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WaterDiss2.0

Dissemination and uptake of FP water research results

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WaterDiss2.0 as a Service

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RE	Restricted to a group specified by the consortium (including the Commission Services).	
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Introduction

WaterDiss2.0 project introduction

For the last three years, the WaterDiss2.0 project partners have been working with a considerable number of recipients from the EU Framework Programme funding, to identify strategies to reach a more effective and speedier transfer of research results to intended users in the water sector.

WaterDiss2.0 is aimed to improve the uptake of water-related research results from EU funded projects to support the implementation of European water policy, in particular the Water Framework Directive. In order to support the dissemination and uptake of FP water research results, the 8 partners[1] of the consortium developed a 'toolbox' of methods aimed to improve the uptake of water-related research results from EU funded projects to support the implementation of European water policy. The major goal was to reduce the distance between researchers and their target groups by enabling scientists to identify their target groups, developing dissemination materials and establishing dissemination channels, creating clear messages and targeting communication.

Aim and scope of the report

The issue of uptake of research results is also applied for the WaterDiss2.0 project itself. Three project years have resulted in the production of new knowledge and new tools on knowledge brokering that should not die after this period. WaterDiss2.0 partners have discussed about the future of this initiative and its feasibility during the Executive Committee meeting held in Venice, June 2013. This issue has been further discussed and validated through the Final Workshop held in December 2013 in Barcelona.

This report summarizes the main results and agreements of this ongoing discussion. The report explores the future of WaterDiss2.0 project and the potential ways of implementation.

Generally, two propositions can be argued as *WaterDiss2.0 as a Service*:

- As a training initiative for scientists to better skill them in science communication.
- As a Knowledge brokering service to complement the role of science and fill in the Science-Policy-Practice gap.

1 WaterDiss 2.0 consortium is composed of Office International de l'Eau (FR), Ecologic (DE), Gdansk Water Foundation (PL), CFPPDA (RO), ESKTN (UK), CIRF (IT), AMPHOS21 (ES), TRIPNITY (FR)

Why WaterDiss2.0 could be a Service?

Reasoning why WaterDiss2.0 should become a potential service or become a future action is not only based on perceptions and opinions from the project consortium. Evidence gathered through the Evaluation activities within WP4 highlights the need of establishing some knowledge brokering activities in the future.

McNie 2007 states that there is now an emerging awareness that new tools for effective and timely communication of research findings are critically needed. Thus, the main aim of WaterDiss2.0 is to prove its contribution to SPI by consolidating an intermediate step just after research in close relation with stakeholders.

In the attempt to match previous similar works, *Shanley 2009* indicates recently developed guidelines for dissemination of research results and published advice for improving the impact of research through communication for development. Such guidelines are provided amongst others by the Overseas Development Institute (Hovland 2003, 2005), International Development Research Centre (Gauthier 2007), the FAO (2003) and the International Union for Conservation of Nature (Goldstein 2006), as well as organizations set up specifically to foster communication for development, such as the Communication for Social Change Consortium (*references included in Shanley 2009*).

Going beyond the above mentioned initiatives, there is still a need for feedback and experiences to validate those guidelines and propose new ones, which is one of the goals that WaterDiss2.0 is pursuing with specific attention to EU funded FP6 and FP7 research.

WaterDiss2.0 as a Knowledge Brokerage initiative

The concept of Knowledge Brokerage (hereinafter as KB) is currently being explored by similar initiatives to WaterDiss2.0, providing each of them different explanations and definitions to the KB concept. The ambiguity of the KB concept provides different definitions depending on the sector of operation.

The concept of KB has been developing in the context of the Science policy interface as large quantities of knowledge produced for the benefit of policy are never used in that policy making (In't Vel and de Wit 2000; Stein, U. 2014). Much of the literature dealing with KB recognizes it as a promising approach to speed-up the utilization of research findings (Slob et al 2007, Karner et al 2011, van Kammern et al 2006) by promoting mutual understanding and dialogue of participating actors (researchers, policy makers, civil society).

In the WaterDiss2.0 context, KB concept is used to enhance the utilisation of research findings by a two-way process of interaction and opening dialogue of science-policy-practice interactions rather than the one way communication process frequently used by researchers. As part of a knowledge brokerage mechanism, dissemination becomes an underlying precondition, which eventually may contribute to social learning (Stein, U. et al 2014). By

providing better dissemination approaches we see knowledge brokerage as a process that facilitates the knowledge flow (knowledge seen in a form of research findings) from individuals and organisations to other individuals and organisations with the aim or learning and improving. While knowledge brokerage is a multi-directional learning process and not a one-directional distribution process, in the WaterDiss2.0 project, due to its diversity of topics and wide range of projects that we assisted, we focused on the science-to-policy/practitioner direction of knowledge brokerage, while making a particular effort to identify needs and preferences of the policy and practitioner target groups.

Good stories highlighting the effectiveness of WaterDiss2.0

Some good stories in effective dissemination practices were identified in the process of working with FP6/FP7 European research projects. Additionally, specific stories from the WaterDiss2.0 dissemination activities can highlight the effectiveness of WaterDiss2.0 in improving dissemination of research results during its duration.

The evaluation framework established within WP4 identified some good stories showing the need of effective dissemination practices and strategies. During the project's Final Workshop, pros and cons of some propositions were deeply discussed and identified. The following validation process resulted from the evaluation framework:

REFRESH FP7 involvement in waterDiss2.0 activities

Greenhouse gas emissions are expected to rise until at least the middle of this century. Climate modeling studies suggest that even if emissions were established at present levels future climate change is inevitable. These changes are likely to have significant effects on freshwater therefore the way they are managed. The EU FP7 project REFRESH (Adaptive strategies to mitigate the effects of climate change on European Freshwater ecosystems – http://www.refresh.ucl.ac.uk) has two goals. The first is to increase our understanding of how freshwater ecosystems will respond to the environmental changes. The second is to translate this knowledge into a form that can be used by water managers.

WaterDiss2.0 has been instrumental in helping the REFRESH project in a number of activities (given the project's size and status) undertaken for dissemination of research results, which have included:

- Working with the Project Coordinator Dr. Martin Kernan to develop the Individual Dissemination Strategy (IDS) or Framework for dissemination. Further input was derived within the WaterDiss2.0 CIRF Summer School in Venice in August 2013. Participants used the REFRESH project as an example case to work the IDS and thus gave independent input.
- WaterDiss2.0 fed information about REFRESH's integrated catchment model into its searchable output database, which can be accessed on the website of the European Water Community (europeanwatercommunity.eu).
- Participation of REFRESH in the WaterDiss2.0 Workshop "*Estimating and monitoring the effects of river restoration measures*" at the 2nd Italian Conference on River Restoration in November 2012 supported by WaterDiss2.0.
- Facilitation of the "European Innovation for Sustainable Water Management: Users meet Researchers", a 'side event' at the Integrated Water Resources Conference in Karlsruhe, Germany on 22 November 2012. The workshop was attended by water practitioners, scientists and policy makers.
- Presentation of REFRESH at the 'Constructed Wetlands' Conference held the 26/27 June 2013. This gave the REFRESH project representative Professor Verhoeven from Utrecht University, Holland, the valuable opportunity to present the research outcomes to a wider and different audience than the project anticipated, particularly to practitioners.
- The REFRESH Science Symposium 'Freshwater Management in a changing world' 2-day event on 6/7 November 2013 was held at the Royal College of Physicians and the University College in London. WaterDiss2.0 arranged for the whole event to be televised and recorded, which was aimed at reaching as many people as possible. The televised event is now posted on the internet (under links through ESKTN TV) and is expected to attract a wide and on-going audience. Added value was also achieved by having e-Seminar facilities available at the same time. This reached a much wider audience than would normally be the case, given the status of the event and results of both science and management practices being presented.

Dissemination from AMEDEUS and BRIDGE projects

The AMEDEUS consortium owes its success to the consortium's strong and coordinated dissemination efforts (~ 5% of budget), which included: creating a strong visual identity, using various printed materials (press releases, articles in national / international journals, scientific articles in peer reviewed journals), attending international conferences endorsed by IWA, and using a joint and interactive web platform. The web platform has remained active in spite of the project having ended.

Key success factors of the BRIDGE project's dissemination strategy were, amongst others, the strong involvement of some project partners in the national implementation of the WFD. The use of a diversity of dissemination tools, from scientific papers to websites and newsletters, also plays an important role in this success story. The project follow up was made possible thanks to the strong involvement of the advisory board with DG-ENV and DG-RTD.

AQUAREHAB project (FP7) and target group oriented events.

Within AQUAREHAB, different innovative rehabilitation technologies for soil, groundwater and surface water were studied and developed to cope with a number of priority contaminants (nitrates, pesticides, chlorinated compounds, aromatic compounds, mixed pollutions...) within heavily degraded water systems. The main output of the project was the production of Generic Guidelines to make better decisions on the use of the remediation technologies.

Waterdiss2.0 worked with the project to analyse the needs of the target groups for the remediation technologies, especially because reaching the technicians of remediation technologies is difficult. Along with a big event on groundwater and Remediation technologies, a break-out session was organised to discuss on this topic. This session aimed to match the needs of the policy makers and practitioners with the new solutions provided by research projects in order to meet the objectives set out in the Water Framework Directive and related directives. This was achieved by two different ways:

- Researchers could enhance a proactive discussion with some policy makers and technicians to finalise the research output integrating the needs of the potential users.
- The potential users have the opportunity to discuss their day-to-day problems dealing with groundwater management thanks to this break-out session and also provide inputs to the guidelines AQUAREHAB attempts to produce. In parallel, questionnaires and phone calls were done by the WaterDiss2.0 to reach those target users that could not attend the event.

Brokering Environmentally Sustainable Sanitation for Europe (BESSE, 2012) and Knowledge Brokerage activities

A good example for this is the BESSE project, focused on Knowledge Brokerage for Environmentally Sustainable Sanitation tried to facilitate innovation in the sanitation sector to make it more sustainable. Using a knowledge brokerage approach, they worked together with utilities from the waste-water sector. At the beginning of the project, they realized that the communication between scientists and practitioners resulted difficult and that none of them was aware of the fact that both sides are responsible for taking part in the knowledge brokerage process. Thus, the knowledge brokers involved in the BESSE project took on the task of mediating and communicating between the two parties. This requires a considerable amount of effort, frequent meetings, overcoming language and cultural barriers as well as misperceptions of the other sector. The conclusions and recommendations of the project concluded, that 1) it is important to put knowledge transfer on the sanitation innovation policy agenda, 2) knowledge brokerage is promoted as a tool to support ESS, 3) to attract knowledge brokerage practitioners to the field of sanitation and 4) finally, the importance of producing and accumulating experiences on the integration of knowledge brokerage practitioners with sanitation actors.

WaterDiss2.0 contributed to maximize the impact of the BESSE project output, a booklet entailing the Position Paper and Guidelines from the project. The booklet aimed to promote innovative processes in the field of sanitation in Europe through enhanced knowledge brokerage (more at http://iwrm-net.europeanwatercommunity.eu/outputs/detail/5. This booklet was mentioned as a good practice example in the annual report of the EC Directorate. WaterDiss2.0 offered several tools, including the EWC searchable database, which has been used. Dissemination of the project was reviewed after conducting and IDS and its assistance helped to shape the

NOVIWAM E-SEMINAR (FP7)

The NOVIWAM project (Novel Integrated Water Management Systems for Southern European Regions) started in January 2010 and finished in January 2013. The project facilitated the consolidation of strong links between 5 regional European clusters throughout the participating Regions, which are active in the field of integrated water resources management. In particular the project produced a *Joint Research Action Plan* whose objectives respond to those necessities and propose a series of actions to achieve these objectives, mainly RTD&I and capacity building activities. In order to support common actions, the NOVIWAM Cluster is based on the triple helix concept, whereby clusters are organised by Region. Following the triple helix structure, each Region is represented by at least one research organisation, one private business and one public authority or regulator. The purpose of the NOVIWAM Cluster is to promote, disseminate and undertake research, technological development and innovation in the water management and related sectors; acting on the basic principle that RTD&I initiatives should be driven by well defined user needs. The NOVIWAM cluster is willing to expand some of its activities for the coming years as well as to expand its territorial implantation in a wider European research-driven network of regional clusters in the water management and related sectors.

WaterDiss2.0 has supported NOVIWAM coordinators in communicating on this cluster. By organising an e-seminar dedicated to researchers, private business and public authorities from Regions of Southern Europe, the Mediterranean Basin and the Black sea area, the WaterDiss2.0 project has contributed to the future implementation of the Joint Research Action Plan by communicating on benefits of participation for Members of the NOVIWAM Cluster.

SWIM-SM project collaborative actions with WaterDiss2.0

Relationship between WaterDiss2.0 project and the SWIM-SM project started in September 2013 during the *1st CIGR Inter-Regional Conference on Land and Water Challenges* in Bari (Italy). Following this exchange, it appears that organizing common events to communicate on knowledge brokerage and dissemination strategies towards water stakeholders and the European Commission was a priority. The goal of the E-seminar organized by the WaterDiss2.0 and the SWIM-SM projects was to share our activities to show their complementarities. It shows how we could assist the EU funded on-going projects and initiatives in their efforts towards the promotion of sustainable water management policies and practices, including the uptake and replication of results and solutions proposed. To the success of this event, we can conclude that the organisation of common events is one of the main challenges dealing with knowledge brokerage activities.

FLOODSITE project and further cooperation resulting from WaterDiss2.0 workshops

Resulting from the WaterDiss2.0 workshop held in Parma the 6th of December, organized by CIRF, the researchers of the VODNI ZDROJE Society (one of the Czech society collaborating to the FLOODSITE project) agreed with the technicians of AIPo (Interregional Agency for the Po River) for a future collaboration in the forthcoming STAMFOR project, which aims to provide an early warning system in case of piping or slope instabilities phenomena by innovating in the dikes' safety monitoring (based on geotextiles and "smart" cables). This project considers a series of pilot sites in Italy, including the river Po basin. In these pilot sites, they will also further test the non-invasive dikes monitoring system based on geo-radar, developed during

External Feedback (questionnaire responses)

During the WaterDiss2.0 dissemination activities, external feedback has been eventually gathered in form of questionnaires and interviews. This continuous process of evaluation served to observe the impact of each of WaterDiss2.0 activities. Below, some of the results explain the perception of the participants of some of those events (Figure 1).

Generally, most of the results have been positive and participants mostly wanted to keep updated on WaterDiss2.0 venues.

During the first project year, WaterDiss2.0 organised the Consensus Conference, December 2011, Berlin. The aim of the conference was to to introduce, discuss and validate our approach to communicate results of EU-funded water research and to promote their uptake in the water sector. We aim to emphasize how the WaterDiss2.0 process can be a normal component of the dissemination step of every research project.

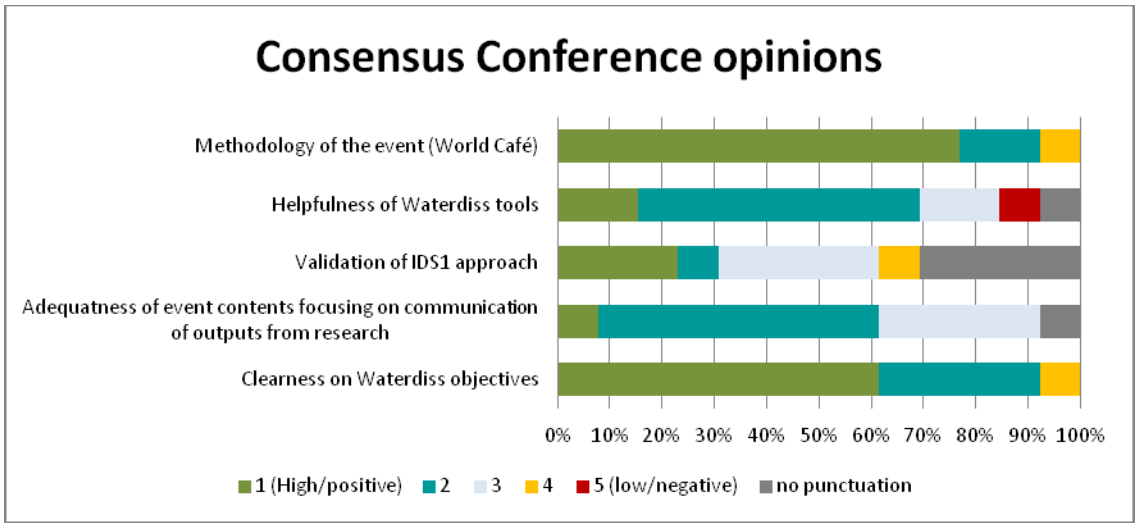

Figure 1. Feedback on the Consensus conference provided by the participants.

The last stakeholders event WaterDiss2.0 organised was the Final Workshop in December 2013 in Barcelona. This final workshop enabled participants to find out more about the accomplished work, and both research teams and potential end-users of commissioned research had an opportunity to benefit. In addition, scientists, policy makers and practitioners were able to share their own knowledge brokerage experiences, tools and methods, and to add further examples of successful practice to the outcomes of the Project.

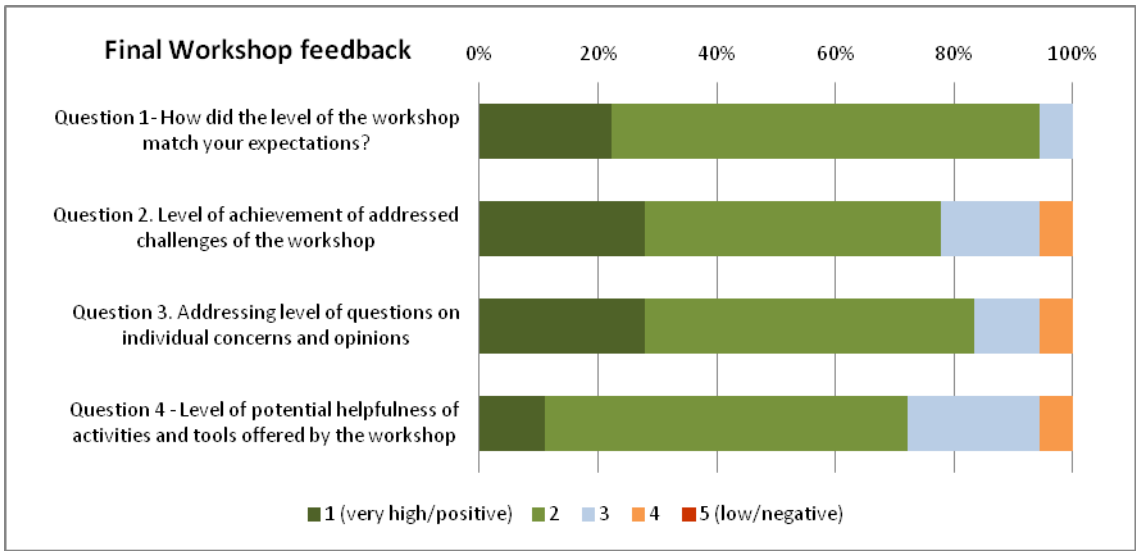

Figure 2. Final Workshop feedback from participants.

The immediate action: Network on Knowledge Brokering (KB)

WaterDiss2.0 has been participating and establishing collaborations with other initiatives, therefore networking has always been crucial for the project. Sharing of knowledge can only be gathered by the establishment of a consolidated network of contacts that can effectively work together. The WaterDiss2.0 team developed a network since the project's beginning and has continuously updated it and thus, increased. Under this scope, one of the immediate actions the project can provide as a service is to share this network. Therefore, the network will be a secondary output of the project which, even if not planned, will be used to keep WaterDiss2.0's purposes alive and keep on having discussion on KB.

Consolidation of the network is a step beyond the project and its main objective is to create an exchange space and contact opportunities between research teams, European consortia and knowledge brokers.

- Consortia and future consortia of European projects.
- Knowledge brokers specialized or not on water issues.

As a result of the exchanges and collaboration with members of the network, good practices will be collected and periodically published. The aim of telling good stories is to further encourage knowledge exchange and also disseminate KB successful experiences.

WaterDiss2.0 has been participating and establishing collaborations with other KB initiatives

- Foodlinks FP7
- Responder FP7
- Corpus FP7
- BESSE project
- MarineTT
- K* approaches
- PSI CONNECT FP7
- SPI-cluster
- Water Research to Market LIFE+

The WaterDiss2.0 project also allowed the contact not only to knowledge brokers in Europe but also to the ones beyond Europe's borders. These contacts with European and international knowledge brokers show that skills are available and partnerships possible, for example, also in Northern America.

In repetitive occasions water stakeholders demanded WaterDiss2.0's contacts and to act as a catalyser of contacting procedures for dissemination actions. The course of the WaterDiss2.0 project and especially the learning process after almost 60 dissemination events provided us with an updated view of the water stakeholders (researchers, policy makers, communicators and water managers). Since this network needs continuous update, this view could perish if no update happens. Building a Knowledge Brokerage network would be better suited to keep this activity alive when no other initiative is carried on.

How can this network be built?

The first step is to build an international network to collect and share specific knowledge brokerage tools and methods dedicated or applicable to the water sector. The role of WaterDiss2.0 will be to make these tools and methods accessible by providing services adapted to the European context and, then, to answer to European water stakeholders' needs. This network represents an opportunity for global collection of knowledge in terms of dissemination in order to allow European projects to improve the uptake of their research results.

Set up of the Network

The different methods and tools tested during the WaterDiss2.0 project, including those facilitating the dialogue between people from very different disciplines - as are the field of water research and that of knowledge brokering -, show that leaders of Knowledge Brokering Network (KBnet) should have both, a deep knowledge of the water sector as well as a solid experience and feedback in terms of knowledge brokerage. This network will be co-led by some partners from the WaterDiss2.0 consortium.

Proposition 1: WaterDiss2.0 as a training initiative

The first proposal for *WaterDiss2.0 as a service* is to embed knowledge exchange skills into scientists, and to provide training for them to improve dissemination practices within their research activity.

This initiative has been deeply discussed during the Final Workshop (December 2013, Barcelona). The discussion allowed the identification of reasons for the deployment of this initiative and what could be the challenges when implementing it.

The following table summarizes the results of the discussion:

Benefits of the deployment of this training initiative for researchers

INTEGRATION OF KNOWLEDGE EXCHANGE IN RESEARCH ACTIVITIES

Exchange of knowledge should be integral to the research activities, and scientists, therefore, cannot stay outside the process. Knowledge cannot be packaged in a way that allows it to be split from other activities and subsequently 'exchanged'.

REINFORCEMENT OF CREDIBILITY OF RESEARCHERS

End users want to meet and see scientists, as they are normally more credible and trustable actors than anyone whose principal concern is communications, therefore they should be able to communicate and engage with stakeholders. The media (press, radio, television) always wishes to talk to actual researchers, not communication specialists.

EFFECTIVENESS IN DISSEMINATION ACTIONS

Training scientists on effective communication has never been attempted previously. This should be tried in order to gain effectiveness in the dissemination actions. As researchers understand their work, they are the best placed people to communicate it to others. Clearly, they need the necessary communication skills to disseminate their work to targets. Scientists undertaking dissemination activities reduce misinterpretation.

Once researchers understand the importance of dissemination for their work, issues regarding Intellectual Property rights are more likely to be resolved. Promoting researchers' communication skills improves engagement with businesses and other funders when searching for project funding.

Some challenges

This initiative cannot be applied to all scientists as not all of them have interest or not all disciplines, i.e. fundamental research, they have an urgent need to do it.

The deployment of this initiative needs resources and it is not clear which entity should provide them. Not all scientists need to learn communication skills; it depends on individuals.

The training initiative can be framed according to the lifetime of a research project, from the idea of the project until the production of outputs and project finalisation. Therefore following steps can frame the contents of the training initiative:

KB TRAINING INITIATIVE FOR SCIENTISTS

MODULE 1: From the call identification to proposal writing

This module would explore issues to take into account when a research project is prepared in order to have "dissemination" well integrated in the course of the project.

The contents of this module explore answering the following questions:

- How to analyse who are your stakeholders? (partners, beneficiaries, regulators, users,

funders, civil society, etc.). Tools for social characterization.

- How to ensure your consortium is balanced?
- How does dissemination need to be integrated in the project work flow (a separated work package, a transversal activity at all work packages, etc.)?
- How could stakeholder involvement improve the research process?

MODULE 2: From the project beginning to the end of the planning stage

In this module, the main aspects on dissemination during the development phase of the research project are explained. Mainly, contents address the following issues:

- How to build the dissemination strategy for the project? How to plan and allocate resources for developing a dissemination strategy for the whole project (networks, web, contacts, etc.)?
- How to engage with stakeholders? (To provide scientists with participatory/engagement methods, contacts with sociologists, etc.)

MODULE 3: From the operational stage to the output dissemination

During this phase, the training initiative would provide possible mechanisms to maximize the transfer of research results and spread the message.

- IDS preparation
- How to plan a dissemination action (Framing an event organization)
- Improving accessibility of your knowledge, going beyond of peer review articles
- *How to talk with, how to write* to others than your partners

MODULE 4: From the end until the long term dissemination

One of the main deficiencies in the dissemination process is that the steps scientists need to follow are not included in a long term plan. So this module provides channels and potential actions that could be developed once the projects end. Thus, responses are offered to questions such as:

- How to stay accessible to keep on talking about the results of the project?
- How to monitor if your results are being used (uptake)?
- How to maintain communication channels?

Proposition 2 - A knowledge brokering service for uptake of research results

This proposition is related to one of the lessons learned frequently cited by our stakeholders: knowledge exchange should be done by specialists and offered to scientists as a service to include in projects. This sort of service should partially include the objective of the previous one but it might also go beyond it as it should include the process of sharing knowledge with the targets and further work with them.

Benefits of this service

INTEGRATION OF SKILLS

Some researchers may be unwilling to be trained and to develop communication skills. However, researchers have capabilities and skills that are more valuable than their intents to communicate. Therefore they should maintain their attention on doing research, which is what they do best. Some projects lack the personal and project-related resources for effective communication, therefore they might need to involve KB to gain effectiveness in their dissemination process.

The involvement of knowledge brokers does not mean that all communication activities should rely on them; knowledge exchange should be a participatory process involving everyone in the project team.

ENSURING A TWO-WAY PROCESS OF COMMUNICATION

Knowledge exchange is a two-way process of communication. Knowledge brokers can keep better contact with the other societal systems: the practitioners. Due to the difference of their respective societal systems, it is particularly difficult to bring scientists and policy makers closer together. Experience suggests that most scientists are skilled in communicating with other scientists but some experience difficulties when talking effectively to end-users such as policy makers, lawyers, farmers, and businesses. The knowledge broker takes an intermediary role that can bridge the gap between the policy system and the scientific system.

USE OF APPROPRIATE LANGUAGE LEVEL

A lack of appropriateness in language by scientists has been widely recognised by other communities, thus the 'vocabulary translation' is missing. KB can better produce messages to target audiences as they are devoted to engage with them. KB can reframe the science subject in such a way that it can appeal to stakeholders.

Some challenges

To ensure a sound cooperation between knowledge brokers and scientists and avoid misinterpretations.

In case of further development, the WaterDiss2.0 Knowledge Brokering service will use the main toolbox for dissemination produced during the project. The table below summarizes the main components of this potential service.

WATERDISS2.0 KB SERVICE
Who integrates the service?

- KBNet which is made by knowledge brokers.

What are the services?

- Organisation of participatory and strategic events
- Involvement in research and innovation consortiums.
- Provision of contacts for participation in research and innovation consortium.
- External reviewer for bids about dissemination and uptake in research projects.
- Preparation of dissemination strategies.

What are the tools?

The **WaterDiss2.0 Toolbox** will be used as main methodology to deploy this service in a continuous process of updating and learning. Those methods are the recommendations, indicators of dissemination and uptake, dissemination tools (EWC, event protocol, guide for speakers) and the IDS. All of them to be organized according to the targets:

a. Knowledge Makers and Funding organizations: Tips to write research proposals with effective dissemination and uptake actions. (Recommendations check list and IDS).
b. To other knowledge brokers: training recommendations, guidelines, fostering capacity building in KB approaches.
c. To knowledge users: recommendations to improve uptake of new research results and development of policy briefs, update of existing databases of research results.

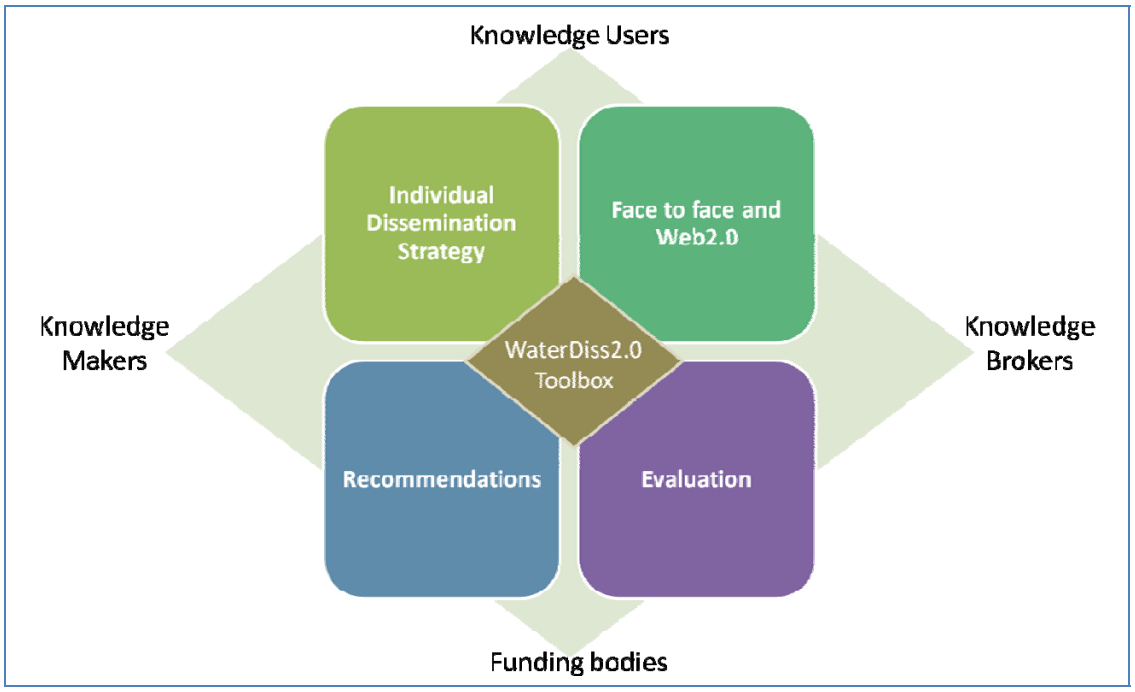

Figure 3. The WaterDiss2.0 Toolbox

CONCLUSION

The need to become knowledge brokerage a practice has been commonly shared by all actors involved in the WaterDiss2.0. So far it has been applied at specific projects. Knowledge brokerage must have a much clearer and more visible role than it has today. Moreover, knowledge brokerage must be able to adapt to different conditions, specific organisations, and varying local and national contexts. Changes in the societal behaviour of the water sector would also be part of such specific results.

During three years WaterDiss2.0 has been closely working with researchers from the water sector not only to analyse and support their dissemination activities, but also to better understand their reasoning when disseminating their research. WaterDiss2.0 also learnt more from the behaviour of research findings' users at the time of organising dissemination activities. Observations from those three years are various and diverse (more information on the project impacts at Deliverable 4.3), however the general conclusion from all those events has been the imperative need to set up knowledge brokering approaches within the research schemes.

WaterDiss2.0 could identify a lack of researchers' skills in communicating science, a persistent problem not only from the water sector. Some of them are claiming for more assistance in the communication actions, and all actors recognized that what has been done at the moment is not sufficient.

Practical tools to improve dissemination have been further developed based on work undertaken in WaterDiss2.0, i.e. Individual Dissemination Strategy, evaluation indicators, recommendations, etc. These tools aim to answer to the urgency of adopting practical approaches to dissemination planning, so that research findings are successfully used.

Despite WaterDiss2.0 tools (e.g. the IDS) can be self contained without guidance, in most of the cases guidance is needed or is recommended to be context wise adapted. The WaterDiss2.0 as a service could approach the fulfilment of this need, by first encouraging the use of KB approaches within research projects and in the configuration of the research agenda. Secondly, WaterDiss2.0 as a Service can safeguard the uptake of the recommendations produced after the project end by each of the stakeholders. The focus of these recommendations is the improvement of the science communication in the water sector, which includes the process that begins with the bids configuration and responding to research calls and ends with the finalization of research projects and uptake of findings. The recommendations are further explained in the project Deliverable 4.5.

Two propositions have been developed resulting from the discussions at the WaterDiss2.0 workshops. Those two ideas have been further discussed and validated, as two potential activities to frame the WaterDiss2.0 service idea. The first proposition would respond to the

need of improving communicating skills of scientists by providing a capacity building training dedicated just for researchers. The second proposition responds to the need of having a horizontal action to the research activity, a KB action for the water research area, providing not only support for the researchers but also to the funding institutions and also supporting target users to better engage in the process.

In shaping WaterDiss2.0 as a service it is important to conceptualise it as a participatory process providing a social learning approach and ensuring mechanisms and methods that ensure a two-way direction of the knowledge flow.

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