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WaterDiss2.0

Dissemination and uptake of FP water research results

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Recommendations for improving research dissemination tactics

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I. INTRODUCTION

Waterdiss2.0 project

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

WaterDiss2.0 aimed at improving the uptake of water-related research results from EU funded projects to support the implementation of the European water policy, in particular the Water Framework Directive. In order to support the dissemination and uptake of FP water research results, the 8 partners¹ of the consortium developed a ‘toolbox’ of methods aimed at improving the uptake of water-related research results from EU funded projects to support the implementation of the 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.

2. Aims and scope of this report

This document reports on recommendations and suggestions that can be concluded from the findings of the project to date. This work is framed under the *Work Package (hereafter the WP) 4- Assessment of Impacts*.

The objective of WP4 is to assess the impact of WaterDiss2.0 activities and to test the project’s added value. In doing so, this work package assesses whether the project is maintaining and enhancing the effectiveness of the Science-Policy Interface (hereafter the SPI) and if it is contributing to a better marketing of research results as well as if it is creating innovation through a continuous learning process amongst all partners and stakeholders.

A project assessment (Task 4.2 of the WP4) has been conducted in accordance with the project’s timeline. The assessment brought together the process and the results achieved during the project. The evaluation in Task 4.2 monitored the project results based on a set of indicators, and forecasted future trends and needs on next project actions.

The objective of this assessment is to produce recommendations and guidelines for future dissemination of research outputs, derived from a need for better and more effective uptake

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)

of water research results. As such, WP4 integrates findings from the above mentioned Task and translates them into recommendations to be taken up from different target groups.

In parallel, this document reports the contribution of WaterDiss2.0 to the effectiveness of the SPI as knowledge brokerage initiative. Additionally, it draws overall conclusions on WaterDiss2.0 activities and the support this project has provided to its targets by integrating the results from the assessments of project's impacts.

The evidence gathered from the project activities to date is reported in this document in the form of a set of recommendations. A first set of recommendations is designed to improve the content of EU calls and funding programmes, as well as the process of writing research proposals in the field of water. Another set of recommendations concerns the lifetime of individual research projects. The last set of recommendations is related to the period after a research project is finished, when results are ready to be used.

This report is organised in four main chapters including this introduction. Chapter 2 provides details on the WaterDiss2.0 framework within the SPI as a knowledge brokerage initiative. The methodological basis to gather recommendations to improve this interface is explained in Chapter 3. Chapter 4 presents a set of recommendations for improving the uptake of research results in water and work towards a knowledge brokerage approach in the research of the water sector. Finally, a set of four key recommendations addressed to the European Commission are presented in form of a statement resulting from the Final Workshop of the project.

3. WATERDISS2.0 as a Knowledge Brokerage activity

The WaterDiss2.0 project is dealing with the Science-Policy interface (hereinafter SPI), and in particular, with the effectiveness of transfer of research results from science to policy and practice in terms of timing. This section aims at gaining a better understanding of the interface between science and policy in the WaterDiss2.0 context by looking first at the SPI concept in the water sector and how it has been analysed in previous related studies.

Water Management and its supporting knowledge are on a harmonised path among European Member States through the implementation of the Water Directive Framework (WFD), which came into force on December 22nd 2000 (Directive 2000/60/CE). The WFD has laid down objectives for water bodies to be achieved by 2015, such as: (i) good status of surface, groundwater and coastal waters; (ii) focus upon safeguarding ecosystems; (iii) commitment to get the public involved and disseminate information. These objectives have revealed common needs for water knowledge and since the beginning of the 2000's, induced water managers and policy makers to entirely develop new approaches and operational modes, thus triggering the complete renewal of research demand. As stated by Fundetec 2007 in its final report 'the typical length of time needed to complete the development cycle (in the water sector) is 10 years'. This means that research commissioned today will impact water management practices within about 10 years, far after the next milestones of the WFD (2015, 2021).

The role of science in policy and decision-making has been an issue of intensive debate over the past decade. In this context, the concept of knowledge brokerage was developed by contemplating issues of communication, interaction, sharing of knowledge, contribution to common understandings, as well as to effective and efficient action (Sheate et al, 2010).

The gap between research and policy has revealed an overarching need for new skills aiming at better facilitation, develop understanding and support knowledge transfer. The limited effectiveness in this process can be attributed, among others, to shortcomings in the uptake of new knowledge. Much information that is produced is never used by policy-makers (In't Veld R et al 2000). This context is precisely the leitmotiv of the FP7 project WaterDiss2.0 (2010-2013).

Van den Hove 2007 defines the SPI as a social process which encompasses relations between scientists and other actors in the policy process, and which allows exchanges, co-evolution and joint construction of knowledge aiming at enriching decision making.

Maximizing connections between research and policy require mechanisms to improve how knowledge is flowing among them. However, today the flow of information cannot be seen as a linear process. It has to be taken as a complex, interactive, multidirectional exchange of

information (Caplan 1997, Figueroa et al 2002, van Kerkhoff and Lebel 2006). The SPI is thus a complex dynamic system where many interactions at different levels of knowledge take place.

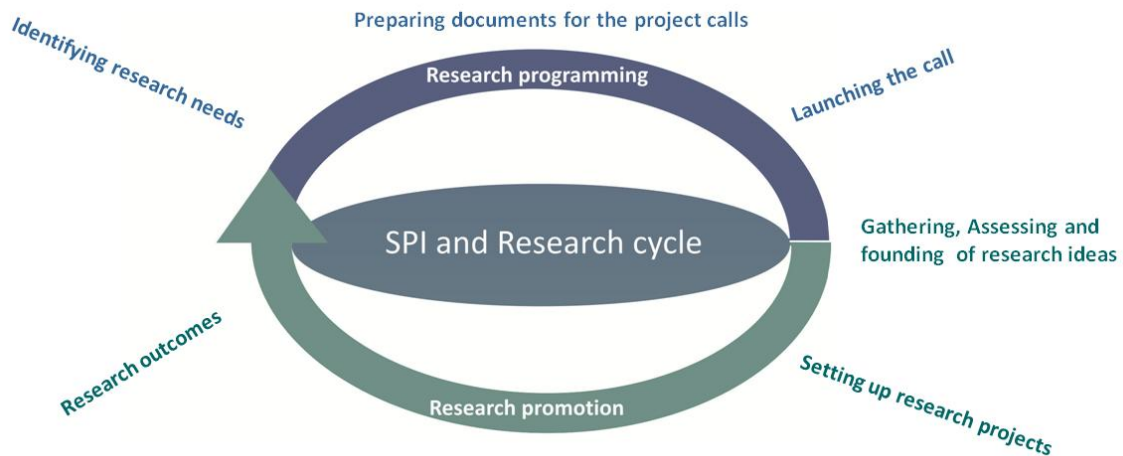


Figure 1. SPI and the Research cycle.

Amorsi, N. et al 2009 describes some particularities of the SPI in the water sector (considered in the context of the implementation of WFD), which are summarized as follows:

- There is a convergence on differences in dynamics, expectations and language. The scientific community normally offers new knowledge and evidence, but also creates new questions demanding more research. Policy is governed by a constrained timeline, in this case the timeframe of the water directives. There are also differences in the language and understanding of conceptualities.
- The complexity of integrated water management in general and the implementation of the Water Framework Directive are a challenge for communication. In the water sector, there is a large variety of scientific disciplines, geographical sizes and contexts and thus, different societal dynamics (institutional, cultural settings, diverse stakeholder integration).
- The lack of an overview of existing knowledge, and the fact that this knowledge is not always appropriate to be taken up by policy.
- The difficulties in aligning research with applications which cover the needs of policy.
- Due to the focus on implementation of the WFD, there is an urgent challenge of programming research that meets the policy needs.
- At the SPI level there is one fundamental problem related with the confluence of different drivers. Policy makers are driven by societal needs and strategies, whereas research is normally motivated by curiosity.
- Several mechanisms are in place to improve the water SPI and thus, the implementation of WFD.

Science	Policy
Understanding the world	Managing the world
Uncertainty is a fact	“Yes” or “No” decision wanted
Clientele diffuse or not present	Clientele present and insistent
Failure and risk acceptable	Failure and risk intolerable
Underestimate the complexity of policy-making	Overestimate the precision of science
The other side ignores the hard evidence	The other side should learn about process and context

Table 1: Differences in world views of the actors in the Science-Policy-Interface. Source: Saner (2007).

Table 1 suggests divergences in the points of view of the actors’ world in the SPI. These are likely to influence their receptiveness. When communicating to policy makers, one needs to have in mind the circumstances under which policy makers generally make decisions. They are influenced by factors such as their own expertise, personal and external judgment, lobbyists and pressure groups, resources, habits, values, traditions, or party affiliations. The communicated message has to compete with these other values and is therefore easily pushed in the background. Decision makers also frequently experience chronic pressure to “act” and need therefore to process information quickly and cover wide thematic fields without necessarily having detailed knowledge of every issue.

In the interactions with EU collaborative project coordinators and stakeholders, we increasingly recognized that communication and knowledge brokerage was not a one-way process. We see knowledge brokerage as a process that facilitates the knowledge flow (knowledge seen as research findings) from individuals and organisations to other individuals and organisations with the aim of learning and improving. Throughout this process, knowledge is not static and changes with every new context. 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 a particular effort to identify needs and preferences of the policy and practitioner target groups was made.

Figure 2 shows the frame of knowledge brokerage in the intersection between science and policy and the main connections regarding knowledge flow in a simplified version.

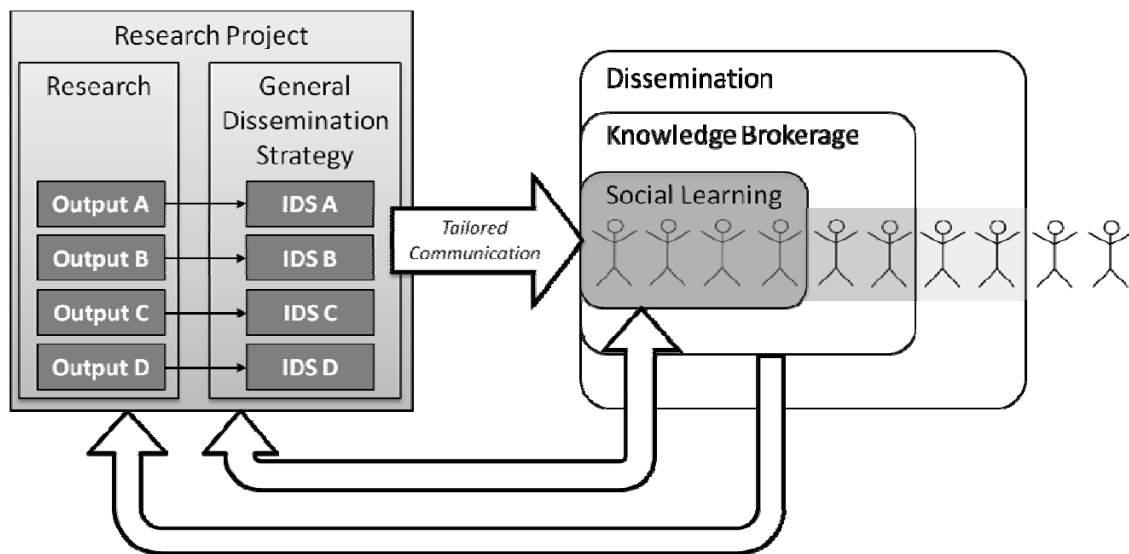


Figure 2. Knowledge brokerage' or 'knowledge exchange' is a two-way facilitated transaction between producers and users of knowledge, intended to improve the diffusion, dissemination and utilization of scientific information in decision making, and to develop strategic relationships between those involved (Stein, Lukat, von Toggenburg, Medina et al. 2014, in preparation).

How science interacts with policy and policy with science is a matter of demand and supply of knowledge. The *PSI-CONNECT FP7 project* underlined in its *Report on conceptual framework for science-policy barriers bridges 2010* that policies are developed to affect decisions at operational level, that in turn will affect conditions of the “real world”. On the other hand, information feedback from the real world is framed into policy problems and needs of more knowledge. These policy needs are translated to the science as questions requesting scientific answers. From the science side, new knowledge is developed and produces scientific results and evidence. It is important to consider the information flow from science to policy development, when providing advices and alerts directly.

Facilitating knowledge exchange is particularly challenging given that the water sector is broad, fragmented and diverse, as indicated in the *Report of the Priority for Action from the 6th World Water Forum SERP10*. Thus, an effective dialogue between the research, industry and policy makers is crucial.

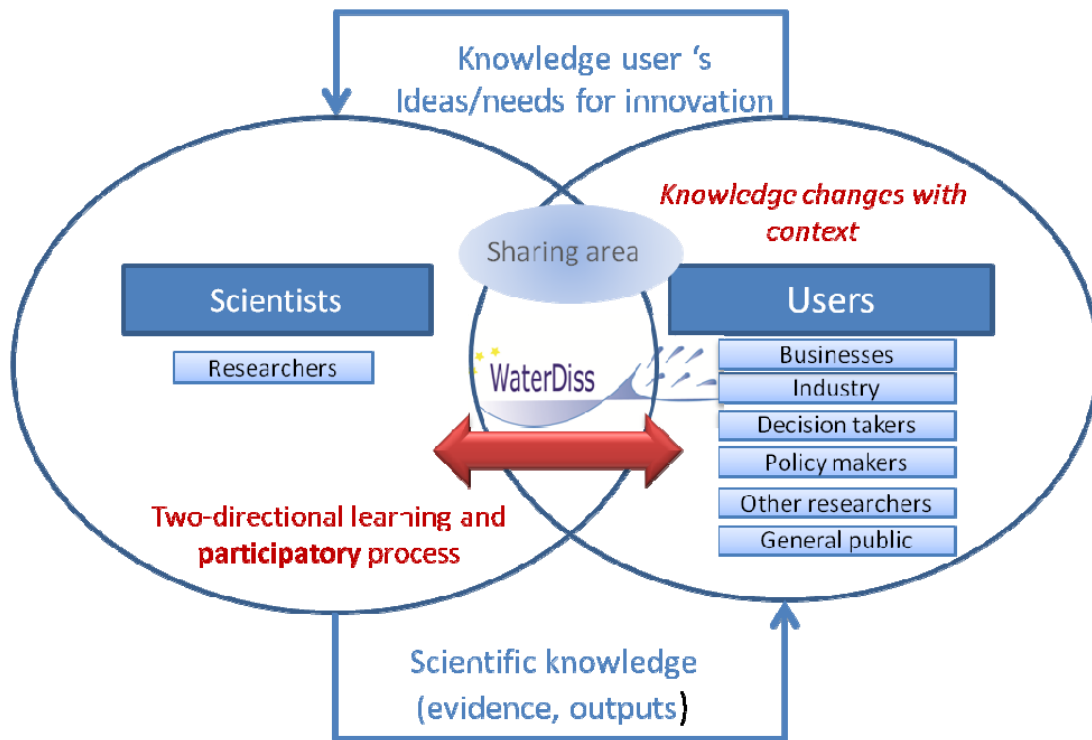


Figure 3: Communication between science and knowledge users as anticipated by WaterDiss2.0.

On the graph above (Figure 3); one can specify the area of activity of WaterDiss2.0. This is where science, which produces outputs, communicates these outputs to practice (users). WaterDiss2.0 supports scientists and knowledge drivers to speed up this process and act as knowledge brokers, basing activities and recommendations on the previously acquired knowledge concerning the communication flow from practice to science.

WaterDiss2.0 is indeed dealing at the level of research projects (especially those in the Framework Programme from the EC), supporting them in some steps of the above figure:

- Assessment of information generated from the project in order to respond to the policy needs.
- Communication of those findings to Policy. Support the existing dissemination activities.
- Facilitating the uptake of the selected output.
- By doing the above mentioned activities WaterDiss2.0 will also ensure and improve the communication with the 'Demand'-side, as we will identify their current needs and try to suit them with the new solutions offered by the research projects.

McNie 2007 states that there is now an emerging awareness that new tools for effective and timely communication of research findings are critically needed. In this sense, WaterDiss2.0 tested and analysed its contribution to SPI and aimed at consolidating an intermediate step just after research closely related to stakeholders.

4. Recommendations, on what?

This section refers to the contextualization of recommendations that WaterDiss2.0 can produce in the water sector. First, the potential audiences in the project are identified, and second, there is an agreement on what the expected contributions for each of the audiences are. This process is carried out while integrating the results of the lessons learned from previous analysis in WaterDiss2.0.

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*).

During this project lifetime, we have gained observational evidence that allowed us to provide some lessons learned and recommendations. During the Final Workshop held in December 2013 in Barcelona, the recommendations were developed together with a number of stakeholders.

4.1. To whom are the recommendations addressed?

The results and activities of WaterDiss2.0 can influence the following groups:

- The **“knowledge makers”**, (namely the scientists). This group involves researchers in consortia of FP projects (possibly also other research funding programmes). This group comprises relevant actors in the field of research, who is producing new outputs and innovation for the improvement of the water sector.
WaterDiss2.0 aims at assisting some of these knowledge makers by developing Individual Dissemination Strategies (hereinafter IDS) for their research outputs.
- The **“knowledge users”**, (namely the policy-makers and practitioners). This target group comprises actors who will use the above mentioned new knowledge from research activities. This group involves:
 - a. Policy makers at local, regional, national and international level.
 - b. Practitioners in the water field (industry).
 - c. Other stakeholders in the water field, such as suppliers of technology, consultancy services, etc.

Even though the WaterDiss2.0 methodology is more oriented at the knowledge makers, its activities directly influence all target groups. An example of the outreach to target groups is the dissemination activities. Evidence from WaterDiss2.0 activities suggests, that the project has an impact on the target group through:

- supporting the provisioning of new knowledge in terms of research outputs from the list of projects we are analysing,
 - a better characterization of targets thanks to the matrix of tools and actors, and
 - an in-depth understanding of the projects WaterDiss2.0 is responsible for and the development of IDS, which guides projects to increase the uptake of their research results.
- The European Commission and other **funding bodies**. This group refers to the developers of strategic research agendas and providers of funding. The final results of WaterDiss2.0 aim at providing guidelines on core elements to better draft dissemination strategies for future research projects that answer the funding calls, which might also help the proposal evaluation process.
- The **Knowledge brokers**², including SPI groups (Water SPI cluster³, CIS-SPI group⁴)
- WaterDiss2.0 keeps permanent contact with this group. The results from WaterDiss2.0 activities include the following achievements: exchange of new experiences and evidences and the provision of new knowledge (Outputs list, contacts, etc.) and methodologies and tools.

² Brokering is defined as going beyond knowledge transfer, signifying people who act as catalysts and 'search out knowledge, synthesize research and scan for best practices and examples from outside their organisations' (CHSRF 2003).

³ <http://www.spi-water.eu/spi-water.cgi>

⁴ <http://www.iwrm-net.eu/node/14626>

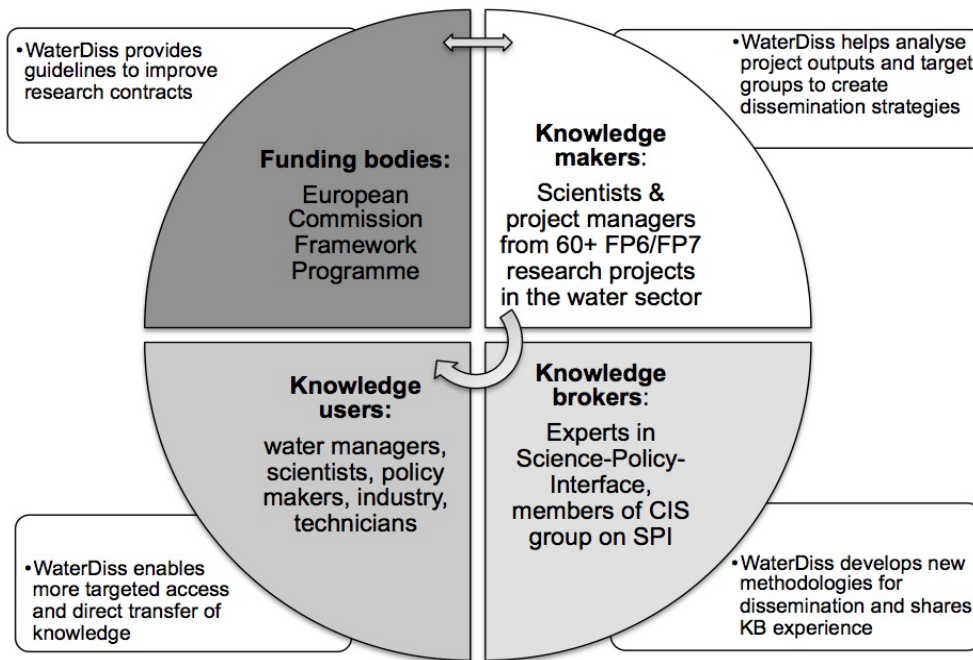


Figure 4. WaterDiss2.0 target groups and the project's contributions (Amorsi, N.; Medina B. et al. In preparation)

4.2. Recommendations, on what?

The WaterDiss2.0 project activities generated evidence and observations about dissemination of European-funded water project findings from project partners and a wide variety of other stakeholders. This evidence was translated into the form of recommendations arising from the integration of the assessment of project impacts. These have been clustered according to their relevance at different stages of research projects, as shown in Figure 5.

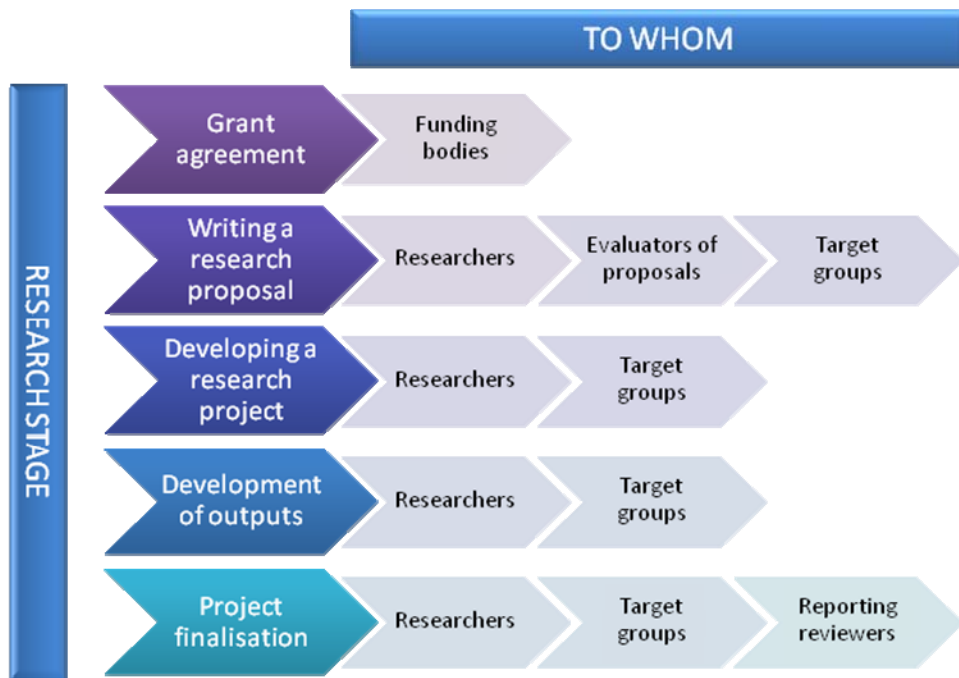


Figure 5 It is outside the scope of WaterDiss2.0 to produce tools on how to better identify market needs. However, the project aims to analyse the needs of the potential users groups and provides knowledge for both, the researchers and the practitioners /policy-makers on their different needs and attitudes and how to overcome these. WaterDiss2.0 tries to reduce the distance between the two societal systems concerning the knowledge transfer process, by promoting research outputs, collecting feedback, presenting knowledge in an innovative way and providing all stakeholders with a platform for communication, etc. In that sense recommendations are provided on how to better reach the groups, which channels match better, etc.

All issues mentioned above are transversal to the lifetime of a research project. Therefore, recommendations are clustered in themes according to the timing of research projects as shown in Figure 5.

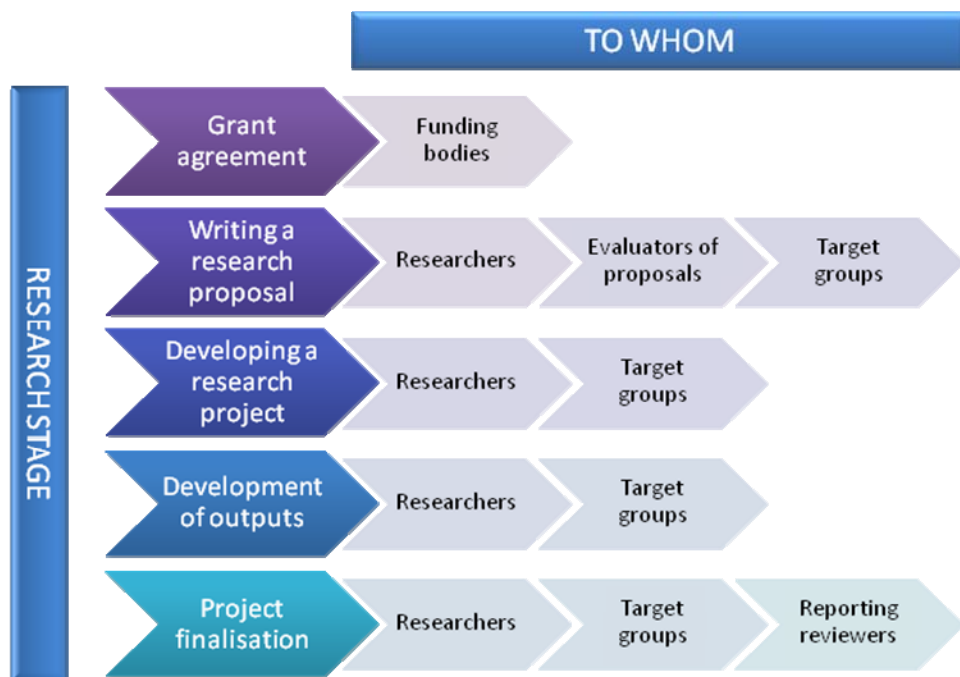


Figure 5

Recommendations on this are set at the 3 stages of a research process:

- a. When writing the proposals
- b. When planning the dissemination strategies
- c. When implementing the activities

The figure below shows the match between our target groups and our expected outputs and results.

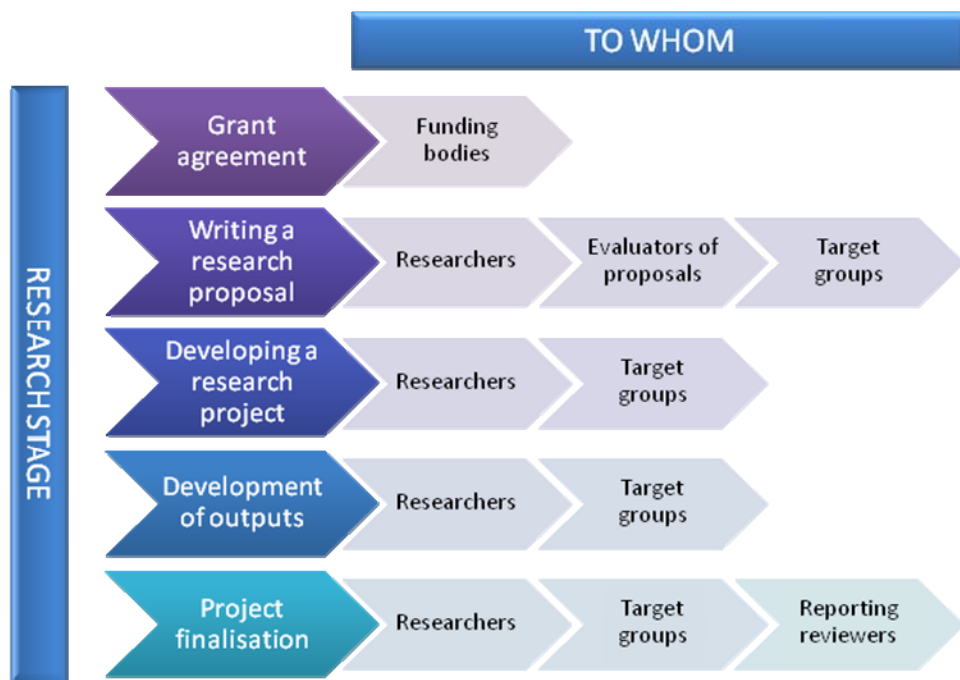


Figure 5. Organisation of Waterdiss2.0 recommendations

During the Final Workshop, a working session was organised to outline and validate WaterDiss2.0 **recommendations for future projects and grant applications**. Mediated break-out discussion groups led to a structured gathering of opinions from the stakeholders. As a result, the following sections provided the validated recommendations by the stakeholders and some additional recommendations coming from project partners' observations and lessons learned.

Finally, **specific key recommendations** are addressed to the European Commissions to be integrated in research contracts from approved proposals of funding programmes, aiming at minimizing obstacles and raising the awareness of the research teams.

5. The List of Waterdiss2.0 Recommendations

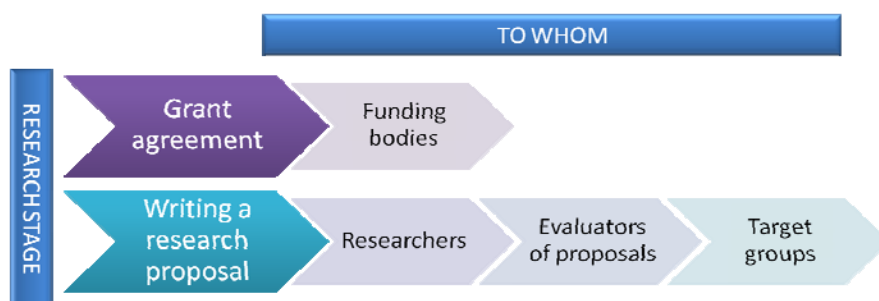
This section delineates a range of recommendations for the success of dissemination activities of research outputs and their further uptake. The insights gathered through the project activities generated evidence and observations by WaterDiss2.0 project partners. Moreover they provide useful guidance that project tools use across a broader spectrum of our scope.

The evidence gathered by the project activities are presented here in the form of recommendations.

5.1. When writing calls/funding programmes and responding to research proposals

A first set of recommendations is designed to improve the content of EU calls and funding programmes, as well as the process of writing research proposals in the field of water.

Recommendations in this section are clustered in three major themes. The first ones were related to obligations that should be included in the text of the calls and the grant agreements. The second ones talked about the phase for evaluation of proposals by the European Commission. The third theme referred to the stage at which proposals are written.



✓ Obligations in the calls

- RECOMMENDATION 1 - INVOLVE A DISSEMINATION EXPERT WITHIN THE PROJECT'S STEERING COMMITTEE.

Context – The WaterDiss2.0 analysis of dissemination of research projects showed a frequent lack of involvement of dissemination experts within their executive board, or the person in charge of dissemination was not an expert in science communication. Research projects should, therefore, include a dissemination expert in their executive board and this should be provided in the individual description of participants contained in the proposals.

Targeted to – Researchers at the time of writing proposals and funding bodies, as they have to evaluate the applications.

- **RECOMMENDATION 2 - GUIDE PROJECT COORDINATORS IN THE DRAFTING OF DISSEMINATION STRATEGIES, BY PROVIDING A GUIDE.**

Context – The development of a project dissemination strategy should be led by experts in the knowledge brokerage field. However, there are some general guidelines that can be provided to project coordinators in order to include them in those dissemination strategies (including, template on individual dissemination strategy, policy briefs, WaterDiss2.0 recommendations, indicators for effective dissemination, etc.). Stakeholders involved in WaterDiss2.0 activities frequently cited the need of getting specific guidelines from the funding organisations that ensure the development of essential activities.

Targeted to – Project coordinators and WP leaders when writing proposals and at the beginning of the project; and funding bodies, as they have to evaluate the applications.

- **RECOMMENDATION 3 - CREATE A CENTRAL DATABASE OF RESEARCH NEEDS, INCLUDING NEEDS EXPRESSED BY STAKEHOLDERS IN THE WATER SECTOR.**

Context – Stakeholders involved in the events held by WaterDiss2.0 frequently cited that the identification of research needs is not considered a transparent process and that normally researchers access to them just when the calls for projects are announced. Additionally, not all water related stakeholders have a direct place where to express their research needs without attending to events or being part of general surveys. A direct and centralised hub for research needs would enhance the visibility of them and should serve as a connector to the development of research proposals.

Targeted to – Funding organisations should promote the development of this initiative.

✓ **Evaluation of proposals**

- **RECOMMENDATION 4 -DISSEMINATION SPECIALISTS SHOULD BE INCLUDED IN THE TEAMS THAT EVALUATE THE PROPOSALS.**

Context – Evaluating and assessing how dissemination is being tackled in a research proposal needs clear indicators or evaluation framework so that all research proposals are ensuring a knowledge brokerage approach. Evaluators of proposals or project reviewers should receive more guidance on this, for instance a clear list of indicators (see indicators for uptake and dissemination in WaterDiss2.0 *Deliverable 4.3. Impacts*).

Targeted to – Funding organisations should integrate this initiative within their current evaluation protocols.

- **RECOMMENDATION 5 - EVALUATORS SHOULD HAVE A GOOD OVERVIEW OF ALL THE PROPOSALS IN THE CALL, ASSISTED BY A CLASSIFICATION TOOL TO AVOID EXCESSIVE OVERLAP OF PROJECTS.**

Context – This recommendation concerns the need of affording a proper evaluation of proposals to avoid the granting of projects which are repeatedly developing similar outputs. Evaluators of proposals are today independent persons from the EC that are ascribed to the “evaluators call”. EC guidelines on proposal evaluation and selection procedures already exist. Nevertheless, when proposals get successful evaluation score, the evaluators did not have an overview of concurrent results. More guidance and tools on how to avoid the overlap of projects are need at the time of evaluating proposals.

Targeted to – Funding organisations should promote the development of this initiative.

- **RECOMMENDATION 6 - INNOVATIVE MEANS OF DISSEMINATION, AND APPROPRIATE ANALYSIS OF THE IMPACT OF USING THESE, SHOULD BE REWARDED.**

Context - Scientists face a lack of incentives to communicate their research beyond the scientific community because the conventional rewards for scientists focus on publication citations by other scientists, rather than taking up of the outcomes of research in professional practice. The modes of dissemination are theoretically very diverse, but in practice there continues to be heavy reliance on publishing articles in peer-refereed academic journals. Many of these are inaccessible to potential users of findings. Conferences, reports and websites are also almost universally used to 'tell' users about research findings. Innovative ways of communicating and disseminating knowledge can expand the boundaries of research through the creative use of new tools and technologies that enhance dissemination of research findings.

Targeted to – Funding organisations in order to also integrate into their dissemination activities a new activity in rewarding projects that innovate. Knowledge brokers in project consortia who should seek for innovative and effective ways of science communication.

✓ **When writing proposals**

- **RECOMMENDATION 7 - Engage target users in the proposals by direct involvement in the consortium and, preferably, as part of the project steering committee.**

Context - Early and focused engagement with particular stakeholders is less common, and although some projects do seek to involve the general public (particularly local residents and schoolchildren, in river restoration projects, for example), most investigators do not attempt to build a 'community of practice' amongst and with the key stakeholders and users in government and industry. More active styles of engagement, such as interactive workshops rather than conferences, appear most effective at prompting take up and genuine learning for application. Planning this engagement should happen at the time of writing the proposals.

Targeted to – Evaluators of research proposals who should ensure stakeholders’ engagement is taking place appropriately. Researchers during proposals development. Stakeholders, as they need to engage in research projects.

- **RECOMMENDATION 8 - Connect proposed projects clearly and unambiguously with a sector demand.**

Context – Calls for proposals are normally focused on a specific sector challenge or demand, thereby research projects should provide answers to those problems. However, this process needs to be more transparent in a way that a clear and visible connection between research application and an existing demand takes place. Failing in this connection leads to the observations made by WaterDiss2.0 activities, a considerable amount of research findings are answering the same demands and approaching the same problematic and, thus, resulting with similar research findings. They are also facing that their target groups do not show interest on them. Therefore, demands need to be more visible in a database provided by the EC.

Targeted to – The European Commission, as a change of the requirements for Horizon 2020 projects for dissemination and of the system of connection of challenges and research answers.

- **RECOMMENDATION 9** - Include two types of project coordinators: Technical and Dissemination specialists.

Context – Experience within the WaterDiss2.0 affiliated projects showed that the role of the dissemination experts in the project consortia is normally mirrored by the technical activities, and many times relies only in the project coordinator. Dissemination specialists should have more responsibility and leadership in the steering committee of project consortia as this task should be a transversal action through the project planning.

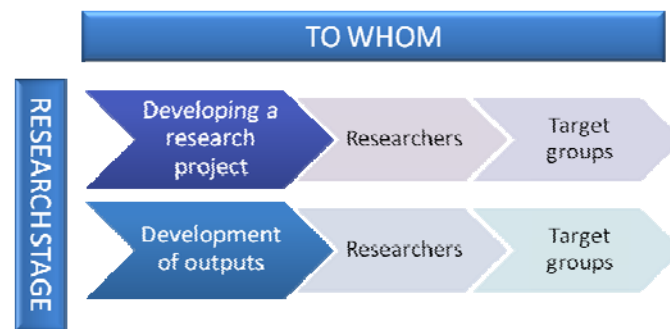
Targeted to – Researchers planning the project consortia when writing proposals.

OTHER RECOMMENDATIONS

- ✓ Include an evaluation kit for dissemination actions when developing proposals.
- ✓ Use WaterDiss2.0 indicators to evaluate proposals and review projects.
- ✓ Build capacity of proposals and project reviewers on how to assess whether a project is properly disseminating and engaging stakeholders.
- ✓ Draft dissemination strategies taking into account the List of Barriers and Facilitators created by WaterDiss2.0.
- ✓ Carefully plan human and economic resources according to the dissemination planning.
- ✓ Analyse the target audience even if you are sure you know them. Early characterization of target groups is important in order to explore and integrate their knowledge needs.
- ✓ Analyse the science-policy interface of each of the projects and provide at the research proposal level specific information.

5.2. During a research project development

Another set of recommendations concerns the lifetime of individual research projects.



- **RECOMMENDATION 10 – Priority should be given to target group identification**

Context – The analysis of FP research projects’ dissemination activities within WaterDiss2.0 showed that the target groups often were ill defined or not sufficiently specified. Effective dissemination is tailored to the needs of target groups. Moreover, the precise identification of the target group and their involvement also supports the adaptation of the output to the target group’s needs. An insufficient identification is one reason for insufficient uptake of research results in the practical realm.

Targeted to – Researchers when fitting the output to the needs of the target group and when designing the dissemination strategy for their output.

- **RECOMMENDATION 11 - Creating ownership: Including stakeholders (=target group) into the projects from the beginning.**

Context – The WaterDiss2.0 analysis showed that uptake of research outputs was low because target groups were not included as stakeholders in the development process of the project and, therefore, the development of the output. As the worldviews of researchers and their target groups (e.g. policy makers, water treatment plant operators) differ tremendously, the inclusion of target groups as stakeholders in the project process creates ownership for the research outcome. The outcome is well adapted to the needs of the target groups and thus uptake is enhanced.

Targeted to – Researchers during project development and design of the output, stakeholders, as they need to engage in research projects.

- **RECOMMENDATION 12 - Creating a dialogue between stakeholders and the project consortium**

Context – Experience within the WaterDiss2.0 affiliated projects showed that the type of inclusion of stakeholders shows different impacts. Involving stakeholders into discussions with the project consortium regarding the research direction creates on the one hand a common point of view for the researchers as well as the stakeholders. On the other hand the research

effort is fine-tuned with the target group's needs. Asking stakeholders about the way they would like to be communicated with increases the impact on this target group.

Targeted to – Researchers during project development and design of the output, stakeholders, as they need to engage in research projects.

- **RECOMMENDATION 13** - Promoting the use of existing central knowledge hubs for information exchange (e.g. CORDIS)

Context – All FP 7 projects ought to include in their dissemination activities a project website. This led to a vast amount of project websites. Knowledge users are frequently overwhelmed with this supply. It is necessary to decrease the information overflow in order to increase uptake by target audiences. Therefore, efforts should be coordinated for publishing information at one central knowledge hub. CORDIS could be further developed to this aim. This platform would also be maintained beyond the project run-time and would thus establish a more sustainable information policy.

Targeted to – The European Commission, as a change of the requirements for Horizon 2020 projects for dissemination via a website is needed.

- **RECOMMENDATION 14** - Ensure communication activities include k*⁵ (knowledge brokering, translating and disseminating).

Context – Dissemination is included in the Description of Work in all FP projects. However, its execution is, in most of the cases, a public relations work. These activities neglect that the communication exercise needs to bridge two different world views (science and practice). Therefore, k* activities are needed to increase uptake of the research outcomes. K* activities include knowledge brokering (a two-way communication process between stakeholders and knowledge holders), knowledge translation (the adaptation of language to the target group of the message) and dissemination (the tailored and targeted distribution of information).

Targeted to – project consortia when designing and executing dissemination activities.

- **RECOMMENDATION 15** - Ensure a common understanding of language among all stakeholders

Context – As world views differ between stakeholders, the understanding of terms is likely to differ too. In order to avoid miscommunications, project relevant terms should be defined in the beginning of a project, including all stakeholders. This common understanding is enhanced due to the lack or proper involvement of external stakeholders.

⁵ Kstar - K* is the collective term for the set of functions and processes at the various interfaces between knowledge, practice, and policy. K* improves the ways in which knowledge is shared and applied; improving processes already in place to bring about more effective and sustainable change (Shaxon et al . 2012)

Targeted to – project consortia and related stakeholders throughout the project.

OTHER RECOMMENDATIONS

Concerning Output oriented dissemination

- ✓ Disseminate outputs ready for uptake, therefore to draft guidance on a check list to identify the readiness of a research output to be taken up.
- ✓ Use IDS to plan the dissemination of your results
- ✓ Analyse and inform on the readiness of an output to be used, if need explain what are the next steps to be further developed.

Concerning dissemination practices

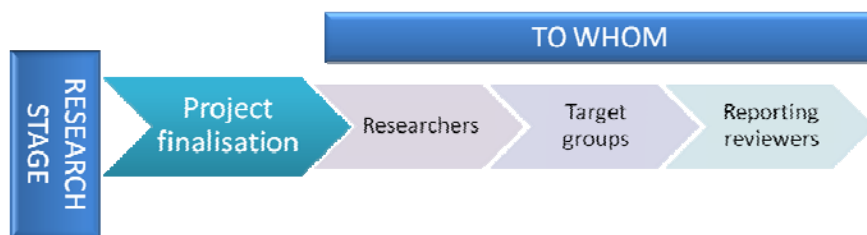
- ✓ Allow a certain level of flexibility as this process involves the social context and is very dynamic and might change the project's needs
- ✓ Remind yourself and others, that events are not the unique way to communicate –to reach target audiences it is important to identify and use the existing dissemination channels and the ones the target users are using.
- ✓ Adapt your dissemination messages should be adapted according to the output/content to be disseminated and to your audience. Anticipate your messages before events take place.
- ✓ Use Communication experts to support the identification of final users, to better suggest how and when to launch the dissemination strategy, to better use Web 2.0 tools, etc.
- ✓ Foster the use of Web 2.0 tool. However the use of Web2.0 tools requires more time for a wider implementation. Some actions can maximize their use: if communication experts assist web2.0 users on a regular basis. Use communication means which foster dialogue, multi-way communication flow of the knowledge, skip from one-way methods of communication.
- ✓ Develop trust among project participants and stakeholders. More active styles of engagement, such as interactive workshops rather than conferences, appear most effective at prompting take up and genuine learning for application.

Concerning target groups

- ✓ Enhance personal relationships with target audiences during project lifetime. Go beyond their invitation to consortium meetings.
- ✓ Increase the collaboration with professional clusters and similar projects

5.3. When research is completed

Last set of recommendations are related to the period after a research project is finished, when results are ready to be used.



- **RECOMMENDATION 16 - Freely accessible and searchable EC-sponsored repository for research results and associated information.**

Context – Information from research projects, especially concerning research findings, should be stored in a way that has sufficient functionality to enable researchers to identify appropriate material and gaps in knowledge. EC should ensure repositories of research results for long-term availability of information rather than encouraging new knowledge brokerage projects which create new repositories that are no longer used. Huge amounts of information are stored on many different websites, and there is no common means of access nor a widely-used repository to serve enquirers. Some valuable material is lost altogether. Therefore, EC should preserve long-term information from research projects, and availability of the research outputs should be encouraged by the EC.

Targeted to – The European Commission, as a change of the requirements for Horizon 2020 projects for dissemination via a website is needed.

- **RECOMMENDATION 17 - Encourage a ‘confederation’ of recognised European research centers to interchange results.**

Context – This recommendation is a consequence of the previous recommendation as not only information should be stored but it also needs to be changed towards the “sharing knowledge” approach. Our experience resulting from the analysis of recipients of research shows that repetition of similar approaches and similar outputs resulting from research are taking place at some water sectors.

Targeted to - Researchers and stakeholders, as they need to exchange their knowledge.

- **RECOMMENDATION 18 - Projects should allocate funding for dissemination of research findings after the end of the research phase of the project, by engaging with technology platforms during and after the project.**

Context – Availability and dissemination of research findings is limited when a project ends, as project consortia move away and there is a lack of allocation of resources. Observations resulting from the WaterDiss2.0 activities showed a lack of continuation of dissemination activities when projects finished. Contractual obligations for research projects should strengthen the inclusion of a long term condition within their work plan and budget schemes as a project goal in its own right. After the projects are completed, the incentive to continue to disseminate research findings is very limited, and the opportunities to do so are infrequent or

inconsistent. Therefore, EC should improve and centralise the communication channels and information systems in knowledge hubs and dissemination platforms.

Targeted to – The European Commission throughout the process of setting contractual obligations in the bids.

- [RECOMMENDATION 19 - Maintaining relations with longstanding stakeholders, such as river basin commissions or their equivalent.](#)

Context – Raising awareness amongst decision makers was identified as a key issue to allow stakeholders to benefit from scientific research in the water sector. Beyond the identification of stakeholders and their involvement in the research projects course, engagement with key stakeholders needs to be sustained over extended periods.

Targeted to – Researchers and target groups as they should reinforce their connections and ways of dialogue.

- [RECOMMENDATION 20 - Making better use of connections with existing and ongoing professional and social networks.](#)

Context – Networks, clusters, professionals associations, etc. are existing initiatives which are providing a networking arena to foster connections between different actors. However, researchers are not benefiting from this long term service to promote their research and to reach their target users even after the research project ends.

Targeted to – Target users should more frequently approach research, specially existing networks.

- [RECOMMENDATION 21 - The Commission should consider funding specific dissemination activities based on suites of completed projects, such as international study tours, group visits to pilot sites and educational or training activities.](#)

Context – The analysis developed by WaterDiss2.0 of finished projects funded by the framework programme had as a persistent problem: the lack of continuation of dissemination activities after the projects ends. The main reason is the lack of resources to further work on the promotion of the research results. A horizontal activity that would enhance finished projects to keep on promoting their research results should be encouraged and tackled by the funding organisations, which are relying this activity to project consortia.

Targeted to – Funding organisations that should encourage finished projects to keep on promoting and disseminating research results.

OTHER RECOMMENDATIONS

Concerning EU dissemination means

- ✓ Improve existing repositories of information and convert them into interactive tools (not just one way communication).
- ✓ Include a Dissemination Officer at the EU.

Considering the long-term scope of the research outputs

- ✓ Elect project champions that achieved uptake of their research results. Enhance the visibility of uptake status of research results.
- ✓ Develop a business case or develop an implementation strategy for research results once project is finished

How to enhance SPI principles

- ✓ Keep on funding brokerage and dissemination projects and projects contributing to enhance the effectiveness of the SPI.
- ✓ Be more present at policy –science workshops and promote the participation to SPI events at all levels, not only European.
- ✓ Create a database of dissemination experts.

6. Recommendations to the European Commission

The following statement contains a set of four key recommendations, which are concerned with the needs of stakeholders and the potential actions by the Commission to improve dissemination of research findings in the water sector and elsewhere. This statement resulted from the discussions and debate during the final WaterDiss2.0 workshop (Barcelona 2-3 December, 2013). It was an agreed statement from participants, addressed to the Commission.

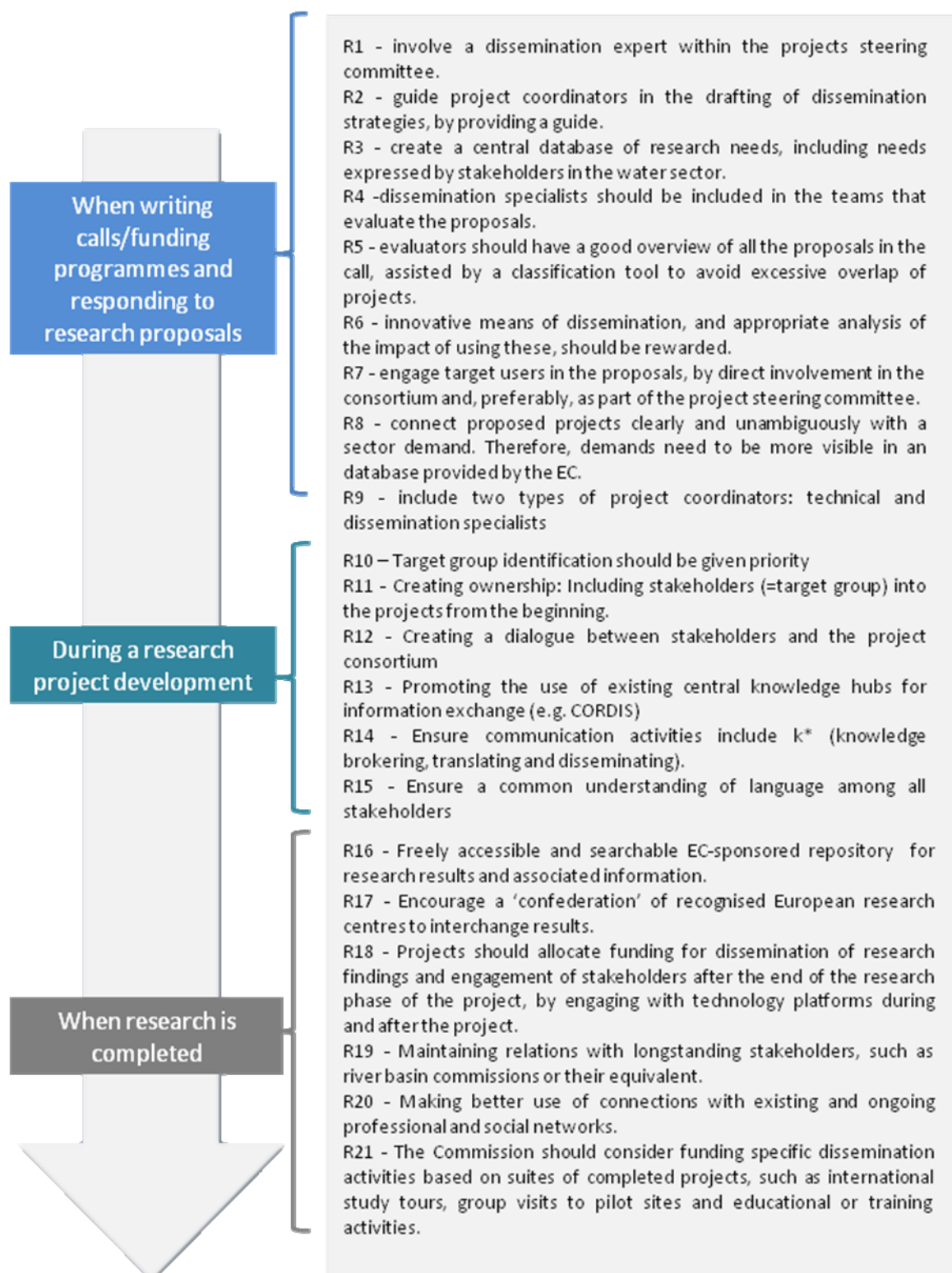
Recommendations to the European Commission

1. Conduct a review of outcomes of completed lines of funding to consider lessons learned from projects (including on the effectiveness of knowledge brokering), and to avoid duplication of effort in future programmes and projects. Specifically:
 - Designate a senior project manager for project coordination at the EC to transform derived knowledge from programmes and projects into information accessible to end users.
 - Specify a small number of managed and accessible repositories for research outputs and logging of end user needs.
 - Consider rebalancing the budgets of whole programmes to reserve an element for knowledge exchange during the life of the programme and beyond.
2. Ensure that every call includes a requirement for knowledge brokering to be identified explicitly within project descriptions.
3. Ensure adequate funding is provided for the full suite of knowledge brokering activities including knowledge dissemination, translation and brokering by rebalancing budgets of European calls.
 - Consider such rebalancing at programme and/or project level as appropriate.
4. When reviewing bids, ensure that adequate attention is paid to knowledge brokering activities within the proposed programme of work.

Specifically:

 - Generate an expectation that knowledge exchange activities are specified in some detail.
 - Consider specifying the appropriate proportion of funding to be allocated to such activities within a project.
 - Consider specifying an appropriate proportion of the project funding for knowledge exchange activities beyond the end of the research timeframe.

7. Overview



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