6th World Water Forum

Final Target & Solutions Group report

Target and Solutions Group "CS3-Target1"

Target 1: By 2015, design and implement a programme, including in developing countries, to improve the delivery of research for water governance with a view to increasing capacity/strengthen leadership of decision makers at various levels through establishing effective science-policy interfaces.

Report on the target, its action plan and its identified solutions and commitments and the related Forum session jointly organised with the

Specific Europe region priority target n°10

1. **Introduction** …………………………………………………… X

Governments, international agencies and civil society organizations have stipulated ambitious goals with respect to the water sector: ensuring sustainable and equitable management of water resources, providing good governance frameworks of water and sanitation services, adapting to global change, halting the loss of biodiversity and in Europe in particular with the Water Framework Directive defining and achieving good ecological status.

These goals pose challenges that can not be resolved without a robust scientific basis together with innovative and effective partnerships between scientists, policy makers and on-the-ground actors. These are complex multi-disciplinary challenges that call for new modes of relations between science and decision-making. In particular a continuous transfer of knowledge must be ensured while, reciprocally, stakeholders must be actively involved in the formulation of research questions so that research remains policy-relevant. Also of importance is the sharing and spreading of knowledge and know-how. Such a context helps in devising public water policies on the basis of solid scientific knowledge (evidence-based policies).
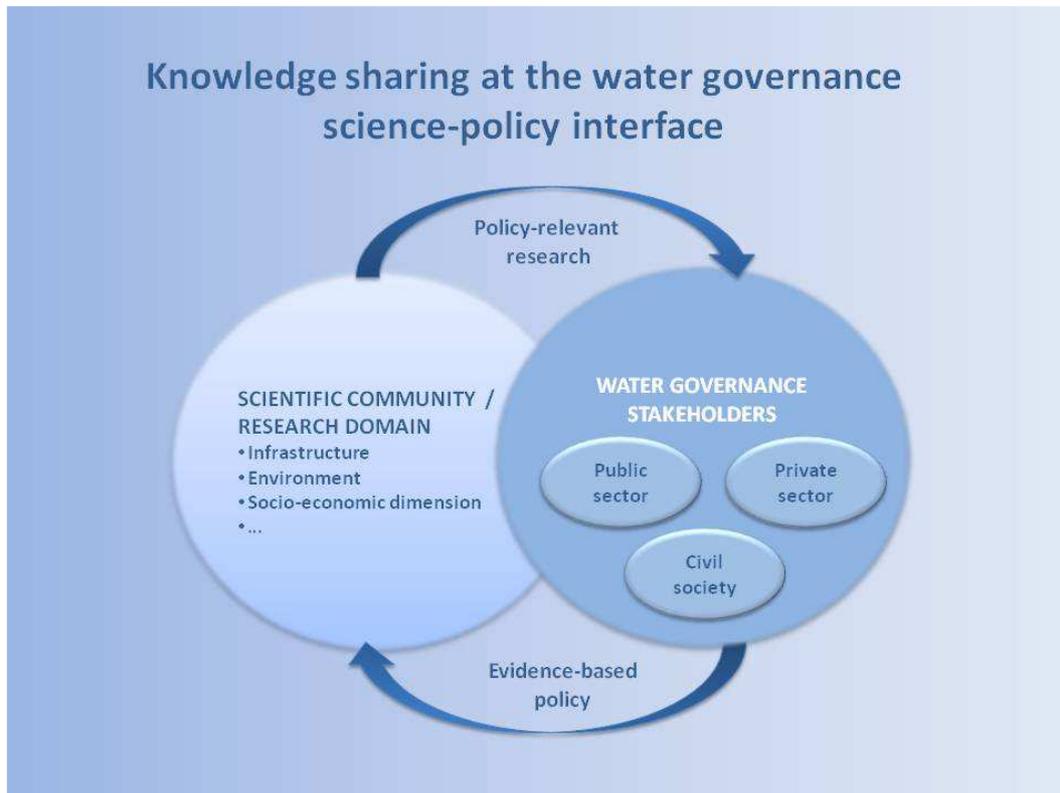
(Source: Wehn de Montalvo, U. and Schwartz, K (2011) 'The quest for the 'ideal' knowledge cycle for the water governance science-policy interface', UNESCO-IHE internal working document, November, UNESCO-IHE, Delft.)

In reality, a gap remains between science and policy, yet interactions and exchanges between scientists, policy makers and water managers are crucial to efficiently share and use their respective knowledge. A more lasting link between these communities is required in order to enable improvements in water governance and water management.

The collective aim is therefore to design and implement a programme by 2015, including in developing countries, to improve the delivery of research for water governance with a view to increasing capacity/strengthen leadership of decision makers at various levels through establishing effective science-policy interfaces.

Existing experience on this issue is worth sharing at a global level in order to identify the bottlenecks to improving the water governance science-policy interface and how to address these.

2. **Background and rationale of the target** ………………………………………………… X

Many research programmes are undertaken in the field of water management and water governance. Many workshops and international conferences are being organised to investigate issues related to river basin management. Yet little is known about the extent to which the insights are used by water managers and whether this type of research even fits the policy makers' needs. Reality shows that a gap remains between science and policy while interactions between scientists, policy makers and water managers are a necessity for efficient knowledge use. There is also a need to ensure a permanent link and facilitate exchanges between these communities with a view to facilitating improvements in water management.

These research delivery and knowledge sharing gaps are not only due to insufficient matching between demand and supply, but also to non-aligned language and insufficient dissemination of existing knowledge.

To address this lack of research delivery and knowledge sharing, better communication between stakeholders is required, namely "policy makers" and "scientists" who use different glossaries and languages. Moreover education tools and awareness raising campaigns to mainstream new water management technologies and practices are needed.

Facilitating the delivery of research and knowledge sharing is particularly challenging given that the water sector is broad, fragmented and diverse. It consists of many different stakeholders with different interests at various levels from public institutions and utilities, industries, consultants and service providers, NGO's and trade associations, universities, research entities and civil society.

Knowledge sharing and science delivery can be strengthened by implementing solutions some of which have already been experienced in some parts of the world. There is an urgent need to improve the situation by disseminating experiences of how to improve

the interface between science and policy. Doing so may contribute to considerable savings in terms of time and resources.

3. **Target action plan and commitments** ……………………………………………….. X

The purpose of this target is to design and implement a programme, including in developing countries, to improve the delivery of research for water governance. Such a programme will help increase the capacity of decision makers by providing them with a solid scientific basis on which to implement policies and actions. This will also strengthen their leadership at various levels through bring supported by adjusted/matching knowledge.

Reaching this target's commitment by the international community requires setting up an activity to facilitate science-policy interfaces for water governance. The expected results are effective science-policy interfaces that ensure operational and sustainable long-term exchanges between the research and policy making domains.

This commitment would support building water policies based on robust scientific knowledge. It necessarily involves policy makers at the governmental levels with support of parliamentarians. Funders of research also have to be involved.

To reach the objective of implementing such a programme by 2015, the following main milestones should be achieved:

1. To form a solid international scientific community on water and to implement a process aiming to elaborate common (international) research agendas – 2013

2. to implement tools aiming to evaluate priority research needs meeting water policy needs – 2013

3. To elaborate guidance on effective research dissemination practices and instruments to support water policy – 2014

4. To implement those preferred practices and instruments for delivery of research for water governance and policy – end 2015

This programme may be facilitated by pledges to act by a specific deadline to help meet the milestones. The session to be held will help improve this draft programme and identify political decision makers, organizations or individuals ready to take these pledges.

4. **Solutions**   ……………………………………………………………….   X

Many solutions already exist in the world demonstrating the feasibility and efficiency of the science-policy interface. And many constitute promising solutions for facilitating science-policy interfaces. Solutions exist to consolidate the international scientific community on water and to elaborate common research agendas, such as the Joint programming initiative for Water in Europe. Globally we can find existing processes enabling water policies such as the science-policy interface for the water framework directive implementation. Several studies on science's dissemination practices provide tools ready to be implemented as the UNU's experience demonstrates. They all have been posted to the platform of solutions; some of them will be presented during the dedicated session (see below). All the solutions posted to the platform and relevant to the topic are described below.

UNESCO-IHE - Institute for Water Education

UNESCO-IHE carries out research, education and capacity building activities in the fields of water, environment and infrastructure. The Institute is the largest water education facility in the world, and the only institution in the UN system authorised to confer accredited MSc degrees. UNESCO-IHE is instrumental in strengthening the efforts of other universities and research centres to increase the knowledge and skills of professionals working in the water sector.

In its capacity building activities, UNESCO-IHE often takes a pro-active approach to joining up the academic world of water research with that of water governance practitioners. By involving them in joint education and training programmes, UNESCO-IHE provides the missing link and establishes essential communication and interaction

channels between these often separate domains. This is also the case for the considerable number of knowledge networks and Communities of Practice which UNESCO-IHE has helped to set up, linking water professionals from academia and government agencies within and across national boundaries.

Knowledge Hub - by Asian Development Bank

Knowledge Hub is defined as a center of excellence promoting knowledge exchange and capacity development on Asian Development Bank priority water topics. Knowledge Hub's mission is to deliver state-of-the-art, knowledge-based products and services that meet the practical needs of water organizations like utilities, river basin organizations, ministries, and planning agencies. Committed to transparency and continuous quality improvement, Knowledge Hub aims to improve the water sector's performance by promoting effective solutions and developing local capacity in organizations around the region.

African Water Documentation and Information System

AWIS (African Water Documentation and Information System) is a network of African organizations that aim to share the practices and information they have available with the largest audience.

A huge amount of information on water is produced and regularly updated on the African continent. Because of poor systematic management practices and dissemination of this information, much of it is barely accessible. However, sharing of information, experience and knowledge between actors is necessary to improve the quality of best practices and interventions in the sector.

AWIS focuses on three objectives:

1. to build a network of partners in Africa that produce information in the field of water;

2. to reference quality information on the water sector in Africa;

3. to provide free access to this information via an Internet portal.

Euro-Mediterranean Information System on know-how in the Water sector EMWIS

EMWIS is an initiative of the Euro-Mediterranean Partnership. It provides a strategic tool for exchanging information and knowledge in the water sector between and within the Euro Mediterranean partnership countries.

United Nations University Institute for Water, Environment and Health (UNU-INWEH)

Knowledge Management and Mobilization is a core function that cuts across **UNU-INWEH**'s thematic areas. The Institute – working with a variety of partners – is a leader in the development of effective science-policy linkage and knowledge mobilization solutions including the following (for more information - www.inweh.unu.edu):

- **IW:Science:** Due for completion in early 2012 the project is the first ever synopsis of the science behind the International Waters portfolio of projects to date (20 years of work on 180 projects for international river, lake, groundwater, coastal and marine water systems spanning 172 countries and over US$ 6 billion of investment). The project helps strengthen priority setting, knowledge sharing, and results-based, adaptive management in current and future projects of the Global Environment Facility (GEF).

- **KIM-UNU:** "Knowledge Integration and Management – United Nations University" is the name of the technology platform behind IW:Science. Developed by UNU-INWEH in partnership with the Centre for Community Mapping as a powerful and user-friendly Knowledge Management System (KMS), it is a fully integrated relational database and suite of learning network and communication tools. Highly successful, it is being applied in other projects including UN-Water (KMS implementation between the 28 UN-Water member institutions for all transboundary water matters); The Lake Victoria Basin Commission (KMS implementation between Kenya, Uganda, Tanzania, Rwanda & Burundi); and the management of Hima areas for conservation and natural resource use across 21 countries in the West Asia - North Africa region.

- **The K* (KStar) initiative** Within the worlds of research and policy there is growing awareness of, and commitment to, the role of intermediaries and intermediary organizations. They are increasingly seen – by various parties including research providers, users and funders - as important in ensuring that: Research directions are informed by the potential users; Users are strategically involved in the research; and, Research findings are accessible and actually used in decision making. Knowledge Intermediaries are playing key roles in considering how relationships between policy and practice, research and other types of knowledge can be made to function better. Using a variety of approaches and toolkits they are practicing Knowledge Management (KM), Knowledge Mobilization (KMb), Knowledge Translation and Transfer (KTT), Knowledge Brokering (KB), Knowledge Adoption (KA) and a number of other activities which collectively we term K* (KStar).

Working with partners, UNU-INWEH is leading a major global initiative to bring together leading knowledge management and mobilization practitioners from various sectors (including water), generate a white paper and a state of the art publication, and develop a learning network devoted to this emerging field. A K* conference is slated for April, 2012 and the learnings will be broadly applicable in and useful to many sectors, including water.

- **Policy Briefs and other Advice** - UNU-INWEH staff have developed a series of influential policy briefs and other advice on various topics. These include 2011 reports and associated summaries for decision makers) on Lake Twinning, on the use of language in water and environment-related UN declarations (including a synthesis of effective strategies to highlight and strengthen key concepts) and on managing environmental impacts of coastal development in the mid-East Gulf Region.

In North America UNU-staff have been closely involved with partners including the **Canadian Water Network (CWN)** and **Environment Canada (EC)** on issues related to the water science-policy interface. For example, reflecting a new focus on developing CWN as a "broker of knowledge for solutions" CWN has adopted a consortium approach to

research with the end users influencing the directions of actionable research. EC became an acknowledged leader among Canadian federal governments in knowledge translation and brokering, and has demonstrated the impact of a series of water science-policy workshops. It has continued to develop an acclaimed and innovative suite of tools to mobilize water research (e.g. EC Science Alert, EC S&T Expert, Water Science News) and has published an ongoing Study Series "Strengthening Science-Policy Links."

UNEP "Global Environment Alert Service" (GEAS) bulletins

As part of UNEP's (United Nations Environment Programme) role of strengthening the science-policy interface, the "Global Environment Alert Service" (GEAS) bulletins communicate in a simple language, using visual tools, the scientific evidence of emerging environmental issues, trends and threats of international significance. In preparing the bulletin, UNEP will continue to work closely with the scientific community and UNEP staff, consulting them and drawing from their work and suggestions including continous search for peer reviewed and policy relevant scientific articles from scientific databases and science news services.

Water community in solution exchange (WCSE)

The Water Community in Solution Exchange (WCSE), India, is a Value Network that connects with the local communities and administration for design and implementation of societal water projects. This network is a solution to the recurring problem of duplication of action in the water sector. It uses a Web 2.0 based Value Network dedicated to societal Water projects (W2W). Based on WCSE's, the solution uses a W2W management viewpoint by integrating the two distinguishing features of a W2W-Water and Web 2.0.

The network was initiated by the UN country team in India in 2005. The objective was to provide water practitioners in India with an impartial space to debate, build knowledge and explore joint projects. It has helped several NGOs in the sector to secure funding by highlighting their work, donors to find suitable projects, individuals to raise their profiles, and to take forward the overall agenda for providing water for everybody. The

network is the largest of its kind in India. It allows all stakeholders to voice their opinion, share experiences and build joint action research programmes.

Regional partnership programme on water quality management improvement in Asia

WEPA is a tool to exchange knowledge and know-how. It aims to enhance the water environment in Asia by providing its member countries with unique platforms to share and discuss problems and challenges, offer solutions and choices, and provide lessons on water environment management. The member countries share similar water quality-related problems such as poor sanitation, runoff of nutrients and pesticides, and eutrophication. Therefore it is very useful for them to share the management experiences on policy, legislative, institutional and technical issues of other member countries.

WEPA brings its member countries together to share solutions implemented/planned through its database and its periodic updates, as well as organizing opportunities for face-to-face knowledge sharing, such as thematic workshops and multi-stakeholder forums. Common key issues identified through WEPA are discussed in a timely manner such as domestic wastewater treatment and climate change adaptation in water quality sector.

A national water commission

Numerous studies, books, and boards have recommended a national water commission or council that reports directly to the president (for example, NWC 1973, Rogers 1993, Gleick 2009). Such a commission would be comprised of diverse, non-federal experts representing a broad range of disciplines, including leaders of the environmental justice movement. The commission's first task should be to develop guidelines and requirements to ensure that river basin management plans are scientifically rigorous and participatory, identify key threats and stressors to the basin's water resources, and recommend methods for selecting projects to address those threats. The commission's responsibilities would also include reviewing all water-related budgets and making recommendations for key priorities. This review would provide a much needed,

independent analysis of gaps and overlaps in existing water-related programs. The commission could also have a more prospective role in alerting decision makers on emerging challenges / issues in the water sector.

A national water commission or council would be authorized by Congress, be composed of non-governmental water experts from across the many disciplines affected, including the sciences, economics, public policy, law, governments, public interest groups, and appropriate private sectors, would have a fixed term and specific mandate, and would serve as a neutral third party. Such a commission should offer both Congress and OMB (Office of Management and Budget) advice on improving the efficiency with which federal agencies fund and conduct water research and priorities. Additional efforts of such a commission could include providing guidance on national water science, research, and policy priorities; strategies for increasing protection of aquatic ecosystems; new approaches for financing water infrastructure and improving water-use efficiency and conservation; steps to improve the physical security of the nation's water and reduce risks of international tensions over shared water resources; and strategies for helping prepare the nation's water resources systems for the risks of climate change.

A unique science-policy interface: the Advisory Panel

Established in 1976, the Advisory Panel for Water Management has acted as a basis for the Egyptian–Dutch bilateral water sector co-operation program. Initially the purpose was to advise the Egyptian government, and more specifically the Ministry of Water Resources and Irrigation, on the large-scale implementation of land drainage as required after the construction of the High Aswan Dam.

Creating a web based platform to ensure good water governance by making information available to take informed decisions

Establish and strengthen a web based forum for effective information sharing and debate for the use of water managers to take informed governance decisions. This forum will be available for all the stakeholders to put across their concerns and requirements and their points of view on governance. It will give a separate window for

research institutes to submit their research related to water governance. It will also create a forum for public debates where not only institutions but also individuals can contribute. To improve the layout and contents parallel activities such as global dialogues and local seminars will be undertaken and outcomes and even the proceedings will be displayed through the platform. Sri Lanka

Non-partisan Legislative Research Agency (Think Tank) US congressional research service

An option to improve the science-policy interface would be to establish a nonpartisan, objective think tank to provide policy makers with timely, unbiased information and analysis on policy issues. Such an institution would be designed to approach complex scientific and natural resource topics from a variety of perspectives and examine all sides of an issue or policy problem. Experts in a variety of fields could provide insightful and comprehensive analysis for decision makers and be available for consultation during all stages of the legislative process -- from policy formulation, through implementation and oversight. Services of such an institution could take many forms. For example: providing background and analytical reports and issue briefs; providing tailored confidential memoranda, briefings, and consultations for policy makers (regardless of political affiliation or status); conducting seminars and workshops for policy makers and staff; testifying before legislative committees; and responding to individual Member and committee inquiries. To ensure neutrality and objectivity, the institution would not make recommendations or take sides on any policy or decision. Rather, options could be presented, as well as analysis of pros and cons of various and competing options to address complex policy issues. The goal of such an institution would be to provide elected policy/decision makers with factual and analytical material presented in a fair, balanced, objective, and timely manner. Other options include establishing a joint committee of the legislative body, or a specific science oriented institution, with similar operational parameters.

Collaborative Governance in the US American West

Collaboration is a proven approach to engage citizens, experts, and decision-makers in governing water resources in the US American West (and increasingly throughout the world). Experience suggests that this approach to governance (1) results in decisions that receive broad public support; (2) saves time and money when compared to lobbying, litigation, and other ways of shaping water policy or resolving water disputes; provides the most direct and meaningful form of public participation; effectively integrates social and political values with scientific and technical considerations; and makes implementation easier because the stakeholders have helped shape the solutions.

One of the key lessons from recent and ongoing experience in collaborative water governance is that there is no single model per se, but a set of key ingredients that foster success. This presentation will highlight a continuum of approaches from ad hoc, citizen-driven initiatives to negotiated partnerships to formal institutional arrangements. It will examine the emerging practice of nested systems of governing water resources, moving from innovative collaborative arrangements at a very local watershed level to larger river basin efforts to even larger transboundary regional initiatives.

CIS-SPI: Science-policy interface for the implementation of the Water Framework Directive

For an efficient water management policy implementation, an ad-hoc activity "water science-policy interface" has been set up at the European level within the framework of the Water Framework Directive common implementation strategy. This activity aims to build efficient partnerships between research organisations, policy makers, water managers and stakeholders.

The purpose of this activity is:

- to provide research end-users with scientific and technical tools as well as methods;

- to translate operational issues into questions for research to alert financing organisations and research partners of those needs.

The Joint Water Framework Directive / EU Water Initiative process ("Mediterranean Joint Process"/ JP): developing synergies between the two mechanisms to facilitate the implementation of sound water policies.

The Med Joint Process encourages the establishment of a network of water experts, volunteers for sharing their own difficulties/solutions and ready to get experiences from other basins/ countries.

It is a technical platform for collaboration between the various countries bordering the Mediterranean, allowing evaluations and discussions in connection with the Mediterranean characteristics through the use of the Water Framework Directive (WFD) of the EU as a discussion basis. Moreover, this Joint Process (JP) is developing its activities in phase with the European Neighbourhood Policy (ENP) principles (cooperation, regional stability, Exchange of information etc.). Six working groups have been launched in this process, with their mandates approved by the Euro-Mediterranean Water Directors:

- Groundwater management, lead by Greece

- Drought and water scarcity, lead by Morocco, MENBO, European Commission & EMWIS

- Shared water resources management, lead by GWP-Med

- Monitoring networks and programmes, lead by EMWIS

- Waste water re-use, lead by Malta and the EC

- Linking rural development with water management, lead by EC/JRC.

Complementary to these working groups and the EU Pilot River Basins exercise, pilot activities have been developed in the southern rim of the Mediterranean. The exercise consisted in testing the existing EU guidance as well as recommendations produced by the Med Thematic WGs covering different aspects of the WFD. Concrete testing would allow identification of activities / measures to be implemented for achieving the targeted objectives.

The Med Joint Process (JP) new phase will draw on the achievements and lessons of the two first phases of development while taking into account the recent developments around the Strategy for Water in the Mediterranean and the Horizon 2020 initiative. Hence, it will contribute not only towards the general objective of the JP which is to facilitate the implementation of improved water management practices in the Mediterranean, but also to the implementation of the SWM and the related projects.

Joint Programming Initiative "Water Challenges for a Changing world"

Research, Development and Innovation programmes from a number of European Union Member States and Associated Countries have voluntarily decided to participate in this Joint Programming Initiative. These initiatives were formulated by the European Commission and are being organized by European Countries. The purpose is to harmonize research agendas and to develop joint activities (projects, mobility actions and infrastructure) in view of facing a grand societal challenge: "Achieving Sustainable Water Systems for a Sustainable Economy in Europe and Abroad". This JPI will permit to broaden the scope of European proposals, and increase the impact of research by exploiting the multiplying effect of trans-national & multi-disciplinary cooperation in Europe and beyond.

PSI Connect

PSI-connect is a three-year collaborative project funded under EC FP7 that aims to improve the quality of "evidence=based water management" in the context of climate change. To generate insight into how the science-policy gap can be bridged different types of knowledge brokering instruments are developed and applied in concrete policy trajectories at the European, national and regional level.

Knowledge Brokering Instruments (KBIs) are methods or tools which aim to increase the quality of science-policy interactions. PSI-connect has brought together scientists, policy makers and stakeholders to experiment with different types of knowledge brokering instruments in real life policy situations.

WISE-RTD

WISE-RTD is an innovative knowledge portal seeking to enhance interfacing between policy making/implementation, and research and technology development. It intelligently links water directives with research results and technologies in support of improving the status of our water systems. All parties interested in water may use WISE-RTD, i.e. policy-makers, water managers, researchers, SMEs and industries. Project summaries are available in simple English to help non-scientific users. It provides guided searches, gap analysis between policies and RTD-results and e-market possibilities linking policies with RTD-results and technology development. WISE-RTD has collected and still collects water knowledge from FP3-FP7 water projects as well as LIFE projects. When WISE-RTD is finalised by the end of 2012 it will hold information of over 1000 water-related European research and application projects.

AWARE: How to achieve sustainable water ecosystems management connecting research, people and policy makers in Europe

The issue of concern of the AWARE project (funded under 7th FWP (Seventh Framework Programme) is the anthropogenic deterioration of water ecosystems, in particular in coastal areas. The new approach proposed by the AWARE project to enhance connectivity between research and policy-making exploit the concept of integrated adaptive ecosystem management, engaging scientists, policy makers and the public (the latter including both stakeholders and lay citizens/water users) into comparable case studies of participatory scenario-building. The emphasis given to the role of the public enlarges the concept of organisational learning to the wider concept of social learning.

Water Diss 2.0

In accordance with the principles of science-policy interfacing, the general objective of WaterDiss2.0 is to accelerate the transfer of research outputs to water management institutions (a basin authority or a city) with a targeted time lag of only 3 – 5 years.

Information on about 60 water-related FP6/FP7 research projects outputs is being collected and their potential future analysed in close collaboration with the research teams. The project will organise social events and wide use of e-infrastructure to help

stakeholders meet and share ideas. It includes also brokerage events, seminars, and summer schools. The e-infrastructure is a mix of social networking tools, to support a community of practices among the stakeholders, virtual seminars, and a permanent virtual fair of results. The concept of the project is to add an intermediate step after research, like a marketing team in the industry.

Water supply and sanitation Technology Platform - Wsstp

WssTP was initiated by the European Commission in 2004 to promote coordination and collaboration of Research and Technology Development in the water industry. Through a Strategic Research Agenda WssTP provides strategic answers for the water research future challenges. WssTP consists in 61 members and 210 contributors from Industries, Academics, Research, Policy Makers and Water Utilities.

EUREKA Cluster ACQUEAU

The EUREKA Cluster ACQUEAU is an 'Industry/Business led water network', whose ultimate aim is to facilitate the generation of market driven, pan-European collaborative water research and technological development projects for the benefit of the European Water Industry. Through the Water supply and sanitation Technology Platform (WssTP) employing the principle of Integrated Water Resources Management (IWRM), a 'water vision' for Europe has been identified by utilising knowledge from stakeholders, innovators, researchers, etc, involved in the water industry.

In order to facilitate the innovation of products, processes and systems needed on this roadmap the ACQUEAU Cluster will initiate R&TD calls on a regular basis identifying key 'technology needs' that are identified on the roadmap. Successful projects resulting from these ACQUEAU R&D Project calls will strengthen the technological base of the European Water industry. This in time will enable the sector to become more efficient and effective in serving the citizens of Europe and more competitive in the global markets for water services and related technologies.

KNOSSOS, KNOwledge from Science to SOcietieS,

KNOSSOS, KNOwledge from Science to SOcietieS, is a project, funded by the European Commission, which addresses the gap between science and society in the field of environmental research with a focus on policy makers. The initial phase of the project has been to take stock of the available environmental research results that are useful for policy makers. This information is added to the web platform, a knowledge management system which guarantees fast and easy access to relevant information. KNOSSOS also produces policy briefs every three months to coincide with the environmental policy cycle. The first brief summarises the current situation of water scarcity – particularly in Europe. It highlights the key research findings and presents sound, research-based policy options. KNOSSOS also puts an emphasis on disseminating research findings by organising policy dialogues to discuss these briefs and "Knowledge Fairs" as side events of international conferences. These collaborative workshops and policy dialogues bring researchers and policy makers together to discuss the latest policy briefs and potential policy-making options.

IWRM-Net Scientific Coordination Project

The IWRM-Net Scientific Coordination Project provides continued support of 6 water research projects in both administrative and scientific terms. The projects were funded through the partners of the IWRM-Net eranet project launched in 2006 and which ended in 2010. During this time two calls for research to support public policies in the field of water were organised. The first began in October 2007 and the second appeal was launched in late 2009 with the following themes (1) The impact of climate change and adaptation of the Integrated Water Resources Management (2) Water scarcity and drought; (3) Economics for IWRM: social and environmental assessment for decision making.

This work will be delivered through the promotion of interdisciplinary scientific exchanges and synergies and facilitated by Office International de l'Eau. The scientific results will be disseminated to potential users of the knowledge. In support these goals there are three meetings proposed; a kick off meeting, a midterm and final event common to all projects.

An important aspect of the scientific coordination project is the further development of an online scientific community for water research. Trans-disciplinary and thematic discussions will be organized to support the science policy interface for the WFD, including the CIS-SPI ad-hoc group and the water Joint programming initiative. To initiate this community and assist in its role of scientific expertise, IOW has organised a group of experts to participate in working groups, write articles and support the conferences.

Éa-écoinnovation : creation of a Global Network of Water SMEs

Small and medium enterprises (SME) should play a key role in creating enabling environment for access to water and sanitation. In this context, the experience and reputation acquired by Ea eco-enterprises in 15 years led the network to promote French water sector SMEs especially during the 4th World Water Forum in Mexico City (2006) and to lead a French companies' delegation at the occasion of the 5th World Water Forum in Istanbul in 2009.

For the 6th World Water Forum, Ea eco-enterprises proposes to strengthen its commitment through the creation of a Global Network of Water SMEs, which is a concrete solution to the need for creating enabling environments.

The development of such a network depends first on the enhancement of existing international Ea eco-enterprises partnerships (Morocco, Chile, and Colombia) and the mobilization of new network/cluster partners.

Specifically, the network will improve access to water and sanitation through the development and transfer of technology and know-how, capacity building, the setting-up of an observatory of innovative technologies, and the development of new partnerships and cooperation. It will thus contribute to the necessary structuring of the sector at global level, essential for implementing all the appropriate water management actions in the broad sense, that will enable the most effective adaptation to the multiple pressures the resource will undergo during the twenty-first century (climate change,

urbanization, and increasing demand due to population growth, pollution …). The Global Network of Water SMEs will also contribute to:

i) Internationally promoting the enterprises that are network's members,
ii) meeting the 7 France's commitments for water and sanitation,
iii) achieving the Millennium Development Goals

When data, information and science support responsible business engagement in water policy: selected conclusions from the CEO Water Mandate experience

The CEO Water Mandate established under the auspices of the UN Global Compact represents both a call to action and an actionable framework for companies around the world to advance toward water sustainability in their operations and supply chains. The initiative and its endorsers are supported with applied research, dissemination of existing and new tools as well as other best practice guidance resources.

The CEO Water Mandate has recently produced a Guide to Responsible Business Engagement with Water Policy, which provides principles, concepts, practical steps, and case examples that can facilitate companies' responsible engagement with water policy in a manner that reduces business risks while simultaneously advancing policy goals and positively impacting nearby communities and ecosystems. The guide puts forward a variety of approaches for companies to engage with governments and other stakeholders to advance sustainable water policies and management, including supporting research, advocacy, monitoring, and sharing or gathering data related to water resources.

Water Research to Market, to speed up the transfer of water related research outputs

The project Water Research to Market project aims to add a step between research and the existing technology transfer schemes to SME by pro-actively digging, assessing and promoting the research outputs, while targeting not only the companies but also their clients.

The general objective of the project is to speed-up the transfer of research outputs to practitioners, with a targeted time lag down to 3 – 5 years by adding a step between research and the existing technology transfer schemes to SME by pro-actively digging, assessing and promoting the research outputs, with the development of a standardized method for an in-depth assessment of the potential benefits of emerging tools / methods to assess research outputs in term of their distance-to-market (named ReMAS) and the promotion of innovation precursor (through the Precursor Marketing Strategy, PMS). The solution expected to be sustainable as a service for the practitioners and the researchers.

The project is funding by EC in the frame of the LIFE program.

Carteau

Carteau website aims to provide an overview of research actors in the field of water and aquatic environments in France to promote partnerships, to facilitate valuation and to improve networks of researchers. This tool provides a brief description of the units of private and public research, their institutions, projects and programs. Thus, competences on research and development in the field of water and aquatics environment are highlighted.

Others solutions

Some other solutions have been posted to the platform of solutions under Target 1 of Condition of Success 3, listed below:

- [Water Awards](#)

- [Biome Project](#)

- [Improvement of services' performance thanks to a national watchdog : example of SISPEA in France](#)

- [Bridging the gaps – holistic and local water governance](#)

Main lessons learnt from solutions may be classified as follows:

From the solutions several lessons or recommendations may be drawn. They are classified as follows:

- **To support science-policy interface**

  o A unique science-policy interface: the Advisory Panel- Egyptian-Dutch co-operation programme

  o To establish a nonpartisan, objective think tank to provide policy makers with timely, unbiased information and analysis on policy issues - US congressional research service

  o Continuum of approaches from ad hoc, citizen-driven initiatives to negotiated partnerships to formal institutional arrangements - Collaborative Governance in the US American West

- **To bridge the gap between science and policy**

  o Knowledge Management and Mobilization – UNU-INWEH

  o To address the gap between science and society in the field of environmental research with a focus on policy makers - KNOSSOS

  o To develop and to apply different types of knowledge brokering instruments in concrete policy trajectories at the European, national and regional level to bridge the gap between science and policy – PSI connect

  o To enhance connectivity between research and policy-making – AWARE

  o To enhance interfacing between policy making/implementation, and research and technology development – WISE-RTD

  o To provide an overview of research actors in the field of water and aquatic environments to promote partnerships, to facilitate valuation and to improve networks of researchers - Carteau

- **To boost involvement of science in policy domain and vice-versa:**

  o A national water commission – US congressional research service

  o A science-policy interface for the implementation of the Water Framework Directive – CIS-SPI

  o A Joint Programming Initiative "Water Challenges for a Changing world"

  o To boost research to support public policies in the field of water – IWRM.net

- **To encourage networking aiming to provide water policy with scientific information and to call attention**

    o Strengthening the science-policy interface with the "Global Environment Alert Service" (GEAS) bulletins - UNEP

    o To connect with the local communities and administration for design and implementation of societal water projects - Water Community in Solution Exchange (WCSE) - India

    o A tool to exchange knowledge and know-how - WEPA

    o To create a web based platform to ensure good water governance by making information available to take informed decisions – Sri Lanka

    o To accelerate the transfer of research outputs to water management institutions - WaterDiss

- **To encourage knowledge improvement and dissemination, and access to knowledge**

    o Education and capacity building activities in the fields of water, environment and infrastructure - UNESCO-IHE

    o Center of excellence promoting knowledge exchange and capacity development - Knowledge Hub by Asian Development Bank

    o To share available practices and information with the largest audience - African Water Documentation and Information System

    o A strategic tool for exchanging information and knowledge in the water sector - the Euro Mediterranean partnership countries – EMWIS

- **To encourage innovation and water policy-oriented development**

    o To promote coordination and collaboration of Research and Technology Development in the water industry – WsstP

    o To facilitate the generation of market driven, pan-European collaborative water research and technological development projects for the benefit of the European Water Industry – Eureka Cluster Acqueau

    o To improve access to water and sanitation through the development and transfer of technology and know-how, capacity building, the setting-up of an observatory of innovative technologies, and the development of new partnerships and cooperation – EA-écoentreprises

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- o Principles, concepts, practical steps, and case examples to facilitate companies' responsible engagement with water policy in a manner that reduces business risks while simultaneously advancing policy goals and positively impacting nearby communities and ecosystems – CEO water mandate

- o To speed-up the transfer of research outputs to practitioners - Water Research to Market project (LIFE program)

5. **Recommendations for follow-up**   …………………………………………………………   X

To draw attention to the science-policy interface to ensure operational and sustainable long-term exchanges between the research and policy-makers domains is a process requiring long-term support. It relies on both solid political and scientific backing and commitment.

Learning from numerous existing solutions or promising new ones is the first step to take to success. To achieve this, it is recommended to publicise and promote experiences at a global level. This promotion goes together with monitoring such solutions.

Also to support an enduring science-policy interface, it is recommended to establish a networking platform allowing water policy sector to be provided with complete scientific information validated both by scientific and political sectors related to global water resources, needs and demands, and water management.

This platform would involve internationally recognised scientists; it would also allow water managers to provide scientists with a feedback on their needs for information.

Thanks to this platform regular reports providing an official view of global water resources, and specific reports would be produced with a view to feeding United Nations conventions on climate, biodiversity and desertification in particular.

To summarize, to ensure a robust science-policy interface with a view to increasing the capacity of decision makers, we need:

1. Enduring support – with political and scientific commitment - to a process aiming to draw attention to science-policy interface and to bridge the gap between science and policy

2. To learn from existing experiences – publicise and promote, and monitor these experiences

3. To establish a networking platform providing the water policy sector with complete scientific information validated both by scientific and political sectors related to global water resources, needs and demands, and water management; such a platform would allow water managers to provide scientists with feedback on their needs for information.

These recommendations are based on existing or new solutions as presented above.

6. **Conclusion** ………………………………………………………. X

To achieve the goals of implementing sustainable and efficient water governance while ensuring its longevity, a solid science-based approach is needed. It is of high importance to build water policies on robust scientific knowledge. Various experiences exist which can provide a basis for increasing our understanding of how to improve knowledge sharing at the water governance science-policy interface. They are worth being spread world-wide.

Facilitating innovative and effective partnerships between scientists, policy makers and on-the-ground actors is considered a key success factor to establish a positively reinforcing cycle of evidence-based policies and policy-relevant research.

7. Session outline X

Given the similarity between the objectives of the CS3-target 1 and the Specific Europe region priority target n°10, organising a unique, common session for the two targets appears to be the optimal approach.

Title: "Science and Water Policy Interface: When Science and Innovation Meet Water Policy"

Topic of the session: To formulate an action plan that strengthens the scientific knowledge base for public water policy, establishes and improves effective science-policy interfacing and is reported on at the 7th World Water Forum.

Main session's topics and expected outcomes:

Why is the science-policy interface important in the water sector?

The session will begin with a moderated debate, involving senior level science providers and users addressing the question "Why is the SPI important in the water sector?" and "How can we achieve enduring political, policy and scientific support and involvement in SPI implementation?"

The questions to be addressed are:

- How can the involvement of policy makers in the scientific process be fostered so that policy needs are addressed?

- How can science and innovation be strengthened with a view to meeting the needs of water policy?

- What bridging mechanisms and intermediaries are required at the science-policy interface?

Expected outcomes: Recommendations based on existing experience

Experiences and solutions (tools and methods) for a long-lasting and efficient SPI implementation

Expected outcomes: solutions to ensure enduring political and scientific support and involvement based on existing and new experience

Action plan formulation

Expected outcomes: to feed the action plan milestones with the outcomes from roundtables.

With the aim of improving the delivery of research output for water governance and to establish effective science-policy interfaces, the action plan to develop consists of 4 steps to attain a strong and permanent science-policy interface in every country.

For the action plan elaborating the session will help write recommendations and identify actions and solutions to be implemented in order to:

1. form a solid international scientific community on water and to implement a process aiming to elaborate common (international/regional) research agendas - 2013
2. implement tools aiming to identify priority research needs to meet water policy needs – 2013
3. elaborate guidance on effective research dissemination practices and instruments to support water policy – 2014
4. implement those preferred practices and instruments for the delivery of research for water governance and policy – end 2015

Finally the session will aim to identify who could commit to participate in the implementation of this action plan implementation.

Session Outline Form

Part 1:

Reference number *(for example 1.1.1, or 1.1.4 + CS2.4 if combined)*	CS3 Regional process Europe
Target(s)/PFA/CS/ Region	CS3-target 1 SERPT10
Session title *(to be published on the programme, please kindly use media-friendly language)*	Science and Water Policy Interface: When Science and Innovation Meet Water Policy
Session teaser/description *(150 words, please kindly use media-friendly language)*	The goals associated with water management pose challenges that cannot be resolved without a robust scientific basis coupled innovatively with effective partnerships among scientists, policy-makers and on-the-ground actors. These are complex multi-disciplinary challenges that call for new modes of relations between science and decision-making. In particular a continuous transfer of knowledge must be ensured while, reciprocally, stakeholders must be actively involved in the formulation of research questions so that research remains policy-relevant. Also of importance is the sharing and spreading of knowledge and know-how. Such a context helps in devising public water policies on the basis of solid scientific knowledge (evidence-based policies). Not only must research be delivered effectively to water policy makers but the delivery mechanisms to water governance must also be improved. By doing so decision makers will have a better capacity to decide. Establishing effective science-policy interfaces helps in achieving this goal. Many examples of the water science and policy interface exist globally. Thus a first objective of the session is to share such experiences with the

	aim to improve one's own practices and to assist others wishing to implement such processes to gain relevant knowhow. A second objective for this session is to formulate an action plan (to report on to the 7th WWF) aiming to improve the delivery of research for water governance to increase capacity/strengthen leadership of decision-makers at various levels through establishing effective science-policy interfaces. Given the similarity between CS3-target 1 objective and SERPT10 organising a single, common session for the two targets makes sense.
Duration	4 hours
Contact details of the Coordinator(s) convening the session	Frédérique Martini – ONEMA Frederique.martini@onema.fr Gilles Neveu – OIEau G.Neveu@oieau.fr
Objectives and outputs	<ins>General objectives of the session</ins> - exchange of existing or experiences or new approaches in interfacing science and policy and in sharing knowledge globally ; with the aim to improve one's own practices and to assist the others wishing to implement such processes to gain relevant knowhow - formulation of an action plan aiming to improve the delivery of research for water governance to increase capacity/strengthen leadership of decision makers at various levels	<ins>Expected outputs</ins> ■ Finalise the Target Action Plan ■ Share promising solutions ■ Work on commitments ■ Enrich the report and its conclusions ■ Other, please specify: share ideas on implementing an intergovernmental scientific mechanism for water

	through establishing effective science-policy interfaces ; identify bottlenecks and key success factors for implementation of different solutions		
Format/Logistics request *(please note that room settings that are not standard cinema seating reduce the overall number of seats available in the room)*	<u>Estimated number of seats needed</u> ■ Less than 200 ☐ 200-400	<u>Preferred room set-up</u> *(not guaranteed by the IFC)* ☐ Oval/Square seating ■ Roundtable seating ☐ Standard cinema seating	<u>All rooms will be equipped with:</u> - a computer - a video projector - a screen - 2 microphones - simultaneous translation in French and English
Extra requirements for innovative sessions (professional facilitation, additional technical requirements, etc)	The session will consist of round-tables discussions. The room should be organised with 6 separated spaces where people could sit to take part in the 6 round-tables. Around 15 people are estimated at each round-table. A paper board/flip chart should be available at each of the 6 spaces. Some roundtables will possibly be conducted in French depending on the preference of the attendants and the panellist. Moreover a podium or platform where moderators and speakers can act and speak should be provided. A Professional facilitator is also requested for the whole session, particularly for the last parts (pledges of implementation and closing). A lunch (buffet) will be served in the room from 1pm to 2:30pm for the participants giving the possibility to continue a bit the morning session after 1pm. How can the catering be organised?		

Part 2:

Note: some speakers are still to be confirmed

Secretariat recommendations	- At least 50% of your session's time should be devoted to interactive and fruitful exchanges with the audience - You are kindly encouraged to include a political representative and representatives of donors and NGOs as speakers in your session		
Session plan detailing its schedule	<u>Time</u> (minutes)	<u>Descriptions of items/presentations</u>	<u>Confirmed speakers</u>

	<u>11h-13h Morning session: why the science-policy interface is important? Recommendations for an efficient SPI</u>
	
	1. 11h-11h30
	General session introduction – 5' (Patrick Lavarde - Directeur général Office national de l'eau et des milieux aquatiques - ONEMA)
	
	Part I
	
	Moderator: Alex Bielak - United Nations University - Institute for Water, Environment & Health (UNU-INWEH)
	
	Total duration: 25'
	
	Two keynote speakers will engage in a moderated discussion of how and why policy makers need a robust science base, how they can influence research questions being asked, and the importance of linkage and interfacing between science and policy.
	
	Key note speakers
	
	   - Dominique Ristori Director General Joint research centre – European Commission DG-JRC
	   - John Tubbs Deputy Assistant Secretary for Water and Science in the Department of the Interior of the United States (tbc)
	Main objectives: identify key points about needs for science-policy interface
	
	2. 11h30-13h00
	Part II: interactive session based on roundtables discussions
	
	Moderator: Luisa Prista - Head of Environmental technologies unit - Directorate general research and innovation – European Commission - DG-RTD		

Total duration 90'

Main objective: to identify key recommendations to implement science-policy interface

A/ Presentation of the main recommendations outlined in the Targets' reports:

"To ensure a robust science-policy interface with a view to increasing the capacity of decision makers, we need:

- Enduring support – with political and scientific commitment - to a process aiming to draw attention to science-policy interface
- To train actors involved in connecting policy and science in communication and facilitation skills
- To learn from existing experiences – publicize and promote, and monitor these experiences
- To foster integrated approaches and interdisciplinary research to tackle complex problems
- To establish a networking platform providing the water policy sector with complete scientific information validated both by scientific and political sectors related to global water resources, needs and demands, and water management; such a platform would allow water managers to provide scientists with feedback on their needs for information.

Duration: 10'

Speaker: Frédérique Martini – Office national de l'eau et des milieux aquatiques

B/ A set of questions will be addressed by 6 roundtables.

6 roundtables will be led by 6 panellists who have an in-depth experience related to the questions, which they will present briefly at the beginning of their roundtable. Each table should identify 2 additional recommendations to answer its question.

One rapporteur per table

Duration 40'

o   Question1: how to get policy makers involved in the scientific process to serve water policy's needs, allowing for exchange and co-evolution of scientific and policy knowledge?
        Table 1: A research service within the political process: example from the US congressional research service - Betsy Cody (US Congressional research service)

o Question 2: how to strengthen the scientific quality process by allowing critical assessment of scientific outputs in light of users needs and of other types of knowledge (extension of the peer community)?

Table 2: An ad-hoc activity dedicated to science-policy interface within the decision-making process : example from the ad-hoc activity "science-policy interface" of the Common implementation strategy of the water framework directive (CIS-SPI) - Michel Schouppe (European commission - DG RTD)

o Question 3: how to strengthen science and innovation with a view to meeting water policy's needs?

Table 3: Encourage partnerships: example of EIP for water efficiency in the EU - Robert Schroder (European commission – DG Env)

o Question 4: how to align responsible business engagement with innovation in water resources management?

Table 4: When data, information and science support responsible business engagement in water policy : selected conclusions from the CEO Water Mandate experience Jason Morrison (Pacific institute)

o Question 5: how to promote coordination and collaboration of research and technology development in the water industry?

Table 5: Gather research and technology holders to serve water policy challenges: example of the Water supply and sanitation Technology Platform - Durk Krol (WsstP)

o Question 6: how to stimulate water enterprises innovation to meet society needs?

Table 6: creation of a Global Network of Water Small and medium enterprises - Christian Laplaud (Ea-eco enterprises)

Outcomes: new or further recommendations to get enduring political and scientific support and involvement = 2 recommendations per table, i.e. 12 recommendations

C/ Wrap-up segment of part II

The six rapporteurs report back two recommendations per table in plenary

3-4' each; duration 25'

Discussion with the audience - 15'

(may continue during lunch break)

3. **13h00-14h30 - Lunch break** - Buffet

14h30-16h30 Afternoon session: some solutions for an efficient SPI. Elaboration of the action plan.

4. **14h30- 16h10**
Part III: interactive session based on roundtables discussions

Main objectives: identify tools and methods to facilitate science-policy interface and implement recommendations; identify or consolidate solutions; feed the 4 milestones of the action plan with the outcomes from the roundtables.

Moderator: Matthew Mc Kinney- Center for Natural Resources & Environmental Policy, university of Montana,

Introduction and explanation: 5' Matthew Mc Kinney

A/ Presentation of existing solutions from the targets' reports introducing the topics to be addressed in roundtables

Duration: 10'

Speaker: Gilles Neveu –Office international de l'eau

B/ 6 roundtables will be led by 6 panellists accompanied by 6 European projects. The 6 panellists have an in-depth experience with possible solutions and concrete proposals to facilitate SPI and the six projects are illustrations of solutions implementation. All this will serve as an introduction to briefly initiate the discussion in the roundtable.

Each table should exchange on, gather and improve experiences and solutions (tools and methods) for a long-lasting and efficient SPI implementation, and identify 2 additional solutions to address the topic and cross the related action plan milestone as specified below.

Presentations of pre-identified milestones:

1. To form a solid international scientific community on water and to implement a process aiming to elaborate common (international) research agendas – 2013
2. To implement tools aiming to identify priority research needs to meet water policy needs – 2013
3. To elaborate guidance on effective research dissemination practices and instruments to support water policy – 2014
4. To implement those preferred practices and instruments for delivery of research for water governance and policy – end 2015

One rapporteur per table + one project's representative

Duration 40'

⇨ Table 1 - Improve the knowledge base and stimulate a positively reinforcing cycle between science and policy: focus on developing countries with UNESCO-IHE (Uta Wehn de Montalvo – UNESCO-IHE) and example of IWRM.net (Natacha Amorsi – OIEau) – solutions/recommendations related to milestone 1

⇨ Table 2 - Inform and guide policy and programmes on water at the national and local levels with effective knowledge management. Experience of WISE-RTD (Xenia Schneider) - solutions/recommendations related to milestone 1

⇨ Table 3 – Developing a research agenda: innovative solution of Joint programming initiative Water challenges for a changing world - JPI water (Enrique Playan - MINECO Spain, Water JPI Coordinator) and example of KNOSSOS (Thierry Lucas - UNEP) - solutions/recommendations related to milestone 2

⇨ Table 4 – Provide strategic tools for exchanging information and knowledge experience of Africa water information system AWIS (Kabou Kadio KAMBOU - Agence Intergouvernementale Panafricaine Eau et Assainissement pour l'Afrique) and EuroMediterranean water information system - EMWIS (Eric Mino - EMWIS) and example of WaterDiss2.0 (Gilles Neveu - OIEau) - solutions/recommendations related to milestone 3

⇨ Table 5 - Tools to bridge science-policy gaps: experience of UNU-INWEH (Alex Bielak) and example of PSI-Connect (Adriaan Slob - tbc) solutions/recommendations related to milestone 3&4

⇨ Table 6 – Relationships between science and politics: Korean situation for Science-policy interface. Experience of Korean research center for water policy&economy (Dr. Min Kyung-Jin) and example of AWARE (Carlo Sessa)

Outcomes: new or further solutions to facilitate SPI = 2 solutions per table, i.e. 12 solutions

C/ Wrap-up segment of part III session: the six rapporteurs report back two solution proposals per table in plenary to feed the action plan

7-8' each table; max. total duration 50'

5. **16h10-16h25**
Part IV: pledges of implementation

Total duration: 15'

Moderator: Dr. LEE, Seong Keun, president of Daegu Gyeonbuk Development Institute

Coming back to the action plan the audience will focus on commitments and

pledges of implementation for each milestone. With the facilitation of a professional moderator organisations ready to get involved in the implementation of the action plan will be invited to declare their commitment.

Conclusion and closing *5'*

Dr. LEE, Seong Keun, president of Daegu Gyeonbuk Development Institute

Targeted audience in view of commitments	Organisations ready to involve in the action plan implementation
Other Information *(if you have additional information or special requests about your session)*	The session will consist of round-tables discussions. The room should be organised with 6 separated spaces where people could sit to take part in the 6 round-tables. Around 15 people are estimated at each round-table. A paper board/flip chart should be available at each of the 6 spaces. 6 panels to hold posters are needed. Some roundtables will possibly be conducted in French depending on the preference of the attendants and the panellist. Moreover a podium or platform where moderators and speakers can act and speak should be provided. A Professional facilitator is also requested for the whole session, particularly for the last parts (pledges of implementation and closing). A flip chart and some "post-it" stickers will be needed for the final part of the session. Some roundtables will possibly be conducted in French depending on the preference of the attendants and the panellist. A lunch (buffet) will be served in the room from 1pm to 2:30pm. How can the catering be organised?

Short glossary

CSIC	Consejo Superior de Investigaciones Cientificas
DG-JRC - EC	Directorate general Joint research center – European commission
DG-RTD EC	Directorate general Research and innovation – European commission

ONEMA	Office national de l'eau et des milieux aquatiques National agency for water and aquatic environments
UNESCO-IHE	UNESCO- institute for water education
UNU-INWEH	United Nations University - Institute for Water, Environment & Health