWDR3 and on UNESCO’s participation in the WWF5.

CONCLUSIONS AND RECOMMENDATIONS

71. UNESCO’s sustained commitment and efforts in promoting science, education and capacity building to address global water challenges have been reaffirmed by its active participation and strong presence in the WWF5, strengthening its key role in the international community in the area of water sciences. The coordinated participation of UNESCO’s water-related programmes and centres greatly enhanced the visibility of UNESCO work on water.

72. The Bureau may wish to make comments regarding the UNESCO’s participation in the WWF5 and its main outcomes. The Bureau also may wish to note with satisfaction the active participation and significant contribution of IHP to the WWF5, in particular to its preparatory processes, as well as the key role played by IHP in ensuring UNESCO’s leadership in the UN system in the area of freshwater.