Good European Practices for Stakeholder Involvement – Lessons from Real Planning Processes

Case-studies and Experiments

WorkPackage 5 report of the HarmoniCOP project –

Harmonising COllaborative Planning

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PREAMBLE

The increasing importance of stakeholder and public participation in river basin management puts increasing demands on the type and the role of IC-tools. On one hand information must be accessible for different non-expert groups. On the other hand IC-tools are not only a means for transferring information but are instrumental in shaping processes of social learning and communication in a network of stakeholders in a river basin.

The HarmoniCOP project adopted such a broad definition of IC-tools and developed a typology to characterize a wide range of tools. A base was established for investigating and evaluating the role of IC-tools in different phases of social learning during the development of a river basin management plan. The overview summarized in this report provides valuable information for anyone interested in the role of IC-tools for participatory river basin management. We expect that the experience from the case-studies will support the development of practical guidance for an improved application of existing tools and the development of a new generation of improved IC-tools.

I would like to thank all participants of work package three for their enthusiasm and efforts in produce this excellent overview and template. I would like also to thank all participants of work package five for their hard work in filling in various templates, reviewing the analysis and adding to the theoretical knowledge of this project.

We thank the European Union for the financial contribution.

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November 2005

EXECUTIVE SUMMARY

HarmoniCOP Overview

This document is the report of the HarmoniCOP project Work Package 5 (WP5) dedicated to Case-studies and Experiments in River Basin Management (RBM).

The HarmoniCOP project has been set up in the framework of the 5th European Framework Programme for Research and Technological Development (Contract no EVK1-CT-2002-00120). It aims to increase the understanding of participatory river basin management against the background of the European Water Framework Directive. The project involves 17 research teams from nine European countries. Its specific objectives are as follows:

- to prepare a "Handbook on PP methodologies";

- to provide insight into Social Learning in a multi-phase multi-level context;

- to increase the understanding of the role of information and ICT tools (Information and Communication Technology) in Public Participation (PP) and Social Learning (SL);

- to compare and assess national PP experiences and their backgrounds;

- to involve governments and stakeholder groups.

The project started in November 2002 and will run until November 2005.

The HarmoniCOP project started out with a framework of analysis (WP1) and with a study of participation as a social learning process (WP2) and investigating the role of information and communication (ICT) tools (WP3). These three studies serve as a framework used by the HarmoniCOP teams in WP4 (European national approaches and backgrounds) and WP5 to compare different national situations and analyse several case-studies in Europe. The outcomes from WP5 will be integrated (in the WP6) and developed into the HarmoniCOP Handbook (WP7) aimed at RBM practitioners and will be appropriately disseminated to them.

Public Participation and Social Learning

Public participation (PP) and awareness are high on the agenda in European environmental water management. PP can generally be defined as allowing people to influence the outcome of plans and working processes. The expected benefits and drawbacks of PP indicate that it is a necessity, but it has to be well organized in order to work properly. Particular attention needs to be paid to the level at which PP is engaged, and the type of stakeholders that should be involved. In general it is quite difficult to find an agreement on the practical meaning of PP and how to implement it. Much international legislation and policy has been developed to encourage PP, such as the Aarhus convention, Article 14 of the WFD and the guidance document on PP in relation to the WFD.

Considering the huge number of people affected by River Basin Management (RBM), traditional interactions between experts and decision-makers are no longer sufficient. Other additional relational mechanisms have to be considered to link across geographical and organisational scales, including the public at large. HarmoniCOP investigates new forms of PP which promote the social process aspects and which is called Social Learning (SL). SL refers here to the growing capacity of a network of multiple actors in river basins to develop and perform collective actions related to RBM. This

collective problem solving approach requires that the actors meet each other, and develop relational practices. This interaction is characterized by reflectivity, reciprocity and respect of diversity. The different stakeholder groups in a basin have to understand that a complex issue such as RBM can be better resolved in a collective way, relying on disseminated information and knowledge.

Objectives and Methodologies

The key objectives of the research for WP5, to examine social learning arising from European case-studies in public participation, were:

- to gain first-hand experience with PP in river basin management so as to examine how social processes and IC tools and models are applied and used in practice at the river basin level; and

- to study the issues identified in HarmoniCOP work packages 1-4 and test the ideas developed about effective PP, so as to identify approaches that work and those that do not, highlighting those which can be put forward as 'Good European Practices'.

The main elements of the methodology used in this research were:

- selection of case-studies with a wide range of historical, geographical and institutional backgrounds to provide an analysis applicable to a wide range of conditions. Both historical and real-time case-studies were included;

- use of a common analytical approach based on a pool of questions developed from the earlier work-packages of the HarmoniCOP project, and use of common template to report the results;

- development of a cross-case-study analytical template which bought together all the findings about the barriers to social learning and the mechanisms which supported social learning from the case-studies so that commonalities and differences could be highlighted. Barriers and supporting mechanisms were set within a framework of social learning developed in WP6 to structure the evaluation; and

- general reflection on the outcomes of the processes observed and evaluated. This was done from 3 perspectives:

    o process outcomes for example improved effectiveness of networks in multi-party engagement processes, two-way integration across different levels of scale, development and implementation of new structures (institutions) to encourage better management of river basins;

    o social outcomes for example increased awareness of other SHs' perspectives or significant issues within a river basin, and sharing of decision-making responsibilities to ensure delivery of integrated solutions; and

    o environmental outcomes such as solutions that have been developed and endorsed by all key SHs, or demonstrated measurable improvements in the bio-physical environment.

In total 11 case-studies were undertaken as part of this research, ten of which were used in the analysis, see Figure 1.
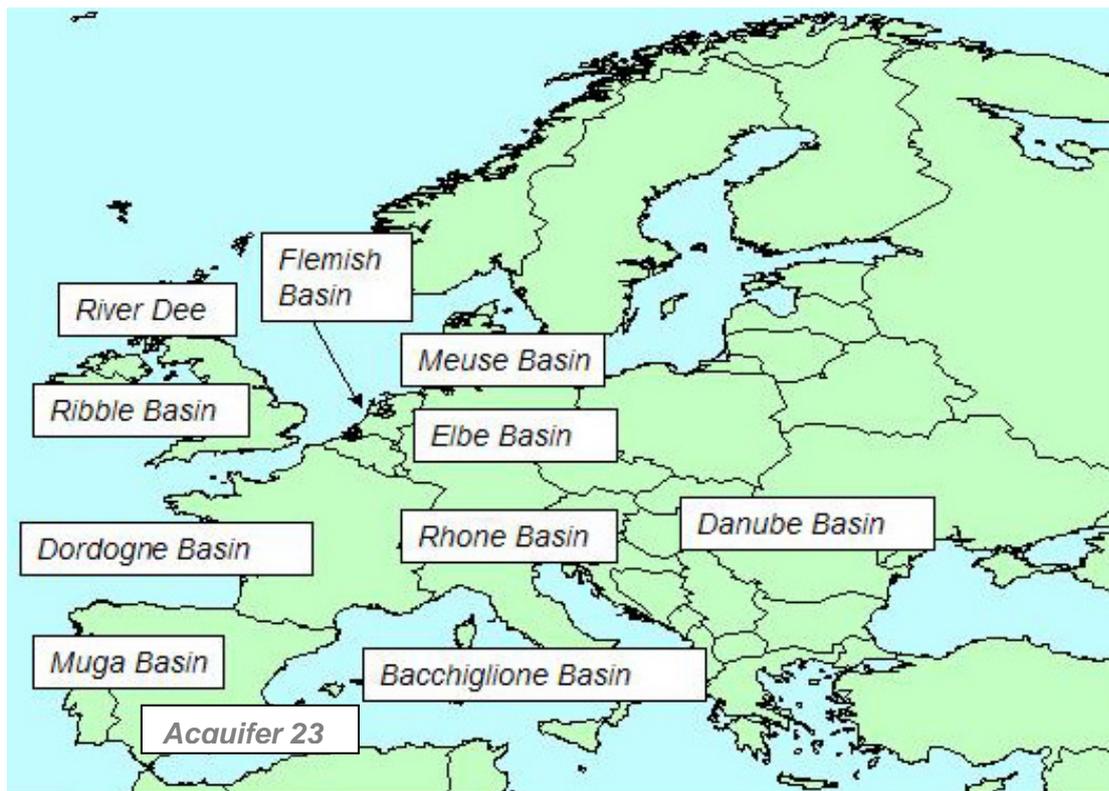
Conclusions and Recommendations

The conclusions from the case-studies gives insights into how the process of PP and Social Learning is carried out and what fosters and what are the barriers for Social Learning. Conclusions and recommendations are given below:

The importance of context: The outcome associated with public participation and river basin planning was very much context specific, and thus there could be no common blueprint for recommendations or actions in river basin planning. Instead, it will become important to embrace a diversity of approaches, to be able to adapt to the context and use appropriate context specific measures.

Build teams to build resilience and capacity around key people/facilitators/leaders: The three most important mechanisms to foster social learning were: a) the need for motivation and leadership and engagement from individuals with high technical competence; b) the presence of independent technical mediators and facilitators and c) high level of commitment from the leaders. A very important role of the leaders has been to build trust and establish alliances among participants. Also, their role has been to deal with managing conflicts, fostering direct interaction, dealing with institutional rivalries and exclusion etc. In cases where these people suddenly did not emerge, processes have halted. This implicates that social learning is depending on key individuals, and their attendance to workshops and meetings. This is a weakness, which ought to be mitigated by creating a team of people around these key individuals. If the key individual were for some reason to disappear, someone else could step in, with an awareness of the key individual's working culture and strategies. This would reduce vulnerability and build resilience and social capacity in social learning systems, and better prepare for the loss of key individuals.

Facilitate a beneficial attitude through positive interactions and avoid overly lengthy procedures: Another important mechanism to foster social learning is the attitude associated with the actors, such as being able to account for and manage different perspectives. In a participatory process building trust may change historical tensions between stakeholders, and through exchange, a better understanding regarding different viewpoints may emerge. Consequently in a discussion the SHs may

learn of new perspectives and reframe their problem and hence reformulate their demands. The facilitator should in these situations watch out for keeping the momentum not to disturb this process, and not having overly lengthy procedures.

Learn from crisis and see it as an opportunity to better prepare for the next one: Crisis moments are part of a significant mechanism to trigger and foster social learning. People responded to crisis in the way that it made them increasingly aware of slow and large-scale environmental issues such as flooding and could incorporate how to manage them in the planning process. The cases show that if people are capable of taking onboard the lessons and opportunities that the crisis moments provide, they can better learn they can be better prepared for the next crisis.

Have a strategy for communication when dealing with stakeholders: The most common barrier to social learning was the lack of clarity about the role and purpose of stakeholder involvement. This shows the importance of being very clear when engaging with stakeholders and inviting them to participate in decision-making. Also, before communicating messages, institutions must be clear about whom they represent, as they sometimes may represent several different interests, and providing mixed messages may prove to be a barrier to SL. Other barriers were found to be people's motives of how they want to get involved, as people may have contradictory expectations of the participatory process. This indicates that there needs to be a clarity about the roadmap and outcomes of the process and what is in it for the SHs, as they need to become involved in issues that clearly and directly benefit their interest. Stakeholder mapping is a common practice that is carried out to analyse SH needs and issues that are relevant to them and what issues may be expected to emerge during the participatory process.

Involve key stakeholders in bottom up planning to improve water resource plans: A multi-party initiative is likely to be a key outcome of ensuring better management of regional large-scale structures such as river basins. This is possible as they are often having a multi-party involvement across political and administrative boundaries involving key stakeholders in bottom up planning. This has shown to improve water resource plans and the implementation of the WFD, aiding in changing and reframing narrowly defined problems from the more operational perspective. In such a network, large institutions are able to provide the broad strategic visions and long term planning capacity that is needed. The presence of rigid top down institutions can however be a barrier to SL. Failure to achieve a multi party dialogue could result in poor ownership by SHs of the solutions developed to meet the WFD's objectives. Local stakeholders are naturally mainly interested in local issues and it has been noted that moving from a strategic level to a more operational level, the potential for conflict can increase significantly as stakeholders understand the potential impacts upon their interests. Taking measures to avoid these conflicts is critical, involving all stakeholders concerned in RBM adequately and if necessary devolving power to ensure continued cooperation.

Allow time and resources for participatory processes, particularly in early stages: Participatory processes take time and resources, particularly in the early stages, allowing time to develop trust, learning of different viewpoints, developing sufficient understanding of issues and technical terms. At the initial phases learning occurs in different segments of society as information to stakeholders may be distributed unevenly, and this creates frustration over the lack of explicit rules for involvement and who should receive information. A perception of overly technical language can also initially be a barrier. However, as stakeholder participatory processes are allowed to go on in time they expand and these initial problems are generally overcome.

Investigate the use of IC Tools and apply in a transparent way that is meaningful for the stakeholders: IC Tools facilitate the aggregating of local knowledge to the level of RBMPs, where the decisions are ultimately made. The indication is that the potential of IC Tools is great, but has not yet been fully realised or utilized. IC Tools facilitates the sharing different points of view and scenarios, acting as integrator between different types of knowledge, disciplines and SH groups, translating knowledge from different sources that makes sense to everyone involved. In this way IC tools may formalise knowledge, translate technical information and modify data, which may empower and reinforce the

position of the SHs. This may be a very important factor as SH often already face an unfair power balance: they are not paid by anyone to attend the meetings, but investing their own private time; as well as their own interests are often at stake in the process. Using IC tools, stakeholders trust the end result they have participated in producing, and it feels meaningful to them.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

x

1.   INTRODUCTION

1.1   Public participation and the Water Framework Directive

Public participation is a widely discussed and researched subject. There are numerous studies and articles on the benefits and dis-benefits, the roles of different publics and the different forms in which participation can take place. Suffice to say that the role of public participation in environmental management, at least at policy level, is now widely recognised. The European Water Framework Directive (WFD) 2000/60/EC of 23 October 2000, which establishes a framework for Community action in the field of water policy, introduces as one of its main themes the need for public participation in water management. The directive is now in the process of being implemented and it is up to Member States to use the policies introduced via this directive to achieve "good water status" for all European surface and underground waters by 2015.

The Directive sets three requirements for public participation (PP), it requires Member States to make information available and to consult the public at key stages, and in Article 14 the Directive requires Member States to: "*encourage the active involvement of all interested parties in the implementation of this Directive, in particular in the production, review and updating of the river basin management plans*". According to the philosophy of this article, decisions must be taken with the maximum of transparency. The implementation demands the reform of traditional "representative democracy" to develop, in parallel, a "participative democracy", in terms of policy of information, consultation, dialogue and monitoring.

The text of the Directive is supplemented by guidance provided as part of the Common Implementation Strategy of the European Commission and the Member States, "Guidance document for PP in relation to the WFD" (CIS Drafting Group 2002). This document describes the concept of PP and indicates also how to organize PP in river basin management (RBM), which actors to involve, when and how to organise PP. A first attempt is made in section 7 to introduce the concept of a learning approach to PP.

Public participation can provide many benefits. It is, however, a complex process, set within complex situations of relationships, history and potentially conflicting goals. There are many difficulties associated with participation, which have to be recognised if the potential benefits are to be realised. A major potential benefit, of PP is that it can lead to better-informed and more creative decision-making. Secondly, PP can result in more public acceptance or even ownership of the decision, and therefore in less litigation, fewer delays and generally better implementation. Benefits flowing from PP are due in part to the procedure used in PP, and the ways in which members of the public are encouraged to make comments and give opinions regarding decisions. Furthermore, PP can also promote more open government and more democratic attitudes among the public. Lastly, in relation with the HarmoniCOP project, PP can also encourage Social Learning among all the parties (see Section 1.2). This means learning how to manage in a collective way a complex problem such as a River Basin (RB) and to deal with different views and interests. Implementing a real PP process is, however, a complicated task. Governments are often reluctant to listen to the public and to organise meaningful processes of PP with sufficient resources. 'Pseudo' or tokenistic PP often has been used for obtaining acceptance for preconceived scenarios and plans, without giving the public the possibility to participate early enough in the process and to really influence the decision-making. This has often been seen to result in disappointment and less public support. In addition, response from the public may be limited, unrepresentative, of low quality. It can also lead to inconsistent decision-making. Finally, PP can be a time- and money-consuming process.

1.2   The HarmoniCOP project

The HarmoniCOP project[1] (HARmonising Collaborative Planning) was established within the 5th European Framework Programme for Research and Technological Development (Contract n° EVK1-CT-2002-00120). This project focuses on understanding the PP in river basin management planning (RBMP).

The project is made of 7 interrelated work-packages as shown in

Figure 1 and further described in the inception report (Mostert, 2003).

The specific objectives of the project are as follows:

- To prepare a "Handbook on PP methodologies";

- To provide insight into Social Learning in a multi-phase multi-level context;

- To increase the understanding of the role of information and communication tools (IC-Tools);

- To compare and assess national PP experiences and their background;

- To involve governments and stakeholder groups.
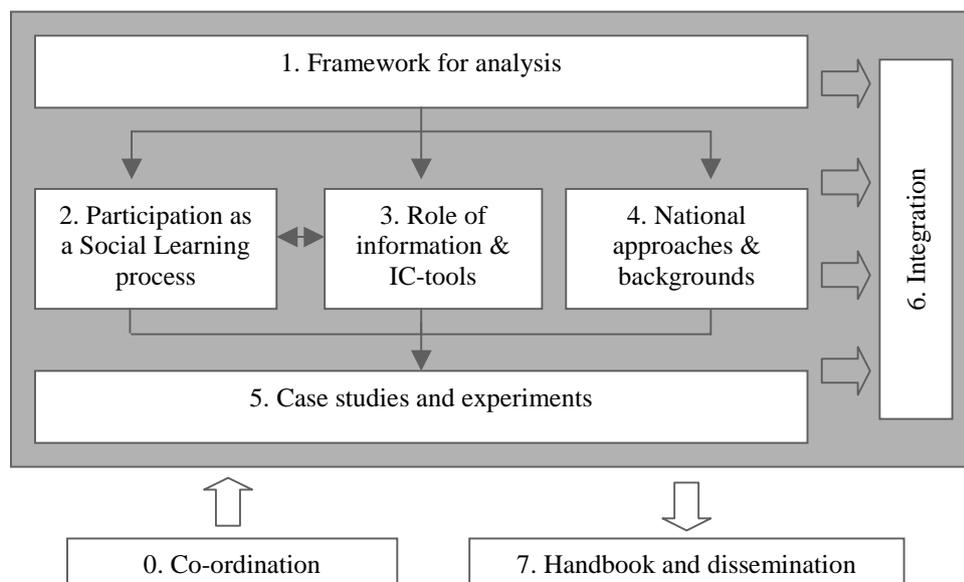
Figure 1   The work-packages of the HarmoniCOP project and their relations

From the literature on PP, participatory RBM and the guidance document for PP in relation to the WFD , several lessons can be learned on how to design participatory processes (Mostert ed., 2003, p. 9) and are summarized in Box 1.

Compared to this existing know-how, HarmoniCOP is focusing more on active involvement and on additional forms of PP, trying to promote the central concept of "Social Learning" (SL). HarmoniCOP

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[1] HarmoniCOP website : http://www.harmonicop.info/

pays also more attention to the role of Information and Communication Tools (IC-Tools) in PP and SL. Finally, even if it's a research project, the interaction with stakeholders remains central in order to provide a useful complement to the guidance document.

1. Before using any PP technique, reach agreement between the different government bodies concerned on the scope of PP (what can be discussed and what cannot?), the purpose (what benefits are aimed for?, why PP?), the level of PP, the different publics to be targeted, the project organisation and procedures for exchanging information and deciding on follow-up.

2. Conduct some form of actor analysis.

3. Identify the relevant publics on the basis of (a) the interests they represent; (b) the information, ideas and skills they have; and (c) their influence on decision-making and implementation.

4. Make a process design.

5. Discuss the process design beforehand with the major stakeholders and develop "co-ownership". Important topics are the type of contributions from the public that are expected and what will be done with them. Do not build up false hopes.

6. Make clear afterwards what has been done with the input by the public.

7. More support for water management is a legitimate aim of PP, but if the input by the public is not taken seriously, PP may backfire and public support may decrease.

8. Approach the different publics actively to prevent limited or unrepresentative response. Intervener funding and/ or participatory training may be needed, especially if some publics have far fewer resources than others.

9. Consider the appointment of a professional outside process manager of facilitator to enhance the legitimacy and effectiveness of the process.

10. Start PP as early as possible, when still something can be done with the public input. Different publics may need to be targeted in different phases.

11. Organise PP on the different aspects of river basin management at the geographical scale (local, regional, river basin, etc.) that is closest to the most relevant publics for these aspects, while still keeping the process manageable.

12. Ensure smooth communication between scales and between units at each scale (e.g. different basin states).

13. Try to involve the different publics in policy research, if only to prevent technical controversies.

14. Prevent a "participation burnout." It is better to ask the public to participate in one integrated planning exercise than in 20 sectoral exercises.

15. Review and develop the PP capacity of government (personnel, skills, budget, openness, flexibility).

16. Choose "realistic" PP methods and techniques that fit the available resources, the concerned publics, the geographical scale, the type of issues to be addressed and the phase in the planning cycle.

17. Evaluate PP afterwards in order to learn for future processes and during the PP process in order to adjust to unforeseen developments.

18. Foster mutual trust and open communication.

Box 1   Lessons from the literature on PP initiated by government (Mostert, 2003)

PP and social learning

Considering the interest as well as the limits of traditional PP, HarmoniCOP investigates a new form of PP which promotes the social process aspects, also known as Social Learning.

The concept of Social Learning is relatively new and a key output from the HarmoniCOP project is the analysis of how this concept can be applied in RBM (Craps et al. 2003, Thaillieu et al. 2003, Mostert 2003c, Pahl-Wostl 2002). Figure 2, which emerged from this analysis, shows how the social learning concept is considered in the HarmoniCOP project.
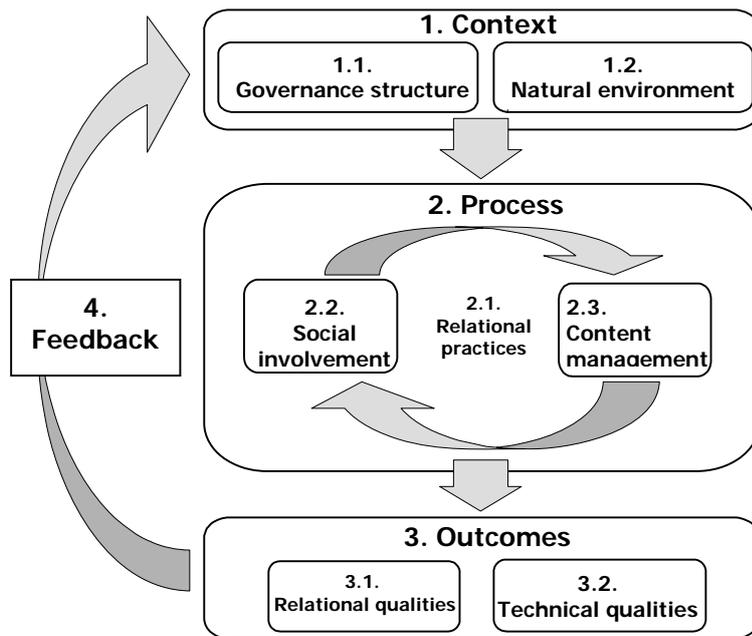
Figure 2   Graphical framework of the Social Learning concept in HarmoniCOP

Social learning refers here to the growing capacity of a multiple actors network (those concerned by the RB) to develop and perform collective actions related to RBM. RBM is considered here both as a social-relational activity (interests, water practices, information, knowledge, funds are spread over many actors) and a complex technical task. Both cannot be separated: problems are identified and framed, diagnosis is made, solutions are conceived, some are chosen, implemented and monitored always in a social environment, as a result of interactions between different actors who have different representations of the reality (Pahl-Wostl, 1995).

Social learning refers both to this participatory social/technical process (part 2 of Figure 2) as well as to the outcomes of this process (part 3 of Figure 2). It takes place in a specific context (part 1) in terms of the governance structure (actors, regulation and cultural norms) and the river basin environment. This context can be affected in turn by the outcomes (part 4).

During this process (part 2), learning to solve a problem is not limited to a purely cognitive process and to individual exercises. It also includes a form of "learning by doing" in a collective way, within existing or developing communities of practice which are more or less homogeneous in terms of skills, knowledge, rules, believes, stakes, vocabulary etc. This collective problem solving approach requires that the actors meet each other, and develop relational practices (part 2.1.). The quality of these relational practices is seen as fundamental to a social learning perspective: it is based on reflectivity, reciprocity and respect of diversity.

Social learning is not only a reflection on how to reach a goal (single-loop learning), it also implies a reflection on the goals themselves (double-loop learning) and on the interrelations between the stakeholders.

In addition to this reflectivity activity, reciprocity is another mechanism liable to facilitate collective actions. Each participant has to realise that they are interdependent and that they cannot ignore the interests of the others, and vice versa.

Finally, social learning supposes that the participants accept the diversity of interests, of mental frames, of arguments, of knowledge. They also have to realize that a complex problem such as RBM

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can be better resolved in a collective way, relying on disseminated information and knowledge. This is what (Rittel, 1984) calls the concept of *symmetry of ignorance* (or *asymmetry of knowledge*): that means that no individual stakeholder knows all of the relevant knowledge, yet the knowledge of all of them is equally (symmetrically) important to frame and resolve the problem (Arias and Fischer, 2000).

Another key point is that river basins as governance systems have to be considered as open multi-scales systems, not only in term of geographical scales (local, regional, national and international) but also in term of organisational scales. The SL concept in this project is clearly focused on direct interactions in small working groups, with participants belonging either to the same community of practice (e.g. a farmers association, an environmental NGO) or different communities of practice (e.g. in a catchment committee). Since much more actors need to be reached somehow, additional relational mechanisms have to be considered, mainly through representatives (interacting with their constituencies or their superiors), other types of multi-membership (e.g. people actively involved in several communities and thus, able to disseminate information and knowledge among these communities), occasional relational events, common policies and procedures. Artefacts produced by the RB communities of practice can also help to reach the non-participants (including the public at large) through more classical distant and mono-directional communication means (shared information system, radio, TV, web sites, newspapers). It is still an open question if this last form of communication can contribute to SL.

IC-Tools as facilitating mechanism for PP and SL

The importance of PP in the WFD leads to the emergence of new stakeholders in river basin management in addition to the water experts and decision-makers. It widens the diversity of "real world representations", skills, stakes, ways of thinking, logics of decision and action. In this complex context, we have seen that the ambition of PP based on SL is to learn how to develop and perform actions related to RBM in a collective way. This raises the crucial issue of information design, storage and retrieval and communication between stakeholders in ways that are relevant for them and that allows collective learning (Roll et al. 2003, Woodhill 2003). IC-Tools, as a facilitating mechanism, present real opportunities to take up the communication challenge, therefore the use of IC-Tools in RBM was the second key focus of the HarmoniCOP project.

Work Package 3 (Maurel, 2003) provides an analysis of the potential and the limits of ICTools to answer practical questions such as: What are the relational and substantive functions of a tool? How should it be used? What is its applicability in the different phases of the PP process? How is it perceived by the actors? HarmoniCOP WP3 focuses on the role of IC-Tools as a facilitating mechanism to support the SL dimension of PP. This goal requires essentially a two-way communication approach so the WP3 report analyses the use of ICTools from this two-way communication perspective. It complements earlier literature, which mostly addresses the use of tools for one way communication purposes i.e. from the authority in charge of the PP process to the public, either to communicate information or to get some feed-back on proposed action plans, and Annex 1 of the guidance document for PP in relation to the WFD (CIS Drafting Group 2002), which focuses on interaction and communication tools and techniques, most of which are group animation techniques and meeting formats, rather than computerized tools.

WorkPackage 5 builds from the work in WP3 to investigate how these tools are applied in practice and to help understand the gap between the production and the actual application of IC-Tools in RBM.

1.3   This Work Package 5 Report

The key objectives of the research to examine social learning arising from European case-studies in public participation were:

- to gain first-hand experience with PP in river basin management so as to examine how social processes and IC tools and models are applied and used in practice at the river basin level; and

- to study the issues identified in HarmoniCOP work packages 1-4 and test the ideas developed about effective PP, so as to identify approaches that work and those that do not, highlighting those which can be put forward as 'Good European Practices'.

The report has four further sections as follows:

- Section 2 provides a brief outline of the approach adopted to enable a cross-comparative analysis of key themes arising from the case-studies, including context, social learning issues and outcomes;

- Section 3 provides an understanding of the key similarities and differences in context associated with the case-studies;

- Section 4 includes an analysis of social learning issues identified in the case-studies. These issues fall under four key categories, action, context, structure and change;

- Section 5 presents a summary of key outcomes arising from the European case-studies according to process, social and environmental outcomes. The influence of IC-Tools upon these outcomes are also discussed where relevant;

- Section 6 presents the conclusions and recommendations.

The Annexes to this report contain details of the case-study report format, and the social learning pool of questions (see Section 2).

2.   OBJECTIVES AND METHODOLOGY

2.1   Objectives

The key objectives of the research to examine social learning arising from European case-studies in public participation were:

- to gain first-hand experience with PP in river basin management so as to examine how social processes and IC tools and models are applied and used in practice at the river basin level; and

- to study the issues identified in HarmoniCOP work packages 1-4 and test the ideas developed about effective PP, so as to identify approaches that work and those that do not, highlighting those which can be put forward as 'Good European Practices'.

2.2   Methods for analysing case-studies

Many factors influence the choice and effectiveness of PP approaches, such as the national culture and prior experience of PP, the presence or absence of river basin commissions and authorities, whether or not the river crosses national or international borders, bio-regional characteristics, and the main water management problems.

Key elements of the analytical approach were:

- selection of case-studies;
- variety of case-study investigative typologies;
- common analytical approach;
- common reporting template; and
- cross-case-study analytical template; and
- use of frameworks of social learning to structure evaluation.

These methods and their use in the analysis are discussed in more detail below.

2.2.1   Selection of case-studies

The ten European case-studies on public participation were selected to give a range of geographical, cultural, historical and institutional backgrounds. The case-studies investigated are shown in Figure 3.
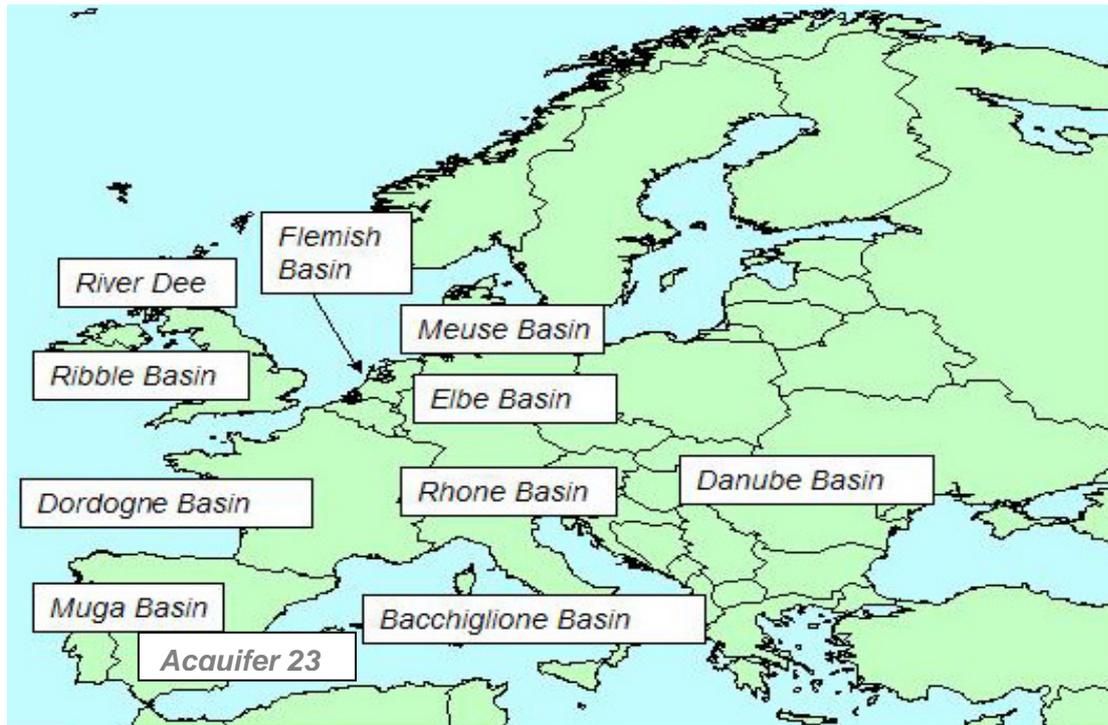
Figure 3   Map showing location of case-studies

The case-studies consisted of three main types:

1. Ex post analysis, mainly based on literature reviews;

2. Ex post analysis mainly based on interviews with actors involved in the process; and

3. Real-time pilot studies and experiments, with researchers witnessing the process first hand during the development of river basin management plans.

Analysis of most case-studies commenced in October/November 2003 and was finalised in August/September 2004. Cross case-study analysis was conducted though the spring of 2005, with a draft case-study presented to case-study leaders for comment prior to the HarmoniCOP Barcelona meeting on the 17th June 2005.

The wide range of analytical methods included textual analysis of completed project literature and notes from meetings, interviews with actors currently or previously involved in participatory processes, participant observation, as well as pre and post project interviews. Techniques of analysis included the use of qualitative software tools to organise and analyse the large amount of data collected. The real-time analysis helped researchers gain first hand experience of PP in RBM. Techniques used included 'observation templates' and action research, in which the researcher played an active role in the design and implementation of PP methods. The action research allowed researchers to study the issues identified in initial analysis during the project, and to test the ideas developed. In one real-time case-study, the Flemish case-study, the researchers were able to provide feedback and advice to the participation organisers, which had a direct impact on the way the participation process was run. The researchers saw themselves as "unpaid shadow consultants" (Craps and Prins 2004, pg. 1). In all cases, feedback was provided from the researchers to those involved in the case-studies either by stakeholder reports, presentations or workshops.

A range of investigative typologies were available so that we were able to isolate case-study type as a possible factor influencing the results and these were classified using Table 1.

Table 1   **Case-study investigative typologies**

Type	Type of Analysis	Description of Analysis	Time needed	Strengths and weaknesses of outputs
H1	Historical: Literature Review	Review of a completed participatory process using the original documents, e.g. a draft plan, the minutes, written reactions, etc.	Low	Limited opportunities to test results of other WorkPackages (WPs). The PP process might not be directly relevant to the WFD, river basin management planning, or ICT tools. The literature may be limited in the type of information it provides and difficult to access. However, it might provide insight into longer-term benefits of PP processes.
H2	Historical: Interview-based	Review of a completed participatory process using the original documents (as in H1) and interviewing the participants (stake-holders, members of managing authority).	Low	The strengths and weaknesses are similar to those of type H1. Interviews may fill in the gaps left by the available original documents, but this depends on the validity and extent of the recollections of the participants.
RT1	Real-time: Observing	A real-time PP event, in an observational capacity.	Medium	First hand experience of PP at the river basin level but limited to observing only. (NB All real-time studies will depend upon the managing authority for their time-scale, which will have to be compatible with the time scale of the HarmoniCOP project).
RT2	Real-time: Participat-ing	A real-time PP event, participating in the organisation of the process (e.g. in an advisory capacity).	High	First hand experience of PP at the river basin level, with the opportunity to influence the process. This gives limited possibilities to test ideas generated by other WPs and e.g. try out ICT tools and methods of social participation. This (limited but active) role of the researcher in the case itself could be seen as problematic by those aiming at objective scientific knowledge.
RT3	Real-time/ Designing and Partici-pating	Participating in the design and organisation of the case-study.	High	The strengths and weaknesses are similar to those of type RT2. However, the possibilities to influence the case and test ideas generated by other WPs are greatest.

Table 2 summarises the case-studies according to country, basin and type.

Table 2   **Case-study countries, basins and typologies**

Country	Basin	Case-study Type
Belgium (Be)	Flemish	RT1, RT2
England and Wales (E&W)	Ribble	RT1, RT2
France (F)	Dordogne	H1, RT1
Germany (De)	Elbe	RT1, RT2, RT3
Hungary (Hu)	Danube	H1, RT1
Italy (It)	Bacchiglione	H1, RT2
The Netherlands (NL)	Meuse	H1, H2, RT1
Scotland (S)	Dee	H1, RT3
Spain (Es)	Muga	H1, H2
	Acquifer 23	H1, H2

2.2.2 Common analytical approach

The social learning pool of questions (PoQ), previously developed in Work Packages (WP) 2 and 3 of the HarmoniCOP project (Craps and Maurel 2003), was used to assist researchers in their analysis. The types of questions include:

- Who was involved and how did they become involved?
- What roles did they play?
- What were the viewpoints of participants at the start of the process, and how did these change?
- What were the relationships between participants and how did these change?
- Were there specific moments when change occurred?
- What were the different national contexts, cultural, geographical, institutional and legal, and how did these impact the process?

The PoQ was utilised by the WP5 research teams as a checklist of questions concerning social learning, and as a common base upon which to develop the case-studies. The PoQ served a variety of different purposes, including acting as a guide when preparing to interview stakeholders, observe meetings, consult archives and evaluate the of use of information and communication (IC)-tools. Researchers selected questions as appropriate in the context of their case-studies.

2.2.3 Common reporting template

The case-study findings were written up into a series of reports using a template based on key concepts of social learning and the PoQ's.

This common reporting template was developed on the basis of a "testing exercise and pilot report" using the PoQ carried out on an ad-hoc basis early in the HarmoniCOP project in Spain, and on the proposals of the "Maastrich ladder of Learning" (Craps and Maestu 2004 – see Figure 6) that emphasised the need to focus on change and the quality of social learning (different learning levels). This proposal also emphasised the need to focus on the analysis rather on the description of the cases. It was discussed and agreed amongst WP5 case-study leaders, in order to facilitate comparison of findings from the different participatory processes investigated across Europe.

The reporting template agreed for the case-studies was based on concepts of social learning from WP2 as shown in Figure 2 (in the introduction) and contained the following sections:

1. Context (environmental, institutional, socio economic and political context).

2. Description of the participation process (activities and phases, outcomes and feedback to context)

3. Analysis of the process (framing and reframing; basic role assumptions; boundary management; evolution of interests functions and strategies; critical points; mechanisms that foster SL and barriers to SL; specific role of IC-tools).

4. General reflections

The case-studies aimed to explore the issues identified in work packages 2-4 and to test the ideas that were developed. An outline of this template is provided in Annex 1. The final case-study reports are available at http://www.harmonicop.info/.

2.2.4 Cross-case-study analytical template

This stage of the research involved analysis of social learning across the nine European WP5 HarmoniCOP case-studies using a template that was developed.

The individual case-study reports were used to identify the key themes and issues. The language used by the case-study leaders in the reports was used to establish the issue categories so that the original meaning of the concepts was adhered to as closely as possible, with some similar themes and issues were merged under into one category.

Information about each of these issues in the template was provisionally filled in by the WP5 case-study leaders who were asked to highlight the relative significance of the issues (fostering mechanisms for and barriers to social learning) within their case-studies. The criteria for assignment of these values according to the significance of the particular issue to social learning were:

- Value of 3 – issue is *critical* to social learning;
- Value of 2 – issue is *important* to social learning;
- Value of 1 - an issue, but not necessarily a significant barrier or mechanism to foster social learning; and
- Value of 0 – specifically *not* an issue within the case-study.

Case-study leaders assigned the above values to each of the issues in the analysis template for their own case-studies. They were asked to note whether the issues were significant for the overall case-study, or whether they were only significant at particular times or events (this was to take account of the fact that some issues were significant for a particular meeting or incident, but were not necessarily significant overall) for the overall outcomes of the case-study.

An additional layer of analysis was derived by counting the number of case-studies in which particular issues were deemed to be of significance, in order to give an indication of how wide-spread the issue was across the case-studies. This number is indicative only, as it was determined by whether or not the case-study leaders decided that issues that had been drawn up from the other case-study leaders' reports for the whole template were of significance to their case-study or not. It does, however, provide the analysis with a further cross check of possible significance[2].

Case-study leaders were also asked to indicate the phase of the process at which the issues proved to be significant. The phases of the RBP were categorised as: Preparation & planning, Implementation and Evaluation. These scores were added up from all of the case-studies, to give an overall indication as to which stage of a process a particular issue might be important. Gaining an indication of the significance of issues at these different phases was seen as important for ensuring practical outcomes from this analysis for Work-package 7 of the project, in which the Handbook is to be prepared for practitioners.

Different depths of colours were assigned to the ranges of numbers in the analysis template, in order to facilitate analysis and recognition of patterns in the data (following the graphic information-processing concepts of Bertin (1981).

An additional comments column was included within the spreadsheet to enable case-study leaders to provide background and contextual information regarding their responses. In discussions with case-study leaders, it was noted that many of the issues could be seen as either fostering mechanism or barriers, depending on the context. Analysis of the results took into account the contextual remarks made by the case-study leaders in explaining the way they assigned significance to the different issues. In addition linkages between barriers and fostering mechanisms were noted in the analysis. Any attempt at such a broad cross-case-study analysis runs the risk of taking comments and seeing correlations out of context. Whilst case-study leaders were asked to assign significance to particular issues on a scale of 0 to 3, crude quantitative assessment has been avoided. Indications of significance have acted rather as pointers to possible emergent themes and areas of importance, which have then been checked against the more in-depth information in the case-study reports and the comments fields in the data analysis template. A further limitation of the attempt to code rich information from case-study material into a template for analysis is that the terms can seem ambiguous and are open to different interpretations. Again, the contextual information provided by the case-study leaders was important in attempting to reduce the ambiguity of interpretations in the analysis.

This initial analysis was then circulated to all of the case-study leaders, who were asked to check interpretation of the case-study reports and accuracy of the analysis. Follow up phone calls and explanatory emails were made where appropriate to ensure consistency in the content of responses.

2.2.5   Evaluation frameworks

Several frameworks for understanding social learning were used to structure the evaluation. These are illustrated in Figure 2 and Figure 6. The way that they were used to structure the analysis is described below.

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[2] Note that these were taken from the number per country – the case-study leaders from Germany used two columns to indicate the different levels of scale of their case-studies. Further analysis of the issues arising in relationship to levels of scale would be useful. The analysis template could be adapted to provide this analysis at a later date.

The conceptual framework in Figure 2 for social learning, was developed in work package 2 of the HarmoniCOP project and illustrates the major components of social learning and their interconnections. This framework was utilised initially in WP5 to structure the case-study reports (see Annex 1). Section 3, case-study contexts, below, is informed by this framework.

As WP5 was developing, WP6 which aimed to integrate the results from the various work packages developed a second framework for analysis which identified four elements of social learning shown in Figure 4. These elements and sub-elements were used to structure the analysis of the case-study materials, both in the cross-case-study analytical template and in writing up the interpretation of the results from this template (see Section 4, Promoting Social Learning – Key issues). Case-study leaders were able to comment on the categorisation of issues during the in depth cross-case-study analysis as well as the process of using these categories to structure the evaluation.

Figure 4   A framework for understanding social learning (the social learning spiral)
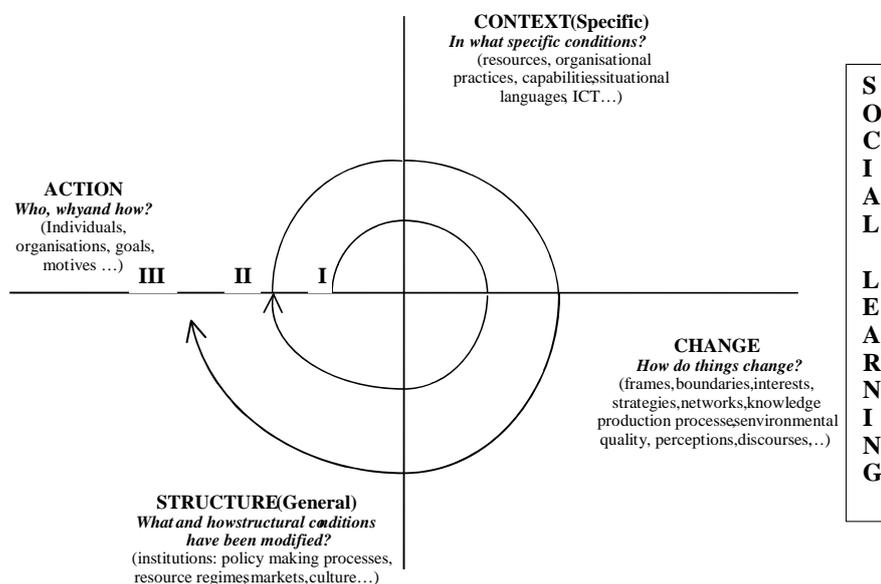
Use of these frameworks in the cross-case-study analysis to capture the dynamic nature of social learning was discussed amongst the researchers at the project meeting held in June 2005 in Madrid, and allowed for the early work on integration to inform the analysis of the case-studies. During analysis of the case-studies, an additional sub-category of 'participation process design' was also added. Thus, the process of using the emerging framework in analysis of the case-studies contributed to the development of the theoretical framework.

The above methods were used to analyse the case-studies. Three major areas of analysis - case-study contexts; promoting social learning, key issues; and outcomes - form the main body of the analysis in this report, and are discussed in the following sections.

The key elements and sub-elements used to structure the analysis are developed from Figure 4 and identified below in Table 3.

Table 3   Key elements and sub-elements used to structure analysis

Key element	Sub-element

Action	Individuals
	Goals
Context	Capabilities
	Organisational practice
	Participation process design
	Resources
	Situational languages
Structure	Culture
	Institutions
	Markets
	Policy making processes
Change	Networks
	Boundaries
	Frames
	Knowledge production processes
	Environmental quality perceptions

3.   CASE-STUDY CONTEXTS

Europe is comprised of a diversity of different orientations influenced by the interplay of various forces, practices or cultures (Patel and Stel 2004). Different histories, cultures and types of issues addressed by participatory approaches in Europe suggest that one size does not fit all. From the beginning of the research design, research teams were aware that it was critical to understand the differences in context associated with the HarmoniCOP case-studies from three perspectives:

1.   We wanted to ensure that the case-studies used would give a good range of contextual situations so that the conclusions being drawn were robust and applicable across a range of different situations;

2.   We needed to characterise the contextual background for each case-study so that we could understand why the influences on social learning were important for this situation;

3.   In going forward and making recommendations on good practices we wanted to present a picture of the circumstances in which particular approaches might be appropriate and when they may not.

The contextual factors used within WP5 to characterise the case-studies are listed below in **Table 4**.

Table 4 Key contextual factors highlighted in case-studies

Type of Issue	Key Aspects
Process issues:	o Case-study Typology
	o Stages in process covered
	o Driver for Participation
Environmental issues:	o Level of Scale
	o Case-study Area
	o Trans-national RBD
	o Environmental pressures
	o Main Water Uses
Institutional issues:	o Type of lead organisation
	o Lead organisations' responsibilities
	o Scale of Lead Organisation Involvement
	o Other key types of organisations/SHs
	o Structure/s for Involvement
	o Total number of organisations involved
	o Responsibilities
	o Conflicts
	o Evidence of Actor Alliances;
	o Relationship with other plans
Socio-economic issues:	o Population
	o Demographic breakdown
	o Previous PP Experience

Each of these factors is described in more detail below with specific reference to the European case-studies.

3.1   Process issues

3.1.1   Typology

The full range of investigative typologies is accounted for by the case-studies. These range from RT1 – RT3 for real-time analysis of the participatory process and from H1 – H2 for historical analysis. All of the nine case-studies involved some form of real-time analysis with researchers at least observing the participatory process leading up to the formation of plans, with the exception of the Muga Basin (Es) which focussed entirely on post analysis of a completed process. All case-studies except for the Ribble Basin (E & W) involved a combination of analysis techniques, including different elements of historical (e.g. literature reviews) and real-time (e.g. interviews with actors) techniques.

3.1.2   Stages in process

All of the case-studies are at different stages in terms of their evolution, with some currently ongoing while others have been finalised. This enables coverage of all of the key stages associated with participatory processes, namely planning and preparation, implementation and evaluation. The distribution of phases investigated amongst the 9 European case-studies was:

- planning phase only (1);
- implementation phase only (2);
- planning and implementation only (3); and
- planning, implementation and evaluation (3).

Some case-studies tended to focus on one of these phases, as evidenced in the Ribble Basin (E & W) (planning and preparation phase) while a small number of case-studies, including the Bacchiglione Basin (It), Dordogne Basin (F) and Muga Basin (Es) covered all of the three phases.

3.1.3   Driver for process

Different drivers tend to have produced these participatory activities, including flooding (3), water quantity and quality (4), nature conservation (1) and the WFD (3). While the requirements of the WFD are likely to have some impact on all of the case-studies only three of the nine case-studies, including the Ribble Basin (E & W), Danube Basin (Hu) and Elbe Basin (De), were initiated as a result of implementation of the WFD.

3.2   Environmental issues

3.2.1   Scale

Within the study, all geographical scales for involvement were investigated, from very local processes (the Flemish Basin (Be)), covering a valley area below sub-basin level, river basin river basin district levels and international basins (the Danube Basin). The Elbe Basin (D), Danube Basin (Hu) and the Dordogne Basin (F) included investigation of participatory processes at multiple scales. In total the nine case-studies yielded analysis of participatory approaches at river reach level (2), sub-basin level (2), basin level (4) and RBD level (4, one of which was international).

3.2.2 Case-study area

Case-studies analysed in WP5 occurred within three river catchment area ranges:

- less than 5000 km^2 (8)
- 20 000 - 50000 km^2 (3); and
- greater than 90 000 km^2 (2).

One of the case-studies as discussed in Section 3.2.1 (the Dordogne Basin (F)) covered different scales and therefore case-study areas. In the Elbe Basin (De) the areas investigated ranged from sub-basin level (~5000 km^2) to international level (~150 000 km^2).

3.2.3 Trans-national RBD

Within the study only four of the nine case-studies, the Meuse Basin (NL), Elbe Basin (De), Danube Basin (Hu) and Muga Basin (Es) formed part of transnational RBDs.

3.2.4 Main water uses

The nine case-studies represented water bodies with a range of different water uses. In total the most common water uses within the catchments of the case-studies were recreation and tourism (9), drinking water abstraction (7) and agriculture (7). Less common water uses were salmonid breeding in the Ribble Basin (E & W) and hydro-electricity/power generation in the Dordogne Basin (F) and Elbe Basin (De).

3.2.5 Environmental pressures

The three most significant environmental pressures as identified within the case-studies were hydromorphological pressures such as river straightening (6), urban and industrial wastewater discharges (5) and over abstraction impacting on surface water flows and groundwater levels (3). Environmental pressures which were less common were eutrophication in the Dee Basin (S) and diffuse pollution from agriculture also identified in the Dee Basin (S) as well as the Elbe Basin (De).

3.3 Institutional issues

3.3.1 Lead organisations

Organisations responsible for leading the participatory processes associated with the case-studies were dominated by governmental organisations where environmental interests were at the core of their agenda. Of the total case-studies, 7 were led by organisations with environmental interests. Exceptions to this rule occurred in the Meuse Basin (NL) and the Muga Basin (Es) where the process was led by organisations with engineering competencies. Three of the nine case-studies, including the Flemish Basin (Be), Dordogne Basin (F) and the Danube Basin (Hu) were lead by at least 2 organisations with different interests (e.g. agricultural and environmental).

3.3.2   Lead organisations' responsibilities

In most of the case-studies the organisations responsible for leading the process had responsibilities for organisation of the participatory process and decision-making. An exception to this rule occurred in the Flemish Basin where, although the process was led by the Water and Nature Administration (an organisation with environmental interests) the Navigational Administration was the organisation that held legal authority over the basin.

3.3.3   Scale of lead organisation involvement

Within the study, the lead organisations covered all levels of involvement ranging from very local involvement as in the Bacchiglionne Basin (It) through to international involvement in the Elbe Basin (De). In total the nine case-studies yielded involvement from lead organizations at local level (4), regional level (7), national level (5) and international level (1). Lead organizations from 6 of the 9 case-studies were involved in at least two of these administrative levels.

3.3.4   Other key types of organisations / stakeholders

Other key types of organisations involved in the participatory processes associated with the case-studies, in addition to the lead organisations included the following:

- Local and regional government organisations;
- Water authorities and management associations;
- Non governmental organisations;
- Irrigation communities; and
- Industrial interest groups.

3.3.5   Number of actors involved

The total number of actors involved in the case-studies varied significantly. In the Dordogne Basin (F) there were in excess of 100 different stakeholder groups while in the Muga Basin (Es) there were between 15-20 groups of different stakeholders.

3.3.6   Structures for involvement

A variety of different structures for involvement were adopted with some being relatively simple in their make-up and some being very complex with many levels of interaction. An example of this is highlighted by the approach in the Dee Basin (S) which included a steering group with decision making responsibility and beneath it separate working groups, while in the Meuse Basin (NL) the Steering Group was supported by a large number of groups with different functions including a project group, theme group, separate working groups and a reflection group.

3.3.7   Responsibilities

The European case-studies highlight many different players with different roles and responsibilities in the PP process including convenor, leader, financial support, expert, local knowledge, decision maker

and co-ordination of different sectoral interests. In the Meuse Basin (NL), Dee Basin (S) and the Elbe Basin (De) the Steering Group had full decision-making responsibility while in the Ribble Basin (E & W) the Steering Group served more of an advisory and liaison role between the project team and stakeholder forum. In the Muga Basin (Es) the HarmoniCOP research team held the responsibility for organisation of the consultative process as well as to co-ordinate the diversity of knowledge and view points to support the assessment and management of the river basin.

3.3.8   Conflicts

Some of the case-studies were instigated as a result of conflict as evidenced in the Bacchiglione Basin (It), where a proposal for the localisation of a number of wastewater discharges resulted in the mobilisation of a large number of different stakeholder groups. Other case-studies such as the Ribble Basin (E &W) involved bringing together a wide range of stakeholders through visioning workshops to ensure that their interests were accounted for. The starting point was thus one of aiming to develop a common vision, rather than one of a particular conflict.

3.3.9   Actor alliances

Actor alliances were identified in four of the nine European case-studies. In the Flemish Basin (Be) there was a notable alliance between stakeholders from environmental groups and the Water and Nature Administration and between the Navigable and Waterways Administration and farmers / land owners.

3.3.10   Relationship with other plans

There was an identifiable integrated relationship with other plans in 5 of the European case-studies, particularly associated with local and regional levels of scale. In Flanders (Be) there was a notable relationship with the local sustainable management plan while in the Danube Basin the participatory process was closely related to rural development plans associated with the Common Agricultural Policy (CAP).

In the Dordogne Basin (F) and Ribble Basin (E & W) there were linkages with a large number of plans including shoreline management plans, catchment abstraction plans, water utility business plans, fish population management plans, water quality plans and national energy strategies.

3.4   Socio-economic issues

3.4.1   Population

The population of the catchments within the case-studies varied from less than 300 000 inhabitants in the Dee Basin (S) to in excess of 25 million inhabitants in the Elbe Basin (De).

3.4.2   Demographic breakdown

The demographic breakdown between the case-studies varied from a high proportion of high density urban communities in the Ribble Basin (E & W) to low density agricultural communities as was the case in the Dordogne Basin (F), Elbe Basin (De) and the Danube Basin (Hu). In the Muga Basin (Es) there has been a significant decrease in population in inland areas and a large increase in population in

lowland coastal areas. This is thought to be attributable to a demise of agriculture and an increase in tourism in this area of Spain.

3.4.3 Previous PP experience

Previous participatory experience within the catchment areas of the case-studies was limited primarily to information provision and consultation of organised stakeholders. However, the case-studies included a wide range of organised stakeholder groups, including regional/provincial government, local councils, irrigation communities, local conservation groups, industry and non-governmental organisations early in the planning process.

4. PROMOTING SOCIAL LEARNING – KEY ISSUES

This section provides details of the analysis of social learning arising within the European case-studies. Issues in social learning are discussed according to the four categories of the theoretical framework for change in social learning, discussed above in Section 2.2.5, and illustrated in 'Spiral of Social Learning, Figure 4'. The four main categories of this framework are: action, context, change, and structure.

In total 71 issues were identified, Figure 5 shows how these issues were distributed across the different categories of this social learning framework.

However, a crude quantitative assessment of the number of issues under different categories does not necessarily denote the relative significance of these issues. The detailed discussion below endeavours to tease out the relative significance of these issues, and to set them within context, to enhance the value of this analysis for learning about ways of promoting social learning. The analysis of issues looked at both fostering mechanisms and barriers to social learning. They are discussed together below under the relevant headings, as the issues are often interlinked. Many of the barriers could be re-expressed as fostering mechanisms, or vice versa, they are discussed, however, in this analysis as either barriers or fostering mechanisms as they arose and were experienced in the case-studies. The order in which the issues in each case-study are discussed was determined partly by the significance assigned to each issue (more significant discussed earlier) and also by groupings of common themes, in an endeavour to promote understanding of these often interlinked issues. Indeed, several of the issues raised appear to be contradictory, or to have in-built tensions. This reflects the complex nature of such multi-party interactions, and the fact that there are inherent tensions that have to be actively managed throughout the process.
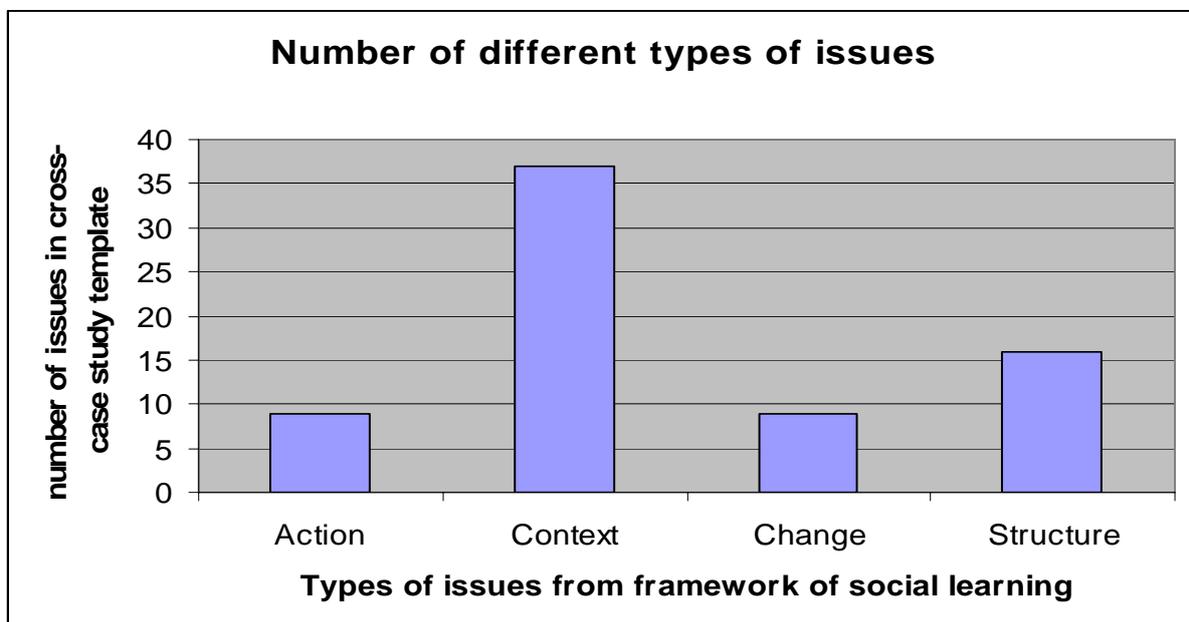
Figure 5   **Overview of issues covered within the case-studies according to the four main categories of the social learning framework**

4.1 Overview

4.1.1 Key barriers to social learning

The top 28 key barriers to social learning identified in the case-studies are illustrated below in

Table 5. These are presented in order of those occurring most commonly and deemed by case-study leaders to have the highest influence on the overall outcome of the process. It shows the overall scores (each of 9 case-studies, plus 1 sub-case, scored from 0-3 depending on how influential these issues are, i.e. maximum score of 30). Relating the top 28 barriers identified to the categories of the Spiral of Social Learning (see Figure 2 on page 2):

- 5 issues related to the action category;
- 15 related to context;
- 3 related to change; and
- 5 related to structure.

This suggests that researchers' observations of social learning in these case-studies were largely connected to processes occurring at levels of scale below the macro level, and ones which were apparent within the timescale of the case-studies. This could offer an explanation for why the majority of observed mechanisms deemed to foster social learning fell within the context category. The relatively short length of time for the case-studies, in terms of observation of the participatory processes (less than 2 years), may also have had some bearing on the relatively small number of issues falling within the structure, and change categories. Issues within these categories tend to reflect more fundamental psychological and institutional change, which is generally only perceptible over longer time horizons.

The four highest scoring issues were:

1. lack of clarity about the role of SH involvement, the form of that involvement, timing and its purpose;
2. lack of SH belief in /clarity of concept, particularly in terms of SH inputs actually making a difference;
3. lack of adequate time and resources invested committed to the overall process; and
4. SHs' lack of resources, particularly in terms of time.

These factors were noted as important in at least 6 out of the 9 case-studies. All of these factors are important in the preparation and planning as well as the implementation phases, which means the overall effectiveness of a PP exercise may be flawed throughout if sufficient effort isn't put into setting the conditions for success from the start. This can ultimately result in SH fatigue, distrust of the process and feelings that SHs have only been involved to add credibility to predetermined outcomes. These types of issues are likely to result in reducing the incentive to participate in further planning and implementation, as well as a reduced sense of ownership of the solutions developed to overcome river basin management problems.

Table 5   Key barriers to social learning

Issue	Ranking	Social learning category	Stage of Process			Total Assigned Significance	Total No. of case-studies where issue observed
			Preparation and planning	Implementation	Evaluation		
Lack of clarity about role of SH involvement (form, timing and aims)	1	Action	10	10	1	14	8
SHs' lack of resources	=2	Context	5	6	0	13	6
Lack of adequate time and resources	=2	Context	2	5	0	13	6
Lack of SH belief/ clarity of concept, that SH inputs will make a difference	=2	Structure	1	8	2	13	6
Lack of clarity of status and aims of initiative	5	Action	5	5	0	12	5
Failure to include all SH	6	Context	4	6	0	9	6
Difficulties in moving to a multiparty emergent approach (maybe related to Reluctance to change governance structure?)	7	Context	3	3	1	9	4
Differences in scale of the project and scale of interest of the SH	8	Change	4	4	0	9	3
Omission of important aspects e.g. costs	9	Context	2	2	0	7	4
Overly technical language	10	Context	1	2	0	7	3
Contradictory expectations of the way SHs want to be involved	=11	Action	1	3	0	6	4
Lack of rules of representation	=11	Context	1	3	0	6	4
Lack of clear and usable feedback on outcomes	=11	Context	1	3	3	6	4
Continuity –Lack of transfer of knowledge between different representatives of the same SH organisation	14	Context	1	4	0	6	3
Controversy concerning the legal authority over the area under study	=15	Change``	1	1	0	5	3
Too long procedures	=15	Context	1	1	2	5	3
Lack of opportunities for direct interaction and exchange between SH (too few, too far apart)	=15	Context	1	1	0	5	3
Fear of loss of confidentiality	=15	Context	1	1	0	5	3
Fear of SH involvement	19	Context	2	1	0	5	2
Governance Structure	20	Structure	4	4	2	4	3
Administrative procedures restricting process	21	Context	2	3	0	4	3
No relationship between SH and technical teams	=22	Change	3	3	0	4	2
Complex and inadequate IC tools	=22	Context	2	2	0	4	2
Lack of openness (e.g. minutes available)	=22	Context	2	2	0	4	2
Partial framing by the convener (e.g. ideas already pre-formed)	=22	Context	3	1	0	4	2
Lack of process orientation of the actors	=22	Context	1	1	0	4	2
Pre-existing distribution of water rights	=22	Structure	1	1	0	4	2
Leading institute defends its interests (2-hats)	=22	Context	2	1	0	4	2

4.1.2 Key fostering mechanisms of Social Learning

The top 25 key fostering mechanisms of social learning identified in the case-studies are illustrated below in Table 6. These are presented in order of those occurring most commonly, and deemed to be of highest influence on the overall outcome of the process. It shows the overall scores (each of 9 case-studies, plus 1 sub-case, scored from 0-3 depending on how influential these issues are, i.e. maximum score of 30). Of the 28 fostering mechanisms identified:

- 4 issues related to the action category;
- 14 issues related to the context category;
- 4 issues related to the change category; and
- 3 issues related to the structure category.

As discussed above for the barriers to social learning, the preponderance of issues occurring in the context category could stem from the nature of the case-studies and their analysis. It is the contextual issues in which the case-studies are embedded which were more easily observable within the timescales of the case-studies. In addition, it is in the action and the context category that many of the issues that can actually be influenced and affected by a participatory process fall, e.g. these are the categories that organisers of the process can more readily influence through their process planning.

Top two highest scoring issues were:

- Continued, high motivation and engagement with high technical competence – personal qualities (establishing and maintaining legitimacy of organiser); and
- Presence of an independent technical mediator/facilitator.

They were noted as influential in every case-study in terms of overall social learning, with the exception of the Elbe Basin (De). Failing to mention this as a supporting mechanism may have resulted from the fact that the authorities responsible for PP in the Elbe Basin (De) had a lack of experience in co-ordination of multiparty interaction, which was seen to result in a general reluctance to become involved in PP. They had difficulties in adequately expressing what is required of SHs and why, and this may have meant that this supporting mechanism was not much in evidence in the case-study.

Table 6   Key mechanisms that support social learning

Issue	Ranking	Social learning category	Stage of Process			Total Assigned Significance	Total No. of case-studies where issue observed
			Preparation and planning	Implementation	Evaluation		
Continued, high motivation and engagement with high technical competence – personal qualities (establishing and maintaining legitimacy of organiser)	1	Action	1	9	1	19	9
Independent technical mediator/facilitator	2	Action	6	7	3	18	8
High level of commitment from the leaders	3	Action	4	5	1	13	7
Establish and maintain legitimacy/openness of project, continuous feedback, dissemination of minutes, questionnaires, comprehensive language, presentations and background documents	4	Context	2	6	1	11	7
Flexibility from both sides to do common work and move from original position	5	Change	1	3	0	10	4
Crisis moments/ issues of high concern e.g. flooding	6	Change	0	1	0	9	3
Organisers well trained in group interactions	7	Context	2	3	1	9	4
Clear expectations	8	Action	5	3	0	9	5
Joint planning of approach	9	Context	2	1	0	8	3
Providing sufficient time and resources	10	Context	1	4	0	8	4
Good exchange of information	11	Context	2	5	0	8	5
Limited number of participants to enable in-depth discussions	12	Context	2	3	0	8	5
Delegated leadership	13	Context	1	1	0	7	4
Clear ground rules for interaction	14	Context	2	2	0	7	4
Bilateral meetings to inform and to listen with a specific focus	15	Context	3	3	0	7	4
Cumulative nature – develop from past experience	16	Change	3	4	3	7	4
Strong river basin institution	17	Structure	3	2	0	6	2
Degree of interdependence amongst participants	18	Structure	2	3	0	6	3
Start from a blank-sheet, no pre-conceptions	19	Context	1	1	0	6	3
Common or shared area in the frames of all participants	20	Change	3	4	0	6	4
Frequent and focussed discussions	21	Context	3	3	0	5	5
Support of traditional political representatives	22	Context	2	2	0	4	3
Complementary multi-party interaction	23	Context	2	3	0	4	4
Close interaction of key stakeholders with relevant policy makers	24	Structure	1	1	3	3	1
Informal work groups and field trips	25	Context	1	4	0	3	4

## 4.2	Action

Social learning is initiated by actions taken either by particular individuals or institutions. Motives for action and the goals that the action sets out to achieve are thus important influences on the actual processes initiated. Key issues arising in the case-studies under this heading were noted with the highest rating of significance by case-study leaders.

Important questions to ask are:

- Who is responsible for initiating the action?
- Why do they act?
- What do they seek or expect to achieve?
- How do they act? (Tabara and Saurí 2005)

The first three of these issues are discussed in section 3, contexts of the case-studies. In terms of key fostering mechanisms for social learning, the two issues noted as most significant in the case-studies were to do with the actual individuals involved in the action. Two key themes emerged – the need for motivation and leadership, and the need for independent technical mediators and facilitators.

There were nine issues to emerge from the case-studies under the heading of Action, five of which were barriers. Whilst this is a relatively small proportion of the overall total of seventy-one issues disused in the cross case-study template, the top five issues that were felt to be significant in the case-studies were found under this heading. These barriers related mainly to lack of clarity about expectations, and these were seen as amongst the most significant barriers in the case-studies. The issue of goals (and clarity about these goals) was thus seen as a key factor in success. The issues to emerge under the heading of Action were:

- continued, high motivation and engagement with high technical competence – personal qualities (establishing and maintaining legitimacy of organiser);
- high level of commitment from the leaders;
- independent technical mediator/facilitator;
- clear expectations;
- clarity about the status and aims of the initiative;
- clarity about the role of Stakeholder (SH) involvement, and what is expected from SHs;
- SHs' belief that their inputs will make a difference;
- barrier - contradictory expectations of the way different SH want to be involved; and
- barrier - leading institute also defends its interests (wears 2-hats).

These issues are discussed below under the three key components of the action framework as described in the Spiral of Social Learning: individuals, goals and motivation. This discussion highlights key issues emerging from the case-studies in the cross case-study analysis.

### 4.2.1	Individuals

The personal qualities of a **continued, high motivation and engagement of individuals with high technical competence** were considered as a key fostering mechanism for social learning, in particular through establishing and maintaining the legitimacy of the organiser. This fostering mechanism was noted as significant in all of the case-studies, and gained the highest score for significance of all of the issues. Whilst this fostering mechanism is clearly related to the mechanism of a high level of commitment from the leaders, there is an additional aspect to it, which has to do with the degree of demonstrated technical competence. Establishing and maintaining legitimacy with stakeholders by

demonstrating technical competency and enthusiasm was thus a critical factor in enhancing social learning. This issue was highlighted by all case-studies as a significant issue for the implementation phase of PP. In the Ribble Basin (E & W) it was noted that the key facilitator demonstrated his technical competence in the process, and in the Elbe Basin (De) it was noted that a high degree of technical competence was expected by SHs and was expressed by the leaders. In the Ribble Basin (E & W) and the Danube Basin (Hu), the importance of continued presence at the meetings of the leaders involved in delivering the WFD was noted. The fact that they demonstrated their motivation and competence through giving presentations and attending meetings was seen as a key factor in the success of the process. In the Meuse Basin (NL), a lack of continuity of key personnel was noted as a problem, and the suggestion was made that some back up was required to allow for continuity of personnel involved in PP exercises. In the Muga Basin (Es) it was noted that close contact between SHs and leaders was fostered by field trips and other ways of maintaining contact during the whole process, which helped SH gain greater insights into the problems at stake, and to have the qualities of the team demonstrated to them. In the Dordogne Basin (F), EPIDOR is perceived as an engineering department, and their high degree of involvement was seen as important in protecting the public's interest.

A **high level of commitment from the leaders** was seen as a key element of success, with a high degree of significance and noted in seven of the case-studies. It was seen as important that this level of commitment was demonstrated and highly visible. The importance of enthusiasm was noted as a key factor of success in the Dee Basin (S). In the Flemish Basin (Be), however, it was noted that enthusiasm and close identification of the initiators of the process with the goals of the project sometimes hindered an inclusive approach. Both the French and Scottish case-studies provide good examples of where strong clear leadership has supported SL. In 1992, EPIDOR became a leader in the Dordogne RBMP (F) and a key node in the SH system, they became an effective representative of public interest. It was considered important that there was a personal high level of commitment from the EPIDOR's manager and his team. In the Elbe Basin (De) it was noted that there was very positive feedback from participants on the level of leaders' commitment, indicating that this was an important element for participants in the participatory process. This finding was backed up in the Ribble Basin (E & W), where an initial lack of involvement from the leaders was noted by the SH. Further into the process of implementation, however, more senior figures of the lead organisations made themselves available to the process, which was seen as important to its overall success. In the Danube Basin (Hu) it was noted that a sustained level of commitment and participation from members of the process with leadership roles was crucial to the overall success of the process. Attendance of organisations with appropriate technical capabilities at all dialogue meetings was highlighted as an important factor regarding the achievement of social learning. As well as financial support, this level of commitment had other benefits for the process, including access to background documents and provision of technical assistance above and beyond their attendance at events.

The **presence of an independent mediator or facilitator** was highlighted in eight of the nine case-studies as critical to the overall success of the process. This factor was particularly important in the planning and implementation phases. In several of the case-studies it was noted that this was a role that could be taken on by members of the stakeholder organisation (as in the Flemish Basin), whilst in some of the case-studies it was taken on by an independent professional facilitator, as in Danube Basin (Hu), where the mediator was an independent professional firm. This firm was working on the implementation of the WFD in Hungary, with the main task of providing professional assistance for the stakeholder events.

The question of whether the mediator needs to be from a group outside of the lead agencies or stakeholder groups, is one that requires further discussion. In Bacchiglione Basin (It), it was noted that having an independent facilitator was important in gaining the 'trust' of participants, both for the process and the outcomes. In the Dee Basin (S), the presence of an experienced, well-respected independent facilitator without vested interests, but with thorough understanding of issues, was deemed to be critical

to the success of the project. In the Muga Basin (Es), it was noted that a considerable amount of effort was invested in order to create the necessary conditions and materials for enhanced reflection with stakeholders. In the Ribble Basin (E & W), stakeholders' preference of the working methods of the original facilitator was such that they found it very difficult to adapt to a different working approach, which was utilised when this individual was unable to attend a final meeting. The Spanish, Scottish and English experiences highlight the need for careful reflection about this role and possible ways of working with stakeholders.

4.2.2   Goals

Lack of **clarity about the role of SH involvement, and what is expected from SHs** was the most common barrier to SL, considered as significant in eight out of nine the case-studies. It was seen also as a function of a poor definition of what is expected from SHs. This lack of clarity covered the aims of the input, as well as its form, including issues such as timing. In the Flemish Basin (Be) although stakeholders were formally represented on the steering group, the roles of members of this group were not specifically clarified. Most members felt that they did not know how they could contribute in a meaningful way. Two of the nine case-studies, namely the Ribble Basin (E & W) and the Dee Basin (S) indicated that the lack of clarity about the role of SHs was reflected in particular events within their case-studies, which although important in terms of the outcomes and success of those events, were not significant in terms of impacting upon social learning in the overall process. This issue was deemed to be the most important in the planning and implementation phase in almost all of the case-studies. In the Dordogne Basin (F), it was noted that the role of SHs were clearly specified at the Dordogne Valley Summit but not in the overall process since 1992. Thus, although lack of clarity about the status about the imitative was not seen as a barrier in this case-study, the lack of clarity about the role of SH involvement was seen as a barrier. In particular, it was seen to lead to poor implementation of the Dordogne Valley Charter, because targets were not assigned to the appropriate action communities. This points to the need for ongoing communication and clarification about roles and aims. This includes communication about the way that the results will be used. Whilst this barrier was not seen as significant in the Muga Basin (Es) for the overall project, it was an issue at certain events, as the use of the final results were not sufficiently communicated at the beginning of the process, despite the fact that these results were finally presented in public with local authorities and the media. In the Bacchiglione Basin (It), it was pointed out that there were different visions about SH involvement, and this issue was seen as a significant barrier, as the director of the authority only saw the SHs' role as that of consultation, not as active participation.

This barrier is related to, and in some cases was seen to lead to, the barrier of **SHs' lack of belief that their inputs will make a difference.** This barrier was given quite a high degree of significance by the case-study leaders of six of the case-studies. In the Elbe Basin (De national level), this was seen to relate to the history of poor communication about such planning processes. In the Ribble Basin (E & W), there was a sense that the SHs hoped that their inputs were making a difference, but some believed that issues that they had put into the process had been ignored. In the Meuse Basin (NL), this barrier was seen as related to that of a lack of clarity about the aims and status of the process, which lead to a lack of clarity about what to expect of the process and thus whether or not the efforts of participating stakeholders were likely to have a return. In the Dee Basin (S), some SHs in the catchment felt that they were being involved only to add credibility to process and that the outcomes would favour the agendas of the funding organisations.

Clear expectations were seen as a key fostering mechanism for SL, reflected in the high significance ascribed to the several different aspects of clarity around expectations discussed below. Several case-studies explicitly identified the category of clear expectations as a key fostering mechanism for social learning In the Dordogne Basin (F), it was seen as an important outcome of clear expectations that 370

out of 402 targets for RBM were adopted unanimously. In the Muga Basin (Es), clear expectations were seen as significant for particular events. It was seen as important that the whole consultation process was open and flexible enough to allow participants to create their own expectations and manage those expectations during the course of the process. Thus it can be seen that expectations require ongoing thought, as they are more a result of a process than an independent thing in and of themselves.

A lack of **clarity about the status and aims of the initiative** was seen as an issue in five of the case-studies, and was seen as a key barrier in the following three case-studies. In the Flemish Basin (Be) the status of the resulting plan has been questioned throughout the process, specifically because the administrations leading on the PP process are not the formal authority over the river. In the Elbe Basin (De), this was a particular issue at the basin level of scale, but not at the sub-basin level. At the basin level, the history was impacted by a poor information policy (from SHs' perspective) and there was some reluctance on the part of the Component Authorities to be seen to have to stick to their words on the outcomes of the process. This led to deep scepticism about the whole approach of PP at an international level. In addition, the international negotiations were quite difficult as it was seen that the Czech partners were not clear about their interests, beyond those stated, of not using any resources. In the Meuse Basin (NL), the key factor was seen to be a lack of clarity about the status of the outcomes of the process and how they will be used in the follow-up trajectory, in particular the status of the flood modelling scenarios and how these would be taken further forward in the project. The resulting outcome of this was that some stakeholders became convinced that their efforts would not pay off. In contrast, case-studies within the Dordogne Basin (F), Danube Basin (Hu) and the Elbe Basin (De - sub-basin level) highlighted the availability of clear expectations from the lead organisation as an important factor in the overall process that had a positive impact on social learning amongst stakeholders within these case-studies. For example in the Dordogne Basin (F), it was seen that The Dordogne Valley Summit that formed in 1992 acted as an institutionalisation of Participative Dordogne Management. This institutionalisation of PP was seen as the 'policy birth' of effective PP in local RBM and thus the status of the initiative was clear. However, there were some concerns about clarity of the ongoing aims of the initiative, as it was seen that many SHs have strong expectations about the Dordogne Valley Charter, which may not be met, as it is only a policy framework paper. In the Danube Basin (Hu), the lead organiser had strong requirements as to the expected outcomes, which were introduced to the participants at the beginning, and this was seen as important in the overall process. In all of the cases that highlighted this factor, it was deemed important or critical to the overall success of social learning.

4.2.3   Motives

A barrier to social learning was **contradictory expectations of the ways different SHs want to be involved**. For instance, in the Flemish Basin (Be), stakeholders wanted to be involved early in the project, but could not tell how they wished to be involved. For the initiators, SH involvement implied consultation and informing societal actors. In the Elbe Basin (De) (Basin-level), the agricultural SH wanted to be treated as an authority, not merely as SHs. This lead to some reluctance on their behalf to become involved in the process. This barrier is linked to a lack of clarity about aims and status of the process, but has further implications in terms of differing expectations and assumptions, which may not be articulated, as to roles. In the Ribble Basin (E & W), some stakeholders expected the process to be more focussed on decision making and actual concrete decisions / aims to be agreed than the visioning process had set out to achieve.

Several of the case-studies discussed difficulty arising from the perception of the **leading institute also defending its own interests, or wearing two hats,** in the process. In the Flemish Basin (Be) this was recognised as a problem, as the leading actors were struggling with their double roles, defending their interests in addition to acting as facilitators of the process. They tried to split both roles by attributing them to different representatives. In the Ribble Basin (E & W) this was recognised as a potential

problem, but the lead organisation went to great lengths to be seen as remaining independent and open to suggestions. This potential barrier was not seen as a significant issue, neither for any particular events nor for the overall case-study. In the Muga Basin (Es), there were some links between the University, which was leading the process, and public officials. However, this was not seen as a barrier, but rather as a potential for social learning.

4.3 Context

For the purposes of this analysis, we have considered 'context' to mean the procedural contexts that create the environment within which social learning may, or may not, take place. This refers to specific contexts, such as the available resources and organisational practices where the action (of PP) will be initiated.

Important questions are:

- What resources are made available?
- What capabilities or qualities do the actors have to act effectively?
- What organisational practices are used, for example how is the role of leader played?
- How is the process of SH involvement designed?
- What situational languages are used?
- What ICT tools are used (see Sections 4.2.5-4.2.6).

This context category accounted for the largest number of social learning issues as evidenced in the case-studies, with a total of thirty-seven out of seventy-one issues under the category.

The issues covered under the category of Context were:

- barrier - lack of adequate time and resources;
- barrier - SHs' lack of resources (in particular time);
- barrier - omission of important considerations such as costs;
- barrier - unbalanced representation;
- barrier - failure to clearly identify stakeholders needed in process;
- barrier -failure to define criteria for SH being included or not;
- barrier - lack of rules of representation;
- barrier - failure to include all stakeholders;
- establish and maintain legitimacy/openness of project, continuous feedback;
- joint planning of the approach before undertaking the initiative;
- clear ground rules for interaction (terms of reference);
- barrier - lack of opportunities for direct interaction and exchange between stakeholders (too few, too far apart);
- complementary multiparty interaction;
- informal workgroups and field trips;
- barrier - splitting up the multiparty process between formal and informal negotiations;
- bilateral meetings to inform and listen with a specific focus;
- barrier - high numbers of participants especially in formal stakeholder meetings;
- limited number of participants to enable in-depth discussion;
- starting from a blank-sheet – no preconceptions;
- frequent and focussed discussions;
- barrier - overly lengthy procedures;
- barrier - no set location and meetings too far apart;

- barrier - partial framing by the convener (e.g. ideas already pre-formed);
- barrier - leaders discarding previously agreed goals/ not appearing to be listening;
- organisers well trained in group interactions;
- barrier - lack of process orientation of the actors;
- barrier - overly technical language;
- barrier - complex and inadequate IC-Tools; and
- barrier - starting from technical models.

These are discussed below according to the key sub groups of the Spiral of Social Learning, namely: Resources, Participation process design, Organisational practice, Capabilities, and Situational languages.

4.3.1   Resources

The issues covered under this heading were deemed by the case-study leaders to be of particularity high significance.

A **lack of time and resources** was identified by six of the case-studies as an issue, and by four of the case-studies as a critical barrier to social learning. In the Flemish Basin (Be), the initiators sometimes complained that they had little time for the study. They also wanted more training, for instance, in facilitation techniques. In the Dee Basin (S) the activities connected to the river basin planning process, including public participation, have largely been funded through European funding. Stakeholders noted that this prevented significant re-framing of issues, as the project outcomes are required to reflect the original proposal for European funding, and in particular its timelines, restricting the time available to rethink the issues. Another example of this problem occurred in the Flemish Basin (Be), where a separate study aimed at accounting for the interests of farmers began after the participatory process was significantly advanced, suggesting that by the time useful results became available, it would be too late to account for them. In the Ribble Basin (E & W), some SHs wanted more time for discussion to go into more depth on issues. This issue was particularly apparent in the final workshop. At the Basin-level of scale in the Elbe Basin (De), this was seen as a significant issue, with the result was that opportunities for PP were limited. This limiting factor has a clearly related fostering mechanism, that of **providing sufficient time and resources**, noted as an important issue in four of the case-studies.

SHs' lack of resources (in particular time) was noted as an issue in six of the case-studies. In England, it was noted that some SHs could not attend the process due to a lack of funding or inability to afford the time. In the Danube Basin (Hu), the costs of participating were seen as a potential reason why some of the smaller NGOs did not participate. In the Muga Basin (Es), a lack of resources for sustained participation was pointed out as an issue, participation was seen to be limited to reactive social mobilisation in periods of conflict. In the Meuse Basin (NL) and the Dee Basin (S), it was noted that participants may lose interest if the process is unclear and lengthy, due to the limited time and money they have to attend workshops. In the Dordogne Basin (F), it was noted that the fishermen were disappointed about the time spent on the process, as their particular concerns, the impacts of water discharges on fishes and spawning grounds for salmon or trout, were not solved in the process. In the Ribble Basin (E & W), it was noted that some stakeholders, particularly from industry, thought that the time was more than adequate and would prefer focussed half-day meetings rather than 2-day discussion workshops. They could not justify such a high amount of time away from their regular jobs.

The barrier of **omission of important considerations such as costs** from the process planning was mentioned in four of the case-studies. It is important to consider the issues raised under resources in the planning of the process from the beginning.

4.3.2   Participation process design

The design of any participatory process can have important implications for social learning that may arise within and between groups of actors. Several issues were raised under this heading. The following cluster of issues deals with a number of key aspects relating to representation.

Failure to include all stakeholders was assigned a high level of significance in six of the case-studies, as an important barrier to social learning, particularly in the implementation phase. This issue was highlighted in the Belgian case-study, where not all stakeholders were seen as included in the process, although formal members of the sub-systems felt that they were adequately represented. At international level in the Elbe Basin (E & W), only agriculture, industry and environmental NGOs were identified as the key stakeholders, while in the Ribble Basin (E & W) many stakeholders felt that many sections of the community, including riparian owners, ethnic minorities and younger people, had not been included. Although there was a failure to include all key stakeholders in the first round of workshops in the Meuse Basin (NL), this problem was rectified in the in second phase (IVM2) where all key SHs were included.

Lack of rules of representation was highlighted in four of the case-studies as an important barrier to social learning, especially in the implementation phase. This was identified in both Flemish Basin (Be) and the Muga Basin (Es), where there was a lack of explicit rules for involvement, while in the Dordogne Basin (F) it was noted that the ground rules for involvement were not as clear as those previously in place under the Dordogne Valley Summit. At international level in the Elbe Basin (De) there were no clear criteria in terms of what was required from SH involvement. It was noted that there was a lack of transparency regarding criteria for selection of stakeholders. A lack of clear ground rules regarding representation in a sub-catchment of the Dee Basin (S) resulted in one SH hijacking the process and attempting to drive through their own agenda. Whilst **unbalanced representation**, in terms of the make-up of SHs involved in the process, was only highlighted specifically in one of the case-studies as a barrier to social learning, several other related issues were raised in the analysis. Other issues that were closely linked to this issue included **failure to clearly identify stakeholders needed in process** and **failure to define criteria for SH being included or not included**.

The following cluster is based around the *overall design of the process* and the means of interaction.

Establishing and maintaining legitimacy of the process through a transparent approach with continuous feedback, such as through the dissemination of minutes, questionnaires and background documents, was identified in seven of the case-studies as an important issue to enable fostering of social learning, particularly in the implementation phase. This issue was assigned a high level of significance by case-study leaders. In the Meuse Basin (NL) it was felt that if such an approach was not employed, stakeholders would lose confidence in the process, which would be reflected through poor attendance at workshops. It was recognised in the Flemish Basin (Be) that the arrangements for communication were inadequate, with the first newsletter after one year, and with the webpage seen as inaccessible, not user friendly, and inadequately publicised.

Joint planning of the approach before undertaking the initiative was considered an important factor in three of the case-studies, though in Scotland, it was also noted that it was better to approach SHs with a plan as opposed to blank sheet approach in terms of process design.

Clear ground rules for interaction of stakeholders, or terms of reference, established at the beginning of the process were deemed to be an important factor in fostering social learning in the Ribble Basin (E & W) and Dee Basin (S). In the Dee Basin (S) the lead organisations felt that this approach ensured greater control in terms of resolution of contentious issues, if they were to arise.

Lack of opportunities for direct interaction and exchange between stakeholders (too few, too far apart) was highlighted in three of the case-studies as a relatively significant barrier to social learning. In the Flemish Basin (Be) there was almost no direct interaction, as steering group meetings occurred on an annual basis, while in the Muga Basin (Es) interactions between stakeholders tended to be limited to their own focus of interest or community, not on transversal RB issues, across interests and at RB scale.

Complementary multiparty interaction were also identified as an important factor in aiding social learning, providing a greater opportunity for SHs to learn about different perspectives from other actors, increasing potential for solutions that involve compromise. In the Dordogne Basin, SHs were provided with the opportunity to interact in a 'concert scene', consisting of large numbers of different actors to learn about the different perspectives of others in terms of management of water discharges. This helped to increase their confidence in the process. In the Elbe Basin (De), a multiparty interaction was created at the beginning of the process to enable involvement of all key SHs. This aimed to ensure that the objectives associated with implementation of the WFD were met, and that there was sufficient ownership of the solutions developed to meet these objectives.

Informal workgroups and field trips were identified as an important issue in fostering social learning in four of the case-studies, particularly in the implementation phase. These were seen to provide an opportunity for discussion and interaction amongst stakeholders, providing a platform for learning about other actors' perspectives and issues facing the entire river basin.

Dividing the multiparty process between formal and informal negotiations was identified as an important barrier to social learning in the Flemish Basin (Be). There was a poor link between formal and informal negotiations, evidenced by a lack of bilateral discussions between different actors in steering group meetings. This resulted in some actors feeling that were unable to satisfactorily contribute toward the formal process.

Bilateral meetings to inform and listen with a specific focus were seen as critical to the overall success of the process in the Flemish Basin (Be) and the Danube Basin (Hu). In the Flemish Basin (Be) the initiators invested a large amount of time in bilateral discussions in an effort to get an indication of what stakeholders' ideal scenarios were in terms of the plan's content. Interestingly, although the purpose of these information sessions was to obtain information rather than to provide it, these information sessions proved to be an important opportunity for engagement, allowing stakeholders and representatives to become better informed about the possible impact of the study upon their interests. In the Hungarian case-study, bilateral discussions were utilised to foster a closer integration of issues between agricultural and environmental interests, enabling resolution of historical conflicts.

A **high numbers of participants, especially in formal stakeholder meetings,** was seen as a significant barrier to social learning in the Flemish Basin (Be), where there was no appropriate meeting format to enable large group discussions. This barrier is linked to the fostering mechanism, ensuring a **limited number of participants to enable in-depth discussion.** This was identified as an important issue in five of the case-studies, particularly in the implementation phase of the participatory process. This issue was denoted with a relatively high level of significance. In the Muga Basin (Es) all participants considered the small-group discussions as the most useful part of the process. The pressures to include all interested SHs discussed above, however, make it difficult to only have small working groups, as this can lead to a feeling of under-representation. These factors have to be balanced against each other. The design of meetings and the overall dialogue process can help to manage these tensions.

The following cluster of issues is specific to the actual design of meetings

Starting from a blank-sheet – no preconceptions was identified as an important fostering mechanism in terms of social learning in three of the case-studies. This approach was utilised set the agenda for issues in the Ribble Basin (E & W) visioning workshops. However, stakeholders indicated that they wanted more information before the meetings to assist them in putting forward the appropriate issues and to ensure that discussions were more focussed.

Frequent and focussed discussions within and between different SH groupings was identified in five of the case-studies as an important issue fostering social learning. In the Flemish Basin (Be), the coordination group met on regular basis. The lead organisation in the in the Ribble Basin (E & W) undertook regular dialogue with different SHs, enabling improved working relations between all SHs, as observed in the visioning workshops. In the Danube Basin (Hu) it was noted that frequent and focused discussions were very important for maintaining the legitimacy of the project and maintain SHs' confidence in the process. This helped to increase knowledge and a better understanding, particularly in the agricultural sector regarding the implementation of the WFD in Hungary. A related barrier to social learning was **overly lengthy procedures.** This barrier was highlighted in three of the case-studies as a significant barrier to social learning. In the Meuse Basin (NL) it was noted that lengthy procedures drain the enthusiasm and energy of participants. In the Dee Basin (S) a perceived lack of time was exacerbated by differences in organisational cultures between the lead organisations.

The linked limiting factors of a **lack of a set location for meetings, and meetings too far apart** were identified in one of the case-studies as a barrier to social learning. In the Bacchiglione Basin (It) meetings tended to take place at intervals of six months or greater at a number of different locations. This contributed to tension between the lead organisation and some SHs.

4.3.3   Organisational practices

A small number of issues were raised under this section, all of which relate to practices of lead organizations and the potential impact of their practices on social learning.

Partial framing by the convener (e.g. ideas already pre-formed) was highlighted in two of the case-studies as barrier to social learning, particularly in the planning phase. In the Flemish Basin (Be) the initiators had a strong impact on the way the problem was framed, who was to be involved and how, as well as in the development of 'ideal' solutions. In the Elbe Basin (De) the competent authorities responsible for implementation of the WFD had a clear idea of what they wanted and were seen to dominate discussions, although this did not necessarily lead to a successful implementation of their ideas.

Leaders discarding previously agreed goals/ not appearing to be listening was highlighted as a barrier to social learning in one of the case-studies, in England. It was seen as a significant issue for a particular event, and subsequently as an issue (though less significant) for the overall process. At a final workshop there was significant discontent among some SHs who felt that key issues raised at earlier workshops had disappeared from the process. This resulted in some distrust toward the lead organisation, and a feeling that the process had gone backwards.

4.3.4   Capabilities

Organisations and representatives **well trained in-group interactions**, with appropriate skills and expertise in participatory processes associated with river basin planning, was seen to play a crucial role in the overall success of the participatory processes in the case-studies. This issue was denoted with a relatively high level of significance in the analysis. In the Danube Basin (Hu) it was recognised that this

enabled differences of opinion between stakeholders to be overcome with minimal disruption to the process. The related issue, a **lack of process orientation of the actors,** was seen as a limiting factor in two of the case-studies. In the Flemish Basin (Be), the initiators were seen as being very focused on the *substance* of the collaboration and on establishing procedures, but not necessarily on the process of interaction. This lack of process orientation could be a common problem amongst people with training in technical and water management issues, as these have not traditionally tended to focus on social processes and the design of participatory processes.

4.3.5   Situational languages

The concept of situational languages encompasses the ways that different groups of actors use language to denote meaning within their spheres of activity. Whilst such a development of language and norms of meaning (commonly referred to as jargon) can ease and enable communication amongst groups of people with similar backgrounds, it can impede understanding and communication between different groups, who are not from the same 'situation' and thus do not share the same language.

A barrier to SL noted in three of the case-studies was the use of **overly technical language.** It was noted, however, that in the Hungarian case-study, participants responding to a questionnaire felt that this was only a problem notable in the first part of the process. As the knowledge of the SHs related to the WFD developed and relationships among the participants advanced, however, it became less of a barrier. In the Belgian case-study, it was felt that there was an over-reliance on technical modelling to attempt to resolve differences between stakeholders.

Supporting the finding from the Hungarian case-study that the barrier of the use of overly technical language is influenced by the phase of the project, in the Flemish Basin (Be), a further dimension of the barrier of overly technical language was noted, that of **starting from technical models**, this was seen to inhibit the engagement of a wider group of stakeholders.

The work group responsible for hydrology issues in the Flemish Basin used abstraction models and scenarios as a starting point which stakeholders found difficult to relate to and understand. In this case, the **complex and inadequate IC-Tools** acted as a critical barrier to social learning as the tools used in the process focused on technical interests and not on wider communication. Attention to making communication accessible to a wide range of people with very different backgrounds and levels of technical expertise is required in a multi-party stakeholder process. In the Dordogne Basin (F) an effective approach to this problem was the generation in a very visible way of a Geographic Information System (GIS) database at the start of the participation process. Data was collected and presented on maps and photographs within the GIS, so that stakeholders could gain a better understanding of issues within the river basin. This GIS database was a useful tool in itself, but the way it was generated meant that stakeholders could more easily link what the GIS database was telling them to their own understanding of their environment.

A large amount of technical discussion focussed on IC-Tools. The following section explores use of IC-Tools in more depth.

4.3.6   IC-Tools and situational languages

The main functions of IC-Tools noted in this project were: first, to manage data and information (e.g. collect, to organize and to provide), second, to support interactions between stakeholders, and third, to simulate the potential impacts of a given scenario. The data collected were mainly environmental data

related to biophysical processes, but economic data were also used. In some cases actors' or public members' representations were collected and synthesised using IC-Tools.

A total of 46 different IC-Tools were utilised within the case-studies, falling within 6 key categories. Table 7 provides an overview of the different types and characteristics of IC-Tools in relation to different contexts which were used in the European case-studies.

Table 7 Use of IC-Tools in European Case-studies

Type of IC-Tool	Case-studies	Comments
Questionnaires Polls	5: F, UK, BE, CH, H 1: F	• questionnaires and polls were usually used for a broad diffusion of information (several hundred people). - for the Flemish case, the questionnaire was used as a basis for face-to-face interviews
Paper model, Flipchart Spreadsheet Interactive whiteboard	4: UK, I, H, D 4: F, UK, I, CH 1: I	• during meetings or active involvement workshops, these were used for different purposes e.g. for the lead organisation in the UK case or as a support to other IC-Tools (slide shows for example, French and German case). • interactive whiteboards were used only during technical meetings.
Internet	6: F, UK, I, CH, D, H	• various forms: From a simple collection of information to a real working tool with restricted access for a selected audience. • sometimes contained message board (forum) functionalities (e.g. German case-study). • almost always in relation to paper documents (newsletters, flyers...)
Maps Geographic Information System (GIS), Information System (IS)	7: F, UK, NL, BE, I, CH, H 5: F, BE, I, CH, D 1: I	• the maps used were very diverse in terms of make-up and purpose: • by content (flood mapping, habitats, microfauna, water user representations of the water release...for example), • by format (A4 to room-size map), • by the technical means of production/diffusion (GIS-based, e.GIS based, click-maps...) • by context (shown during meetings with stakeholders usually but co-built with public (UK case). • GIS or IS were mainly developed by water management boards
Slide shows / PowerPoint presentations and targeted documentaries Mascots, 3Dmodel of a river basin	4: F, H, I, CH, D 1: CH 1: F 1: F	• all these visualisation tools were used during public events (except the beamer was used also for technical meeting) • the mascot is a 3D resin model of a sturgeon (an important fish species in the Dordogne Basin), symbol of the Dordogne River (French case). The mascot and the 3Dmodel of the river basin were used during public events.
Decision Support Systems (DSS), Simulation tools,	5: BE, Nl, 1: Flanders 2: UK, Flanders	• scenario tools were desired by stakeholders in the UK case • all the tools simulate bio-physical processes (hydraulic

Type of IC-Tool	Case-studies	Comments
Scenario tools		model, ground water model for example) • the DSS presented in the Dutch case was more complete and contains slide-show of landscapes, artist's impression, in complement in the biophysical, technical and economical data.

The most simple IC-Tools tended to be used during public events, while more 'high tech' tools such as GIS, simulation tools and scenario tools were used during technical meetings. The latter were more or less well received by the stakeholders, although the GIS in the French case-study was deemed to be too sophisticated for stakeholders, whilst in the English case-study stakeholders expressed a need for the use of scenario tools. Making use of graphic communication, e.g. using a mascot as a symbol, producing clear and easy-to-read maps, was seen to help SHs understand the issues and improve accessibility of the information. The Internet was identified as a very useful tool for collection, organisation, and provision of information to the public and the stakeholders, but it was noted that to realise the full potential of the internet, all stakeholders need to have access to it.

4.4 Change

If actions are successful, they may be able to change specific frames, boundaries, interests, strategies, networks, knowledge production processes and perceptions in the desired or expected manner (Tabara and Saurí 2005). In this way change, can be seen as one of the key outcomes of social learning. Thus, in addition to the discussion under key barriers and fostering mechanisms in this section, issues raised in the case-studies under this heading are discussed further in Section 5, under outcomes.

The issues discussed under this category were:

• flexibility from both sides to do common work and move from original position;

• possibility to change the dominant frames of definition of problems at stake, and of the attendant policy measures;

• common or shared area in the frames of all participants;

• concrete positive experiences of interaction;

• cumulative nature – develop from past experience;

• barrier - controversy concerning the legal authority over the area under study;

• barrier - differences in scale of the project and scale of interest of the SH;

• crisis moments/ issues of high concern e.g. flooding; and

• barrier - lack of relationships between SH and technical teams.

The main headings of the 'Spiral of Social Learning' under which these issues are discussed are: Frames, Knowledge production processes, Boundaries, Environmental quality perceptions, and Networks.

4.4.1 Frames

Social learning implies learning from and with a group of different people. Each of these people comes with certain 'mental models' and 'frames' to the process. A mental model is "a specific mental representation of information about reality" whilst a frame is defined as "the context into which such a

mental model is embedded and which gives sense and meaning to it" (Pahl-Wostl 2004, pg. 3). In a participatory process, exploring actors' frames, the differences between them, and the effects these have on discussions, is key to promoting social learning (Tippett et al. 2005).

Flexibility from both sides to do common work and move from the original position was seen as a significant fostering mechanism for social learning in four of the case-studies. This issue was also characterised by a high level of significance. In the Dee Basin (S), the ability to incorporate a diversity of different perspectives resulted in wider ownership of the community for solutions developed to improve water quality through wastewater treatment in the Tarland sub-catchment. In the Meuse Basin (NL) the flexibility of governments to alter their views was viewed as critical to the overall success of the process. A key fostering mechanisms of social learning is for actors to have the **possibility to change the dominant frames of definition of problems at stake, and of the attendant policy measures**. In the Muga Basin (Es), it was realised that the increasing recognition that PP in RBM needs to be linked to spatial and land-use planning or it renders narrowly defined problems inappropriate.

Creating a common or shared area in the frames of all participants was identified in four of the case-studies as an important issue to enable social learning. In the co-ordination group of the Belgian case-study, significant effort was invested in building common ground between the seemingly opposing nature conservation and flood prevention frames. In the English case-study it was noted that the process of creating common areas in the frames of the participants was facilitated by using simple IC-Tools, in this case flip charts and post-it notes, to make the different viewpoints of the SHs visible, so that SHs could see areas of commonality and difference. In the Muga Basin (Es) a common denominator amongst SHs was identified regarding problems facing the river basin, which was different to the frames of the 'top' policy makers. It was anticipated that this common ground may eventually enable convergence of frames between SHs and the policy makers. This convergence can be viewed as a win-win scenario where stakeholders with different perspectives may yield some element of what they feel is important, yet gain something positive through involvement in the participatory process. For example, in the Flemish Basin (Be) it was noted that recreational possibilities may arise as a result of the construction of new winter dykes.

4.4.2 Knowledge production processes

The fostering mechanism of **concrete positive experiences of interaction** was identified in three of the case-studies as an important factor in promoting social learning. This was highlighted in the Flemish Basin (Be), through positive interviews with stakeholders at the start of the project as well as through positive interactions within the working groups. In addition, examples of positive outcomes from other participatory processes can be used to enhance the credibility of the process, but it has to be realised that this can be a slow process.

The **cumulative nature** of the process and an ability to **develop from past experience** was highlighted in four of the case-studies as in important issue for fostering social learning. In the Dee Basin (S) it was noted that existing links and relationships help to foster further trust and speed up the process, particularly in terms of efficient use of time and resources. Participation in the Bacchiglione Basin (It) was able to evolve from a very local process to a basin vision, largely as a result of previous experience at the local level.

4.4.3 Boundaries

The barrier of **controversy concerning the legal authority over the area under study** was highlighted in three the case-studies as a limit to social learning. In the Flemish Basin (Be) there was

conflict between the two lead organisations, largely because the Nature and Waterways Administration, responsible for leading the process and in charge of technical studies had no legal authority over the river basin.

Differences in scale of the project and scale of interest of the SH was also highlighted in three of the case-studies as an important barrier to social learning. This issue was denoted by a high level of significance. In the Elbe Basin (De) SHs at municipality level expressed concern that negotiation of implementation of the WFD at international level could result in measures to improve environmental quality that would impact largely upon their interests. Furthermore, it was noted in the Elbe Basin (De) that although there is a perception of 'grande importance' associated with SHs at lobbying level, the level from which funding flows, the decisions flowing from this level of scale were only recommendations, without direct impact on actions in the 'implementation of measures', which will occur at an operational level. At the Basin-level in Germany, concern was expressed as to who was going to finance the expected measures, or underwrite the potential economic impacts of different measures. This concern was linked to the fear that the municipalities would have to carry the burden of international politics. In the Meuse Basin (NL) the start of the project focused on large levels of scale and issues such as flooding at this level (large part of river basin), whilst local stakeholders were mainly interested in local issues. It was noted that when moving from a strategic level to an operational, or a more localised, level the potential for conflict increased significantly. At the operational level stakeholders found it easier to understand the potential impacts of proposed measures upon their interests than at the strategic level.

4.4.4   Environmental quality perceptions

A seeming contradiction initially, **crisis moments relating to events such as flooding or issues of high concern** were identified in several of the case-studies as fostering mechanisms for social learning. They were seen to provide the impetus for engagement for many stakeholders. Such crisis moments were seen as significant in the Flemish (Be), Bacchiglione (It), Ribble (E & W) and Danube Basins (Hu) in terms of ensuring participation of stakeholders. These conflicts provided a suitable driver for providing stakeholders with an opportunity for change. For instance, in Belgium, flooding in 1998 provoked a high interest in flooding issues. It demonstrated the inadequacy of the old view of river management. In the Muga Basin (Es) there were no significant crises events during the actual consultation process, but in previous years drought had been an issue, which mobilised local stakeholders and created water-related conflicts.

4.4.5   Networks

Lack of relationships between SH and technical teams was noted as a barrier to social learning in the Flemish Basin (Be) largely because interaction of SH and technical teams was confined to bilateral meetings and interviews. A similar circumstance prevailed in the Italian case-study, with the only 'web' moments represented by the workshops and team-work which specifically allowed for connections and the sharing of information between SHs and experts. Conversely, in the Dordogne Basin (F) this was not seen as a barrier, due to the training of staff and mechanisms in the organisation for participation and information management.

4.5   Structure

For this analysis we have considered structure in the sense of the institutions, policy making processes, markets and cultures which set the deeper rooted, big picture framework within which SH involvement

takes place, and social learning may occur. Social learning may lead to changes within these structures but it is likely that change will be slower than changes in the context, as the structural components of the system work at a different, deeper level than the immediate context and is thus more resistant to change. There were sixteen issues that emerged as possible fostering mechanisms for, or barriers to, social learning under this category. Four of these were fostering mechanisms. Note that while this absolute number of issues is relatively low, especially compared to the number of issues discussed in the sections on Action and Change, many of these structural issues are highly significant in terms of their impact. The fact that there is also a high proportion of barriers identified in relationship to the other main headings, coupled with the likely slow rate of change in any structural issues, means that these issues are likely to have a profound effect on social learning and the effectiveness of multi-party river basin management.

When analysing structural issues, key questions to ask are:

- What is the culture of SH involvement?

- What is the institutional framework within which SH involvement will take place?

- What are the policy making processes that affect and may be affected by SH involvement?

The key issues are:

- barrier - difficulties in moving to a multiparty emergent approach;
- barrier - reluctance to change governance structure;
- barrier - fear of SH involvement;
- barrier - fear of loss of confidentiality;
- barrier - SH reluctant to be involved;
- barrier - lack of confidence of key SHs;
- barrier - unfavourable culture;
- strong river basin institution;
- degree of interdependence among participants;
- barrier - current governance structure;
- barrier - pre-existing distribution of water rights;
- barrier - networks and formal exchange mechanisms not formed;
- barrier - political changes e.g. changes in leadership or party;
- effective structures for pp, including working system for exchange between organisations;
- close interaction of key stakeholders with relevant policy makers;
- barrier - growing tourism pressures.

The main headings used to format discussion of these issues are: Culture, Institutions, Policy making, and Markets.

4.5.1   Culture

Difficulties in moving to a multiparty emergent approach were highlighted as an important barrier to social learning in four of the case-studies. This issue was denoted with a relatively high level of significance. In the Muga Basin (Es) negotiations have tended not to take place in large multi-party situations, but more on restricted negotiations between key SHs and institutions, limiting the possibility for social learning. In the Elbe Basin (De) multiparty interaction was limited primarily to bilateral exchange between the water authority and one SH grouping at a time. This is largely because SHs are

generally informed by water authorities, a factor which confines the level of exchange. This problem was also observed in the Flemish Basin (Be) where the lead organisations only consulted SHs on a bilateral basis, to avoid opening up the discussion process. The initiators preferred to keep control over the process and structured it tightly. They saw themselves as the central party in this process. Stakeholders were only consulted, often on a bilateral basis. The initiators tended to avoid opening up the discussion with the stakeholders. This barrier may be related to a reluctance to change governance structure, discussed below.

Reluctance to change governance structure was also identified as an important barrier to social learning in the Ribble Basin (E & W), where there was perceived reluctance at a national level to change the decision making and governance structures, and in the Elbe Basin (De), where such change was not seen as an option.

Fear of SH involvement was identified in two of the case-studies as an important barrier to social learning. This occurred in the Flemish Basin (Be) where the initiators avoided direct interaction with SHs due to an underlying fear of losing control of the process. This was largely because they did not have capabilities in facilitating multi-party interactions. In the Elbe Basin (De) the authorities were wary that if SHs did not feel that their interests were being addressed that they may mobilise their respective interest groups which would have significant implications for the negotiation process.

Fear of loss of confidentiality was highlighted as a barrier to social learning in three of the case-studies. In the Dordogne Basin (F) an industrial SH believed that their economic interests could be impacted, particularly in terms of competition through their involvement in the process. The issue of confidentiality was also raised in the Elbe Basin (De) where it was believed that large scale SH involvement could reduce the frequency of open discussions where unpopular, intermediate solutions may be elaborated.

SH reluctance to be involved was identified as a barrier to social learning in two of the case-studies, though not as a particularly significant. In the Dee Basin (S) SHs from the tourism and business sectors did not wish to be involved in the process due to the fact that they could not see any tangible benefits for their interests. In the Elbe Basin (De), however, the reluctance of some SHs to be involved stemmed more from a desire of one SH group (agriculture) to be granted more weight in the process than environmental NGOs.

Lack of confidence of key SHs was highlighted as a barrier to social learning in four of the case-studies. In the Danube Basin (Hu) this problem was highlighted at a local conference on the WFD where NGOs had minimal confidence to contribute to discussions due to a lack of knowledge regarding the WFD. This problem was also noted in the Dee Basin (S) where a lack of technical expertise amongst some SHs correlated with a lack of confidence. This issue was partly overcome through extensive information provision and education.

Unfavourable cultures for participation were identified as an important barrier to social learning in three of the case-studies. This was highlighted in the Flemish Basin (Be) where there had traditionally been not public participation connected to river basin planning processes. In the Muga Basin (Es), this issue related mainly to institutional cultures for public participation. In the Elbe Basin (De), there was scepticism on the part of many of the stakeholders, particularly at the Basin-level, regarding the process, which was seen as attributable largely to poor dissemination of information by authorities in the past.

4.5.2   Institutions

The presence of **strong river basin institutions** was highlighted in two of the case-studies as an important factor in fostering social learning. In both of these cases, this issue was denoted with a high level of significance . In the Dordogne Basin (F), EPIDOR is an important advocate for SH engagement and has become an increasingly important representative of the public interest. In the Dee Basin (S) the steering group was identified as a strong river basin institution as it is representative of all interests within the catchment.

Degree of interdependence among participants was highlighted as an important issue in terms of fostering social learning, particularly in the Meuse Basin (NL) where it was noted that interdependency amongst participants was required to ensure that different actors' goals were achieved.

The **current governance structure** was highlighted in three of the case-studies as a barrier to social learning. In the Muga Basin (Es) it was noted that the present government is very rigid with decisions relating to river basin management issues, based largely on technical expert knowledge. In comparison to historical, post-dictatorship policy arrangements, however, this structure is seen as more permeable to advice and information from external SHs.

Pre-existing distribution of water rights amongst different actors was identified in two of the case-studies as in important barrier to social learning. In the Muga Basin (Es) and the Dordogne Basin (F) this related to SHs associated with production of energy. It was noted that it is very difficult to change the practices of these SHs when their activities are compatible with national law. **Networks and formal exchange mechanisms not being formed** and a lack of **effective structures for , including a lack of a working system for exchange between organisations** were also highlighted as important issues in terms of social learning.

Political changes e.g. changes in leadership or party was only highlighted in one of the case-studies as an important issue in social learning, however it was recognised that when this happens, it can have a significant impact on the process and it outcomes. In the Flemish Basin (Be) the lead initiator of the process, the Nature Administration initially had strong political support from the Environment Minister of the Green Party. However, this political support was withdrawn following a shift in power, following on from elections.

4.5.3   Policy making

Close interaction of key stakeholders with relevant policy makers was identified by one of the case-studies as an important issue in fostering social learning. At the end of the consultation process in the Muga Basin (Es), some key stakeholders managed to negotiate a plan with the Catalan Autonomous Government Minister on planning, and get approved, to deal with the planning of the Alt Empordà county, which was one of the main claims of the consulted stakeholders.

4.5.4   Markets

Growing tourism pressures was identified in one case-study as a barrier to social learning. Increasing quantities of non-resident populations in the Muga Basin (Es) increases the potential for lack of engagement with local environmental and water issues and institutions.

5. OUTCOMES

Outcomes evidenced in the European case-studies can be assigned to the following key categories:

- Process Outcomes – i.e. are the processes of PP more effective in influencing RBM? Key indicators are likely to include: the effectiveness of networks in multi-party engagement processes, two-way integration across different levels of scale, development and implementation of new structures (institutions) to encourage better management of river basins.

- Social Outcomes – i.e. are SHs influencing decisions on RBM able to contribute more effectively to these processes or in other ways contribute to, or appreciate more, environmental improvements? Key indicators are likely to include: an increase in SH awareness regarding other SHs' perspectives and significant issues within a river basin, and sharing of decision-making responsibilities to ensure delivery of integrated solutions.

- Environmental Outcomes – are there environmental benefits, or are these more likely to be demonstrable due to SH contributions via PP? Key indicators are likely to include solutions that have been developed and endorsed by all key SHs, resulting in demonstrated measurable improvements in the bio-physical environment.

5.1 Process outcomes

Engaging SHs to resolve complex water management issues can result in changes to the engagement process itself, which helps to develop solutions that are integrated and more effective in their implementation. Put simply, process outcomes relate to revisions of the way SHs and institutions work, think, and use their resources to ensure appropriate resolution of river basin management issues. Key process outcomes identified within the European case-studies include:

- effectiveness of networks;
- active management of boundaries;
- promoting two-way flow of integration across levels of scale; and
- development of new institutions.

These outcomes are discussed in more detail below in Sections 5.1.1 – 5.1.4 with reference to key, illustrative examples from the case-studies.

5.1.1 Effectiveness of networks

The effectiveness of a network between actors in any multi-party process will play a significant role in influencing social learning. The creation of knowledge systems in multi-party processes in relation to river basin management must be carried out in extremely complex and uncertain circumstances. Relevant information needs to be transferred amongst many different actors. Networks may be particularly effective where no one organisation has access to all of the required information to ensure that solutions developed are well balanced, and where change will require action from many different actors.

In the Dee Basin (S), the lead organisation recognised early in the process that it could not deliver the required environmental improvement programmes without the contribution of knowledge and expertise from other actors, such as farmers. A steering group, including all of the key organisations with funding and statutory responsibilities, was established along with separate working groups, made up of representatives all of the SH groups likely to be affected by measures (including local senior technical specialists that were respected by all involved). A public awareness and involvement working group was also set up under the 3 Dee Vision project, with a clear strategy in place for engaging stakeholders within each of the sub-catchments throughout the project lifetime. This resulted in increased capacity and confidence of SHs, enabling them to better implement solutions related to the river basin planning initiatives.

The case-study in the Ribble Basin (E & W) established a network of approximately 30 different types of actors within the structure of a SH forum. Visioning Workshops at local and regional level were also utilised to ensure that SHs had the opportunity to identify which issues they deemed to be most important, which could be taken further forward in the process. SHs indicated that this approach had been significantly more effective than previous approaches employed by the lead organisation.

In the Danube Basin (Hu), road-show events were established across the country to promote the implementation of the WFD in relation to agricultural water management. Techniques of small group negotiations were also employed at these events, which were deemed by participants to be a very useful platform for enabling participants to become increasingly aware of other SHs' view-points.

5.1.2 Active management of boundaries

The European case-studies have highlighted that there are very complex boundary issues connected to river basin management issues in relation to multi-party involvement processes. River basin management groups tend to be "loosely coupled systems", in which "traditional boundaries of hierarchy, function, location, structure, role, task and time are often not present" (Craps, 2003, pg. 35). Whilst the biophysical delineations of river basins can be mapped, once criteria for selecting them have been agreed, the areas of interest (both geographical and issue based) of the different stakeholders are likely to overlap, operate at different spatial scales, and in some cases come into conflict over jurisdiction and responsibilities. Thus there are many overlapping, and often incompatible boundaries. This is exacerbated by the need to include administrative units that have often not traditionally been involved in environmental management, and thus are often not based on bio-geographical units of space, such as local authorities, to deliver the integrated types of solutions required by the WFD.

Setting up a multi-party stakeholder process involves the creation of at least one new boundary, which is developed around that process. This involves asking the questions – 'Who is in the process and who is not? Are there smaller groups within the larger process with specific responsibilities, and how do they relate to the larger group?'. Feelings of exclusion can create problems, in terms of SHs' perception of the legitimacy of the process and their acceptance of the outcomes. Thus, the process of deciding who to include (and in what way, with what role in the decision making process) is important. Issues to be taken into account include: biophysical factors, administrative and managerial boundaries, social dynamics and cultural understandings, and the different groups and associations that may have an interest or stake in the river basin. The perception that SHs have been adequately included in the multi-party process is an important factor that can assist in stimulating change.

The Ribble Basin Pilot Project utilised a comprehensive process of stakeholder mapping to endeavour to make the participatory process representative, through inclusion of a wide range of 'stakes' in the stakeholder list. A questionnaire was sent to a multitude of groups, identified by axes including: organisational type (e.g. public sector, private company, NGO, community group), level of scale of

operation, interest in the water environment (e.g. ecological, water quality, recreational), level of interest in being involved in river basin planning (e.g. would prefer to be involved actively, to be involved through consultation, or through being informed) (Riley, C., 2004). However, difficulties were experienced in engaging groups that were deemed difficult to reach, such as the business sector. This may have been due to a lack of communication about the relevance of the process to their interests, exacerbated by the fact that the process was in its early stages, at which no concrete measures for improvement were apparent.

The perception that all SHs connected to a river basin management process have been adequately engaged was an important outcome highlighted in some of the case-studies. In the Dee Basin (S) the flexible approach of the working groups in each of the sub-catchments and their makeup of all stakeholders likely to be affected by measures (including local senior technical specialists that were respected by all involved) was highlighted as a major strength, enabling actions to be implemented with greater ease. An example of this was highlighted in the Davan sub-catchment of the Dee Basin, where a forestry stakeholder group was invited to join the working group, after the participatory process had commenced, because it was recognised that they could contribute to the process. It was also noted that the public awareness and involvement working group set up under the 3 Dee Vision project in Scotland had a very positive impact on the process, because it had a clear strategy in place for engaging stakeholders within each of the sub-catchments throughout the project lifetime. The second phase of the Meuse Basin (NL) case-study, IVM2, resulted in the inclusion of additional SHs such as municipalities, particularly at local level. These SHs were also provided with the opportunity to contribute toward the development of flood control scenarios.

Participatory processes associated with the HarmoniCOP case-studies tend to involve representatives from organisations, with the responsibility to bring the views of their organisations to the process and to feed back the outcomes of the process to their respective organisations. Therefore, the overall effectiveness of the participatory process itself rests on the shoulders of a limited number of individuals. As they develop a sense of belonging to the multi-party stakeholder group, trust and understanding can be developed. This helps to develop a sense of identity for the process, which can assist the process of social learning. There is, however, a danger that the social learning will become too dependent on key individuals, and their attendance at meetings and workshops. For example, at the final basin-wide visioning workshop for the Ribble, the independent facilitator involved in all previous workshops was absent. This individual was respected and trusted by all of the actors. Some of the stakeholders indicated that this absence resulted in a step backwards for the good relations developed in the earlier workshops. This issue was also identified in the Elbe Basin (De).

Different perceptions about the between SHs' perceptions of boundary of the problem to be tackled was also highlighted in a number of the case-studies. This was observed in the Ribble Basin (E & W) where some actors were concerned with wider strategic visions (e.g. public authorities) as opposed to others (e.g. local actors such as farmers) who were more concerned about concrete initiatives. Some actors were anxious to move directly to solutions whilst others concern a more strategic approach to options appraisal to ensure that solutions derived were effective in terms of outcomes related to effort and expenditure apportioned to them. In the Meuse Basin (NL) the scale at which flood alleviation measures were being derived (e.g. basin level) was considered by some SHs to be too far removed from their interests. This issue raised concerns relating to inclusiveness, efficiency and ownership of the solutions which would be eventually derived.

Asymmetries in power between actors at different levels of scale have also been highlighted within the case-studies relating to financial resources, time, expertise, knowledge and experience, and legal influence. For example in the Flemish Basin (Be) the public authorities responsible for leading the process had financial, technical and legal power with respect to river basin management initiatives. In contrast, other SHs were required to invest their own time in attending meetings, and because their

focus tended to be rather narrow they were unable to have as wide an insight into all of the issues connected to flood alleviation. These asymmetries in power between actors can result in the formation of a technocratic hierarchy.

5.1.3   Promoting two-way flow of integration across levels of scale

Promoting a two-way flow of integration across different levels of scale was highlighted as a major challenge in many of the European case-studies. In order to encourage institutional change, linkages across and between levels of scale require improvement to ensure that there is an adequate balance between 'top-down' processes, and strategic visions and 'bottom-up' approaches, which involve the development of operational solutions at more local level. A key outcome relating to this point was emphasised in the Muga Basin (Es), where it was recommended that public participation in water management needs to be integrated into the wider domain of spatial and land use planning, in order to increase adaptive capacity to solve environmental problems.

In some of the European case-studies it was noted that it is often easier to generate broad visions at national or river basin district level, where SHs can easily agree on abstract principles, which lack concrete suggestions for change. This problem was evidenced in the Dordogne Basin (F) in the transition from adopting a common 'Valley Charter' via the EPIDOR process in the Dordogne, to putting into place 'River Contracts' at local level within specific tributaries of the Dordogne. It was noted in the Meuse Basin (NL) participatory project on flooding, that moving from a strategic level to a more localised level increased significantly the potential for conflict. This was thought to be because at the operational level, stakeholders found it easier to understand the potential impacts of proposed measures upon their interests than at the more abstract, strategic level, where the direct impacts on their spheres and interests were not as immediately apparent.

A key concern of local stakeholders highlighted in some of the case-studies was concern over the extent to which involvement in the PP processes would ultimately influence decision-making. This concern is strongly linked to whether the organisation in the lead of the SH process has decision-making powers with regards to the issues at stake, and whether it establishes a clear understanding among members on how the PP process will feed into the overall decisions on actions and on implementation of actions. In the Bacchiglione Basin (It) the public organization responsible for leading the participatory process conceived the flow of information as largely one-way, more of a process of informing SHs than taking into account their views and concerns in the planning process. In the duration of the process the public administration was reluctant to recognise the participatory forum as a mechanism for re-framing and questioning policy targets, strategy, etc.

In relation to the role of different actors at the different levels of scale in the PP processes, there were some important differences between the case-studies. Many of the cases considered that a key factor for success was to include a facilitator that is perceived as neutral in the process. However, in other cases there was no formal role of facilitator external to the process, where, for instance, the chair or the lead organisation played that role. This role was at times taken by one organisation throughout the process (e.g. Dordogne Basin(F)) or was rotated among different participants (e.g. Danube Basin (Hu)). According to some of the cases e.g. Dee River Basin (S), it was the personal qualities and the ability to build trust and establish alliances among participants that was identified as important, but there also appears to be an element of whether the convener has legal powers and possibly financial resources that establish the necessary certainty for participants that involvement in the PP process will have an actual impact. The ability of the leaders to deal with managing conflicts, building trust, fostering direct interaction, dealing with institutional rivalries and exclusions, etc. is also important. If public organisations are perceived as having a double agenda of fostering their own agencies' interests as well

as facilitating the process this may create problems, which could exacerbate the difficulties of integrating planning across different levels of scale.

Use of IC-Tools within the European case-studies tended to be distinguished between two different types of situations, the use of IC-Tools to share or organise information relating to different points of view within the same area and using IC-Tools to build a shared body of knowledge, by aggregating information from different perspectives at different levels of scale. In the Meuse Basin (NL) flooding simulation models were used to enable SHs operating within the same territory to visualise the impacts of different types of flooding scenarios, while in the Dordogne Basin a participatory GIS tool was used to assist in identification of different perspectives within the river basin. In contrast IC-Tools have been utilised in the Ribble Basin (E&W), Dordogne Basin (F) and the Elbe Basin (De) to link local knowledge to higher levels of scale. Some of the IC-Tools used to achieve this purpose include use of maps and charts, drawing together a diversity of different perspectives to create a global image i.e. Dordogne Basin while in the Ribble Basin a room sized map was used to enable SHs to locate the issues which they considered to be important. All of these case-studies are associated with implementation of the WFD, and are attempting to ensure that local knowledge is aggregated to the level of the RBD, where decisions which will impact upon local interests are ultimately made.

5.1.4 Development of new institutions and initiatives

Developing new institutions and initiatives to ensure better management of river basins is likely to be a key outcome of any multi-party initiative. In the European case-studies new institutions were only developed in the Dordogne Basin (F) and the Muga Basin (Es).

In the Dordogne Basin (F) the Dordogne Valley Summit (1991-1992), publicising various issues including, water releases, flood prevention, river pollution had an impact on local governance structure and policies on the river. PP encouraged the aggregation of several groups and actors with a new approach to water management being one of its core objectives e.g. professional interests, grass roots organisations and political actors. This enabled the transformation of governance structures, providing the impetus for better integration of environmental issues into public policies. A new public institution (EPIDOR) was established in 2001, largely due to the publicity generated by the Valley Summit and the perceived limitations of the State administrations regarding environmental management. The institution aimed to maintain an objective position regarding water conflicts in the Dordogne Basin. The introduction of this institution resulted in the introduction of a new vision for the river basin i.e. the Dordogne is an environmental entity which should be protected for its own sake.

In the Muga Basin (Es) in June 2002 an institution called 'Salvem l' Emporda' (Save the Emporda) made up of a number of local organisations and SHs was created in order to make available resources to minimise the negative impacts of economic development in the county of Alt Emporda. This organisation operates under an assembly, and developed a series of working groups to deal with different aspects such as mobilisation of resources and assessment of legal matters. This institution has already resulted in minimising the impacts of some development initiatives in the Muga Basin.

5.2 Social outcomes

The process of multi-party collaboration among SHs with divergent interests within river basins can result in co-learning across political and administrative boundaries, resource management jurisdictions and different domains of skills and expertise. Social outcomes tend to reflect the process of framing and re-framing, which may result in convergence of views, through participants being open to change their

views in terms of what they consider to be important and relevant. Key categories of social learning identified in the European case-studies include the following:

- Increased understanding of key issues;

- Changes in perspective derived from the process;

- Building trust and improving relationships between different groups of SHs; and

- Social empowerment.

These outcomes are discussed in more detail below in Sections 5.2.1-5.2.3 with reference to the European case-studies.

5.2.1   Increased understanding of key issues

Developing increased understanding of river basin management problems connected to multi-party processes was highlighted as a key outcome in most of the European case-studies. In the Dee Basin (S), Tarland sub-catchment a local resident who was respected by local farmers (also a member of the steering group), had been active in collecting water quality data for a period of 5 years. This generated greater interest, particularly amongst farmers, to become involved in the participatory process. Through their involvement they were able to learn that other pressures were also impacting upon water quality (e.g. wastewater discharges) and that they were not being 'singled out' as culprits by statutory agencies.

5.2.2   Changes in perspective derived from the process

Social learning is encouraged through integrating the different frames of stakeholders. This requires that actors recognise the role of their own frames and the frames of others in shaping their thinking and responses to issues. The process of exploring the frames that actors bring to a participatory process, the differences between them, and the effects these have on social learning is key to promoting social learning. This process needs to be made explicit, such that assumptions and perceptions are made visible, explored and discussed. It is in this process of learning about the viewpoints of others that stakeholders can learn to expand their own frames and see how their particular concerns and issues affect, and are affected by, the larger whole of which they are a part. The existence of different perspectives often results in the formation of boundaries between different groups of SHs involved in a participatory process. Convergence of these boundaries can result in changing perspectives and enhanced social learning. This convergence can be viewed as a win-win scenario where SHs with different perspectives are able to see that shifts from their original position can lead to positive outcomes in the overall process (Tippet *et al*, 2005).

In the Bacchiglione Basin (It), local SHs initially objected strongly to a proposal involving the relocation of a wastewater discharge outlet, accounting for a number of previously untreated industrial and wastewater discharges to their section of the river. In response to these objections the authorities widened the involvement to include all SHs, as opposed to just those with technical and statutory expertise. This enabled SHs to see their own perspectives within the context of the entire river basin and to increase their understanding regarding water quality problems within the river basin. Therefore, they were able to become more receptive to solutions proposed by the authorities.

In the Elbe Basin (De), Brandeburg Lander implementation of the WFD enabled the lead statutory organisation to increase their understanding of the merits of public participation. They became increasingly aware that involving SHs would ensure that solutions developed to meet the objectives of the WFD would be better informed and more widely accepted.

### 5.2.3 Building trust and improving relations between SHs

Changes in perspectives and reframing of viewpoints can also lead to the outcome of building trust and improving relations between SHs. In the Flemish Basin the Water and Nature Administration and the Navigable Waterways Administration were two central actors which had previously been in conflict with one another as a result of a dichotomy in their perspectives. For example the Navigable Waterways Administration supported a vision relating to control of the river through man-made structures whilst the Environment Administration saw the river as an important part of an overall ecosystem and they placed high importance on retaining water to preserve nature. Initially, due to the historical differences between perspectives, the Environment Administration excluded the Navigable Waterways Administration from the participatory process, despite the fact that it had important competencies for putting into place a vision determined by the Environment Administration. Upon involving the Navigable administration there was an increase in mutual acceptance of the competencies associated with each of the administrations. The participatory process enabled them to go beyond historical tensions to produce a vision which satisfied both parties.

Another positive outcome involving convergence of different perspectives was highlighted in the Dordogne Basin (F). A working group was established to tackle issues relating to water quantity arising from the operations of a large hydroelectric company (EDF). A group comprised of fishermen, who had previously taken the EDF to court and were opposed to their operations, joined the working group. Through exchange a better understanding regarding different viewpoints emerged: the fishermen became more aware of the requirements of hydro-electricity production whilst EDF became more aware of the impact of their operations upon the fishermen. Consequently the stakeholders re-formulated their demands in the context of such discussions.

Increasing recognition of other SH perspectives was also observed in the Danube Basin (Hu). At the beginning of the participatory process there significant tension between the Water Management Associations (WMA) and the World Wildlife Fund (WWF), largely because activities of the WMAs tend to conflict with WWF interests. However, there was a notable development in relations between these organisations during the process to the extent that the WMAs now view the WWF as a respected partner.

5.2.4 Evidence of social empowerment

Constructive change and improvements in sustainability can only occur if people involved in the process are included and empowered to make decisions. Social empowerment may, but does not necessarily, equate to re-distribution of power, but rather increasing the skills of individuals, groups and communities to make better decisions for themselves and to be more effective at engaging with the decision making process. This process implies second order, or double loop social learning, where underlying mental models and ways of working are changed through involvement in the process. In river basin planning multi-party processes, such empowerment can be very complex as partnerships may go across sectors, borders and disciplines.
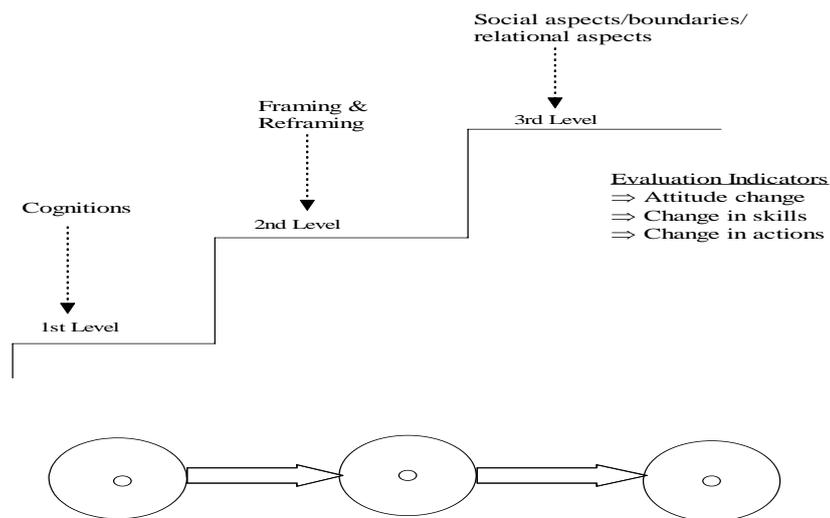
Figure 6   Ladder of social learning (Tabara and Saurí *et al.* 2005)

In some of the European case-studies lead organisations with either statutory or financial powers recognised that they needed the skills and expertise of other SHs to ensure that solutions developed to overcome river basin management problems were sound. This outcome was evidenced in the Meuse Basin (NL) where non-traditional SHs were engaged by the lead statutory organisations in order to gain information and feedback regarding preferences relating to different flood prevention measures. This learning implied a change in the way that the lead organisations actually saw their working processes, implying a deeper level of learning arising from the interactions than simply increased technical knowledge about the basin.

In a similar vein, in the Dee Basin (S) participants recognised that the participatory process had resulted in greater ownership of the environmental pressures facing the river basin, as well as the solutions required to overcome them.

Incorporating stakeholders' perceptions and viewpoints into the discussion using IC-Tools was generally seen as beneficial in the case-studies, due to increasing mutual confidence among the stakeholders and sharing knowledge as evidenced in the Ribble Basin (E & W) and the Dordogne Basin (F). IC-Tools can, however, also be used to maintain power relations, particularly with respect to SH knowledge. A contrast between two uses of IC-Tools in the Dordogne Basin illustrates this point. The 'sturgeon mascot' was a visualisation tool which encouraged the reaction of SHs at public events, providing an impetus for interaction with the lead organisation, while the 3D technical model did not produce interactions between the public and the technicians. Another problem relating to IC-Tools was identified in the Flemish Basin where both lead organisations utilised rival models to ensure that they could assist in achieving their institutional agendas.

In the Dordogne Basin (F) a key outcome relating to IC-Tools was that they were used to translate information between different SH groups and levels of social organisations. They offered an effective entry point to observe the interactions between the various actors involved in river basin management, and allowed information to be translated in such a way as to reinforce the influence and hence position of different SHs within the river basin. Therefore the capacity of SHs to formalise knowledge, translate technical information and modify data using IC-Tools acted as a form of empowerment, which reinforced the position of the various actors in the RBM process. Thus, IC-Tools played a role of translator and integrator, allowing integration between different types of knowledge, between different disciplines, between different SH groups. Effective use of these tools as a social process in the multi-

party interactions also allowed for integration between different levels of social organisation and level of territorial scale. They allowed representatives to act as "spokespeople" or representatives of particular stake or social groups, with a voice in the wider process.

5.3   Environmental outcomes

Multi-party collaborative resource management can ultimately result in improved environmental outcomes. According to Moseley (2003) evidence of environmental improvements is likely to be indicated by the following factors:

- participants agreeing about what constitutes an improved environment prior to deliberation; and
- there is an objective notion of an improved environment that can be identified independently of social or political processes.

However, it is important to note that a collaboration of SHs should not be deemed as a failure if environmental improvements e.g. improvements in water quality are not observed. If, for instance, through deliberation SHs decide that water pollution is not the core issue at stake, then a lack of improvement in water quality should not be deemed as an indicator of failure in the process (Moseley 2003). In addition, the long time scales often required to be able to measure environmental improvements, and the multitude of other factors that can impact on the environment, which are outside of the project scope, means that it can be difficult to directly ascribe environmental improvements to the multi-party interaction, or indeed to ascribe a lack of improvement to a failure of the process. As environmental improvements can take a long time to become discernible, it can be difficult to measure them within the timescales of the interaction processes (or the research evaluating them).

In the Dee Basin (S) (Tarland sub-catchment) an initial proposal was put forward by local authorities for a wastewater treatment plant to ensure compliance with the Urban Wastewater Treatment Directive. Due to the contentious nature of the proposal, the local community were invited to become involved in the process. This resulted in the development of solutions that the authorities had not previously considered, such as the inclusion of wetlands and a wastewater polishing option. As a result the initial proposal was re-framed, enabling an increase in amenity values, water quality and biodiversity within this area and greater ownership of the solutions developed to overcome water quality problems. Stakeholders also noted that some of the working group members in the Davan catchment (e.g. estate managers), also located in the Dee Basin, have changed their land management practices, having become more aware of the environmental problems facing the catchment through involvement in the participatory process.

Non-governmental and governmental actors in a sub-basin (Thuringia) of the Elbe Basin (De) have prioritised a number of pilot measures aimed at achieving the objectives of the WFD. These include measures to restrict the impact of sewage treatment discharges upon water quality and restoration activities aimed at addressing hydromorphological impacts. In the Danube Basin (Hu) four water management associations in partnership with WWF have initiated common pilot projects for the planning of measures to meet the objectives of the WFD, particularly for wetlands and reactivation of former flood plain areas.

The participatory process in the Bacchiglione Basin (It) resulted in approval for a proposal to relocate a number of untreated urban and industrial discharges to one point in the river, enabling better procedures to improve the quality of the water before it is discharged into the river. Although the proposal was initially met with resistance, particularly from local SHs, it was eventually approved after SHs became more aware of water quality issues affecting the entire river basin, through the multi-party process.

In the Dordogne Basin (F) the participatory process associated with the Cere River contract has resulted in the construction of 10 weirs, resulting in direct positive improvements in terms of riverbank stability. A number of wastewater treatment plants have also been upgraded, although this has resulted in no tangible improvements in water quality as yet, due to the impact of diffuse phosphate pollution from agriculture. EPIDOR commissioned an anthropological survey, enabling visualisation of all the problems in the river basin connected to hydro-electric discharges. This resulted in the development and implementation of an early warning system for upstream reaches of the Dordogne Basin.

5.4   Social learning and delivery of the WFD

Article 14 of the WFD requires the active involvement of SHs in developing river basin management plans to ensure delivery of the WFD's objectives. The Common Implementation Strategy (CIS) guidance recognises the importance of involving SHs, highlighting the 'need to involve SHs and the civil society in the implementation of the WFD' (European Commission, 2001).

Actively involving SHs at the level of scale at which implementation of the WFD is reported to the Commission, i.e. the River Basin District is still uncommon in many European countries. Final river basin management plan (RBMPs)s, which are likely to include the outcomes of participatory processes (programmes of measures) produced under the WFD require delivery by December 2009. All of the European case-studies have highlighted the importance of involving SHs early in the process as well as providing sufficient time and resources to ensure that a wide diversity of perspectives can be incorporated into the process and adequately accounted for. This is likely to be a key challenge in ensuring adequate 'buy-in' of the programmes of measures developed to realise the objectives of the WFD.

Another key problem relating to scale and implementation of the WFD is that the legislative drivers and problem contexts, e.g. pressures on the water bodies, generally relate to different levels of scale. This was highlighted in the Elbe Basin (De), for issues such as hydromorphological impacts, agriculture and sand and gravel extraction. A challenge will be to establish appropriate links between 'top-down' processes, which aim to establish strategic visions, and 'bottom up' processes, which aim to establish operational measures, and will be essential in implementing measures suited to the local context.

Despite the future challenges associated with implementing the WFD, the European case-studies have highlighted how social learning can improve river basin management processes. In the Elbe Basin (De) and the Bacchiglione Basin (It) SHs were able to become more aware of the problems facing their respective river basins. In the Dee Basin (S), involving local SHs resulted in the development of more robust solutions to improve water quality and greater ownership of these solutions. Such examples show that multi-party processes that encourage social learning may help to achieve the ambitious environmental objectives of the WFD, and as such have value in terms of delivering the WFD, not just as ticking the box to show that active engagement has been encouraged.

6.   OVERALL CONCLUSIONS AND RECOMMENDATIONS

The conclusions from the case-studies gives insights into how the process of PP and Social Learning is carried out and what fosters and what are the barriers for Social Learning. Recommendations are given as below:

The importance of context

The outcome associated with public participation and river basin planning shown to be very context specific, and thus there can be no common blueprint for recommendations or actions in river basin planning. Instead, it will become important to embrace a diversity of approaches to be able to adapt to context and use appropriate measures. The ability of a lead organisation to co-ordinate different perspectives, moving to a multiparty emergent approach, changing governance structure, involving stakeholders and recognise boundaries within and between different groups of stakeholders, and to account for different levels of scale is likely to influence the degree of success, in terms of social learning. However, if the lead organisation does not recognize this, structures such as institutions, policy-making processes, markets and cultures can become barriers.

Build teams to build resilience and capacity around key people/facilitators/leaders

The three most important mechanisms to foster social learning were: a) the need for motivation and leadership and engagement from individuals with high technical competence; b) the presence of independent technical mediators and facilitators and c) high level of commitment from the leaders. A very important role of the leaders has been to build trust and establish alliances among participants. Also, their role has been to deal with managing conflicts, fostering direct interaction, dealing with institutional rivalries and exclusion etc. In cases where these people suddenly did not emerge to meetings, processes have haltered. This implicates that social learning is depending on key individuals, and their attendance to workshops and meetings. This is a weakness, which ought to be mitigated by creating a team of people around these key individuals. If the key individual would for some reason disappear, someone else could step in, with an awareness of the key individual's working culture and strategies. This would reduce vulnerability and build resilience and social capacity in social learning systems, and better prepare for the loss of key individuals.

Facilitate a beneficial attitude through positive interactions and avoid overly lengthy procedures

Another important mechanism to foster social learning is the attitude associated with the actors, such as being able to account for and manage different perspectives. In a participatory process building trust may change historical tensions between stakeholders, and through exchange, a better understanding regarding different viewpoints may emerge. Consequently in a discussion the SHs may learn of new perspectives and reframe their problem and hence reformulate their demands. The facilitator should in these situations watch out for keeping the momentum not to disturb this process, and not having overly lengthy procedures.

<u>Learn from crisis and see it as an opportunity to better prepare for the next one</u>

Crisis moments are part of a significant mechanism to trigger and foster social learning. People responded to crisis in the way that it made them increasingly aware of slow and large-scale environmental issues such as flooding and could incorporate how to manage them in the planning process. The cases show that if people are capable of taking onboard the lessons and opportunities that the crisis moments provide, they can better learn they can be better prepared for the next crisis.

<u>Have a strategy for communication when dealing with stakeholders</u>

The most common barrier to social learning was the lack of clarity about the role and purpose of stakeholder involvement. A problem was the disbelief that involvement in the process would actually make a difference and the lack of time and adequate resources to try it out. This shows the importance of being very clear about the issue and what is motivating SHs when engaging and inviting them to participate in decision-making. Also, before communicating messages, institutions must be clear about whom they represent, as they sometimes may represent several different interests, and providing mixed messages may prove to be a barrier to SL. Other barriers were found to be people's motives of how they want to get involved, as people may have contradictory expectations of the participatory process. This indicates that there needs to be a clarity about the roadmap and outcomes of the process and what is in it for the SHs, as they need to become involved in issues that clearly and directly benefit their interest. Stakeholder mapping is a common practice that is carried out to analyse SH needs and issues that are relevant to them and what issues may be expected to emerge during the participatory process.

<u>Involve key stakeholders in bottom up planning to improve water resource plans</u>

A multi-party initiative is likely to be a key outcome of ensuring better management of regional large-scale structures such as river basins. This is possible as they are often having a multi-party involvement across political and administrative boundaries involving key stakeholders in bottom up planning. This has shown to improve water resource plans and the implementation of the WFD. In such a network, the local level may aid in changing and reframing narrowly defined problems from the more operational perspective. Large institutions, or decisions at national or river basin district level are able to provide the broad strategic visions and long term planning capacity that is needed. The presence of rigid top down institutions can however be a barrier to SL. Local stakeholders are naturally mainly interested in local issues and it has been noted that moving from a strategic level to a more operational level, the potential for conflict can increase significantly as stakeholders understand the potential impacts upon their interests. Failure to achieve a multi party dialogue could result in poor ownership by SHs of the solutions developed to meet the WFD's objectives. Taking measures to avoid these conflicts is critical, involving all stakeholders concerned in RBM adequately and if necessary devolving power to ensure continued cooperation.

<u>Allow time and resources for participatory processes, particularly in early stages</u>

Participatory processes take time and resources, particularly in the early stages, allowing time to develop trust, learning of different viewpoints, developing sufficient understanding of issues and technical terms. In those cases where stakeholder confidence has initially been low, this has partly been overcome by information provision and education. Past experiences of unsuccessful participatory processes may have created scepticism to future initiatives and trust may have to be redeveloped. At the initial phases learning occurs in different segments of society as information to stakeholders may be distributed unevenly, and this creates frustration over the lack of explicit rules for involvement and who should receive information. A perception of overly technical language can also initially be a barrier. However, as stakeholder participatory processes are allowed to go on in time they expand and these initial problems are generally overcome. For example, allowing time for multi party processes to evolve

(i.e. one key stakeholder has time to influence others) may generate interest and understanding of key issues among a wider network of SHs.

<u>Investigate the use of IC Tools and apply in a transparent way that is meaningful for the stakeholders</u>

IC Tools facilitate the aggregating of local knowledge to the level of RBMPs, where the decisions are ultimately made. The indication is that the potential of IC Tools is great, but has not yet been fully realised or utilized. IC Tools facilitates the sharing different points of view and scenarios, acting as integrator between different types of knowledge, disciplines and SH groups, translating knowledge from different sources that makes sense to everyone involved. In this way IC tools may formalise knowledge, translate technical information and modify data, which may empower and reinforce the position of the SHs. This may be a very important factor as SH often already face an unfair power balance: they are not paid by anyone to attend the meetings, but investing their own private time; as well as their own interests are often at stake in the process. Using IC tools, stakeholders trust the end result they have participated in producing, and it feels meaningful to them.

7.   REFERENCES AND FURTHER READING

Arias, E.G. and Fischer, G. 2000. Boundary objects: Their role in articulating the task at hand and making information relevant to it. International ICSC Symposium on Interactive and Collaborative Computing, University of Wollongong, Australia, December.

Barraqué, B. Le Bourdis, J. P. Maurel & R. Raymond.2004. *Les expériences de participation du public dans le bassin de la Dordogne Etude de cas française*. Barraqué, B. (LATTS –CNRS), Le Bourhis, J. P. (Université de Paris I) Maurel, P., & Raymond, R. (CEMAGREF, Montpellier). HarmoniCOP 5 WP report.

Barraqué, B. Le Bourdis, J. P. Maurel & R. Raymond.2004. *Participation and Social Learning in the Dordogne River Basin* France. Stakeholder Workshop Report. Barraqué, B. (LATTS –CNRS), Le Bourhis, J. P. (Université de Paris I) Maurel, P., & Raymond, R. (CEMAGREF, Montpellier). HarmoniCOP 5 WP report.

Bertin, J., 1981: Graphics and graphic information-processing. Berlin: Walter De Gruyter

Birch, D., 2002: Public Participation in Local Government - A survey of local authorities. 02LG00871, Local and Regional Government Research Unit, ODPM, London, pp. 65. http://www.local.dtlr.gov.uk/research/democ/pubrprt.pdf

Borowski, I. 2004. *Public Participation in the Elbe Basin.* IESR, University of Osnabrueck, Germany. HarmoniCOP WP 5 report

Burton, P., Goodlad, R., Croft, J., Abbott, J., Hastings, A., Macdonald, G. and Slater, T., 2004: What works in community involvement in area-based initiatives? A systematic review of the literature. University of Bristol and University of Glasgow, London, pp. 90.

CIS Drafting Group, 2002. Guidance on public participation in relation to the Water Framework Directive – Active involvement, consultation and public access to information. Prepared in the Framework of the Common Implementation Strategy of the European Commission and the EU Member States.

Cleaver, F., 2001: Institutions, Agency and the Limitations of Participatory Approaches to Development. In: Cooke, B. and Kothari, U. (Ed.), Participation - The New Tyranny? London: Zed Books, pp. 36 - 55.

Council of the European Communities, 2000: Directive Of The European Parliament And Of The Council, Establishing A Framework For Community Action In The Field Of Water Policy. PE-CONS 3639/1/00 REV 1Luxembourg, Published on 22 December 2000 in the Official Journal of the European Communities.: 153. http://www.panda.org/europe/freshwater/pdf/wfd.pdf

Craps, M. (Ed.), 2003. Social Learning in River Basin Management. A report produced under workpackage 2 of the HarmoniCOP project. K.U .Leuven - Centre for Organizational and Personnel Psychology, Leuven, pp. 70.

Craps, M. and Maurel, P., 2003: Social Learning Pool of Questions. An instrument to diagnose Social Learning and IC-Tools in European River Basin Management. Combined WP2/WP3 report of the HarmoniCOP project, EC contract n° EVK1-CT-2002-00120, deliverable N°3b. pp. 65.

Craps, M. and Prins, S., 2004: Participation and social learning in the development planning of a Flemish river valley. Case-study report produced under WP5 of the HarmoniCOP project.

Davis, M. & Rees, Y. 2004. *Participation and Social Learning in the River Ribble, UK'*. Stakeholder Workshop Report. WCc Plc, United Kinddom. HarmoniCOP WP 5 report.

European Commission, 2000: "Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy, Official Journal L 327 , 22/12/2000 P. 0001 - 0073." Number.

European Commission, 2001: SEA Directive 2001/42/EC. Luxembourg, Published on 21 July 2001, page 30 in the Official Journal of the European Communities, L197, pg. 30,

Jones, T., 2001: Implementing the EU Water Framework Directive: A seminar series on water Organised by WWF with the support of the European Commission and TAIEX, Synthesis Note Seminar 3: Good Practice in River Basin Planning. WWF, European Commission, TAIEX, Brussels, pp. 31. http://www.panda.org/europe/freshwater/pdf/sem3-syn-en.pdf

Massarutto, A., de Carli, A. & C. Longhi, C. 2005. *Public Participation in the Bacchiglione River Basin (Italy)* DSE – Università degli Studi di Udine HarmoniCOP WP 5 report.

Maurel, P. ed 2003. Public participation and the European Water Framework Directive. Role of Information and Communication Tools. Work-package 3 Report of the HarmoniCOP project, EC contract No EVK1-CT-2002-00120, deliverable No. 4a.

Mostert, E. ed 2003. Public participation and the European Water Framework Directive. A framework for analysis. Inception report of the HarmoniCOP project, EC contract No EVK1-CT-2002-00120, deliverable No. 1, 47p.

Mostert, E. 2003b. Public participation and Social Learning for river basin management. Paper presented at Monitoring Tailor-Made IV, St Michielgestel (The Netherlands) 15-18 September 2003, 7p.

Mosely C., 2003. Constrained democracy: evaluating community-based conservation using environmental outcomes. Ecosystem workforce program and Institute for a Sustainable Environment. September 7, 2003.

Mostert, E. ed 2003. Public participation and the European Water Framework Directive. A framework for analysis. Inception report of the HarmoniCOP project, EC contract No EVK1-CT-2002-00120, deliverable No. 1, 47p.

Mostert, E. 2003b. Public participation and Social Learning for river basin management. Paper presented at Monitoring Tailor-Made IV, St Michielgestel (The Netherlands) 15-18 September 2003, 7p.

Otter, H., P. Valkering, and H. Wolters, 2004. *Participation and Social Learning in the Meuse River.* Delft Hydraulics, ICIS & RISA. The Netherlands. HarmoniCOP WP 5 report.

Pahl-Wostl, C. 1995. The dynamic nature of ecosystems: Chaos and order entwined. Wiley, Chichester, 288p.

Pahl-Wostl, C. 2002. Participative and Stakeholder-based policy design, evaluation and modelling processes, Integrated Assessment 3: 3-14.

Pahl-Wostl, C., 2004: The Implications of Complexity for Integrated Resources Management. Transactions of the 2nd biennial meeting of the International Environmental Modelling and Software Society, Osnabrück, June. 25-33.

Patel, M. and Stel, J. H., 2004: Public Participation in River Basin Management in Europe. A national approach and background study synthesising experiences of 9 European countries. A report produced under Work Package 4 of the HarmoniCOP project. International Centre for Integrative Studies (ICIS), the University of Maastricht.

Rittel, H. 1984. Second generation design methods, In Cross(Ed) Development in Design Methodology, John Wiley and Sons, New York, pp 317-327.

Roll, G., Ehin, P. and Hougarrd Andersen, D. 2003. Role of information dissemination and communication to stakeholders and public in managing transboundary waters in Europe. In S. Langaas and Timmerman, J.G. (eds) The role and use of enivromental information in European transboundary river basin management. IWA Publishing, London.

Tabara D. and Saurí, D., 2005: Integration Report - Workpackage 6 of the HarmoniCOP project. Autonomous University of Barcelona, Barcelona, Spain, www.harmonicop.info

Tàbara, D., Saurí, D., Ribas, A., Bayés, C., Pavon, D., Maestu, J. 2004. *The Muga River Basin Case Study Catalonia, Spain*. HarmoniCOP WP5 report.

Tàbara, D., Saurí, D., Ribas, A., Bayés, C., Pavon, D., Maestu, J. 2004. *The Muga River Basin Case Study. Stakeholders report. Catalonia, Spain*. WP5 HarmoniCOP project report.

Thaillieu, T., Bouwen, R., Craps, M., Dewulf, A., and Prins, S. 2003. Multiorganisational collaboration in River Basin Management and the Social Learning concept, Paper presented at MOPAN Conference (Glasgow, June 2003).

Tippett, J., Rees, Y., Searle, B. and Pahl-Wostl, C., 2005: "Social Learning in Public Participation in River Basin Management - Early findings from HarmoniCOP European Case-studies." Environmental Science and Policy, Vol. 8, Number 3, page Special Issue - Research and technology integration in support of the European Union Water Framework Directive.

Walker, S. and Searle, B. 2004. *Participation and Social Learning in the Dee catchment,* Aberdeen University, Scotland, UK. HarmoniCOP WP 5 report.

Warburton, D., 2002: Evaluating Participation in Sustainable Development. EASY-ECO I: EvAluation of SustainabilitY EuroCOnferences, Vienna, Austria, May 23-25, European Commission, Research DG, Human Potential Programme. 147-163. http://www.sustainability.at/easy/easy_eco1/pdf/warburton_pabs.pdf

Woodhill, A.J. 2003. Dialogue and transboundary water resources management: towards a framework for facilitating social learning. In S. Langaas and Timmerman, J.G. (eds.), The role and use of environmental information in European transboundary river basin management, IWA Publishing, London.

Ijjas, I and Botond, K. 2004, Public Participation in the implementation of the WFD in the Middle Danube Sub-basin in Hungary, Case study report produced under Work Package 5, Department of Hydraulic and Water Resources Engineering, Budapest University of Technology and Economics

ANNEX 1 CASE-STUDY REPORT TEMPLATE OUTLINE

Max 30 pages

1.Executive summary/Main findings (1-2)

2.Introduction and approach (1)

3.Context (5)

- Environmental context

- Institutional context (include Organogram (see example))

- Socio-economic political context

4. Description of the PP process (5-10)

- Activities/phases

- IC Tools

- Outcomes

- Feedback

5. Analysis (10-15 pages)

6. General Reflections (5)

7. Appendix A:

- Templates

- Research methodology (unless covered by template)

ANNEX 2   CONTACT INFORMATION

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