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Social Learning in Water Management: Lessons from the HarmoniCOP[6] Project

ABSTRACT

This paper summarizes the main results of the HarmoniCOP project. The main focus of HarmoniCOP is the introduction of the concept of 'Social Learning' into water management. The concept of Social Learning is explained. A literature research on approaches and international experiences was conducted and is summarized. The applicability of IC-tools in Social Learning processes is investigated and guidelines for their use are provided. The main findings of the project were translated into practical guidelines in a Handbook for practitioners. The scope and goal of this Handbook is explained.

Key words: water management, Social Learning, IC-tools, HarmoniCOP, WFD, participation, interactive policy-making.

INTRODUCTION

Over the past decades, the character and complexity of problems that water managers face have changed to a degree, that new approaches are indispensable. Authors like Castells (1997) and Giddens (1990) state that our societies are challenged by governance problems due to increasing complexity, interdependency and fragmentation of interests and identities. To resolve it, more democracy and more direct ways of putting democracy in practice are needed.

According to many authors, the complexity and uncertainty of current water and river realities urge for new forms of governance (Doppelt, 2000; Gregory, 2000; Tabara, 2003; Woodhill, 2002). These new forms should replace the traditional hierarchical systems, oriented to control, by participatory and flexible systems, based on experimenting and Social Learning between multiple actors.

Socio-economic boundary conditions change quickly and require more flexible management strategies. Climate change results in increase in uncertainties, in particular extreme events. The environmental problems society faces today are thus more intricate than in the past and require new approaches to problem solving (Pahl-Wostl, 2002). A common feature of these

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new approaches is their integration of social and political sciences with technical, economic and ecological sciences. This points to the need to consider the possible repercussions of responses on both the technical-economic-ecological and the societal subsystems.
The importance to bring a wide range of societal actors together is recognized both in the Water Framework Directive (WFD) and in important Common Implementation Strategy documents. Aspects of trust, social learning and network building are recognised as keys to sustainable freshwater management (Galaz, 2005).

The HarmoniCOP project was aimed at the development of solutions for the increasing complexity and uncertainty in water management. It has sought to do so by making the concept of Social Learning operational. In the following chapters, the HarmoniCOP project and its main results are explained.

THE HarmoniCOP PROJECT

The HarmoniCOP project (Harmonizing COllaborative Planning) has tried to meet the need for integration as mentioned in the introduction, by placing emphasis on *collaboration*, rather than merely public consultation. The key concept used and explored in HarmoniCOP is Social Learning. Social Learning is**,** among other aspects**,** about creating trust, promoting relations and networks about collective learning and eventually collective action.

Key elements of the HarmoniCOP project are: 1) the introduction of the concept of Social Learning in water management, with special focus on the implementation of the WFD; 2) a comparative study on public participation practices in nine European countries, both on a national scale and on a case study level; 3) research into the role of IC-tools in the public participation process; 4) dissemination in the form of a Handbook and training sessions. These four elements are addressed in the following chapters.

SOCIAL LEARNING IN WATER MANAGEMENT

The concept of Social Learning

In the HarmoniCOP project, the concept of Social Learning is summarized as: 'learning together to manage together'. Social learning emphasises collaboration between the different stakeholders, starting at the earliest possible moment. It helps to build up trust, develop a common view on the issues at stake, resolve conflicts and arrive at joint solutions that are technically sound and actually implemented in practice. It helps all stakeholders to achieve better results than they can achieve otherwise. Social Learning is called for whenever:
  • Different stakeholders depend on each other to reach their goals;
  • There is no agreement on the problems at stake;
  • The issues are important enough for the stakeholders to invest the necessary time, and
  • Money.

A social learning process comprises the following aspects:
1. Learning about each others opinions and viewpoints;
2. Respect of these opinions and viewpoints, based on an understanding of the underlying reasons;
3. Generating, preserving and exchanging knowledge during the project and for follow-up activities;
4. Enabling stakeholders to adjust their views and attitudes by looking at problems from their neighbours perspective;
5. Changing the management style from bargaining to problem-solving by integrating different interest;
6. Recognition of all stakeholders of the fact that they can learn from each other.

Table 1 shows how Social Learning compares to traditional public participation and what the benefits are for water management.

Table 1.   *Traditional participation versus Social Learning and the benefits of Social Learning for water management. The numbers 1 to 6 refer to the list of important aspects in the text above.*

Participation aiming at mere consultation	Participation aiming at Social Learning	Contribution of Social Learning to water management
1. Participants are motivated to express their expectations concerning participation and their opinions about the issue at stake	1. Participants are encouraged to explain why they have a certain opinion about the issue at stake and what it may mean for them on a personal level, beyond economic aspects	Not only hydrological and ecological factors are discussed but also economical and societal as well as their connectivity
2. People try to convince others to share their individual opinions	2. Participants try to listen and better understand why others do not share their opinions	People learn more about the complexity and inter-linkages of water management.
3. Knowledge gained is limited to the predefined objective of participation. Reports, minutes and other results are made available to stakeholders that participated in the process, and sometimes to the wider public also. The process leads to an exchange of individual knowledge.	3. Knowledge elicitation is highly promoted and goes beyond the predefined objective of the participation process. The issue at stake and the objective remain more open throughout the process. The process leads to a co-production of knowledge. Results of the process are prepared to meet the needs of different stakeholders, the public or whichever target group is defined.	More knowledge about rivers and river basin management is generated. A better focused documentation on different information users increases access to and use of information.
4. Trying to share one opinion.	4. Trying to agree on a consensus without losing the diversity of interests and knowledge	The risk of drop-outs during the process and the development of strong opposition is reduced.
5. To reach a decision, the participants bargain. Parties see each other as competitors and their interests as contradictory.	5. From the beginning the process is open to identifying similarities and common interests instead of focusing on differences. It leads to collective action.	More innovative and adapted decisions, a wider sense of ownership of the decisions, commitment to the decisions and better implementation.

| Participation aiming at mere consultation	Participation aiming at Social Learning	Contribution of Social Learning to water management
6. Rarely achieved	6. Willingness to invest in future process because of individual knowledge gains and more and better relations among stakeholders	Future participatory processes are supported by existing relationships among stakeholders. Changes in understanding and redefining of problems lead to a more sustainable change in practise.

The contribution of Social Learning to water management is its focus on improving collaboration and on the quality of the relationships that the stakeholders establish. To quote Webler (1995: 460): "The crystallization point of participation is when the group transforms from a collection of individuals pursuing their private interests to a collectivity which defines and is oriented toward shared interests"

When and how can Social Learning help the water manager

Water managers all over Europe are facing the challenge of implementing the WFD. The WFD states that the public should be consulted three times in the planning process and that the "active involvement of all interested parties" should be encouraged. The purpose of HarmoniCOP is to help water managers foster Social Learning, as a means to achieve active involvement.

For a water manager the investments in Social Learning processes have to be justified by benefits further on in the planning cycle, e.g. in the planning or implementation phase. According to figure 1, the problem identification and planning phase will take longer in a participatory decision-making setting, but benefits are to be found during the implementation phase.

Figure 1.   Time path in unilateral and participatory decision making processes.
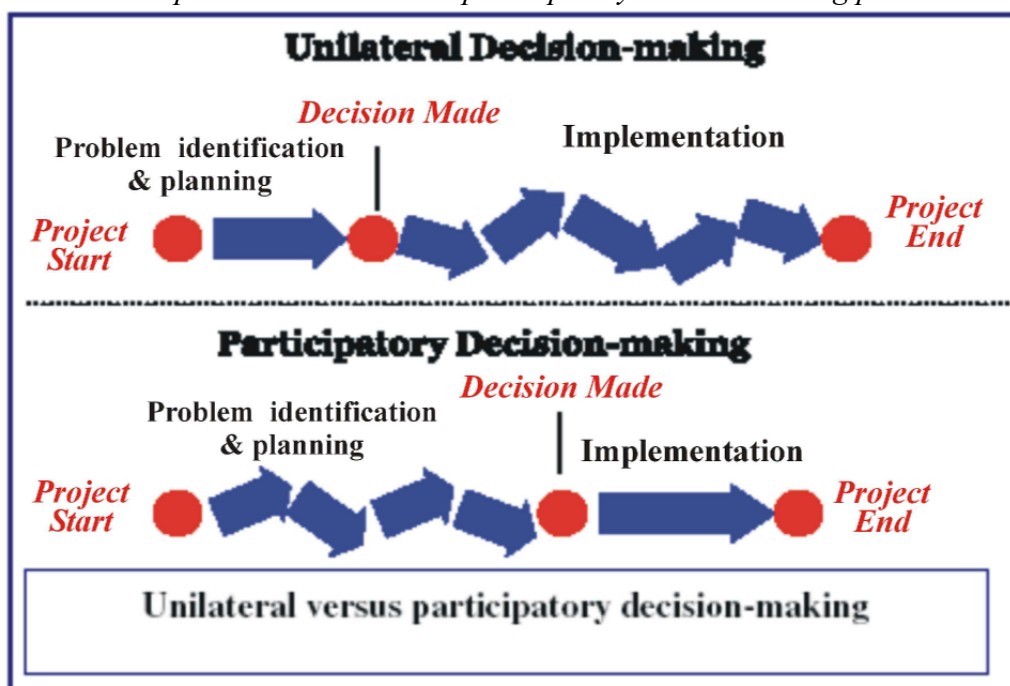
Although this seems plausible, practical evidence is scarce. The Water Conservation Project in the provinces of Noord-Brabant and Limburg, in the Netherlands, provides some proof. Jacobs (2004) stated "... Social Learning takes time. Parties must learn to trust each other (...). As soon as this mutual trust has been achieved, the process is speeded up".

COMPARISON OF NATIONAL PRACTICES AND CASE STUDIES

Within the HarmoniCOP project a comprehensive literature-based review of the national experiences of the ten participating countries was undertaken (Patel & Stel, 2004). In addition, nine European case studies were conducted to gain first-hand practical experience with participatory processes in river basin management. This provided a solid basis from which to identify the depth and variety of experiences in public participation in RBMP both between and within the countries.

Many regional variations and specific experiences were found. In spite of this, significant commonalities and similarities in experience could also be identified. Thus the lessons learned were often a reflection of underlying issues and factors related to history, culture, politics and geography that influence and shape the individual experiences.

The conclusions of the study specifically focus upon the key considerations and recommendations for the implementation of the participatory provisions of the WFD; see Table 2.

Table 2.   *Considerations and recommendations for the implementation of the participatory aspects of the WFD.*

Issues	Considerations	Recommendations
Guidelines	Need for additional guidelines for the implementation of the participatory provisions of the WFD.	These guidelines need to specifically target: - 'Active' involvement methods to help facilitate Social Learning amongst participants. - Informal participation, which actually defines much of the participatory experiences in Europe. - The complex terminology used in the WFD; where possible avoid it altogether in order to make the WFD understandable for non-professionals. - The facilitation of a beneficial attitude through positive interactions. - Ways to learn from crises and to see them as an opportunity to prepare better for the next experience.

Issues	Considerations	Recommendations
Information flow	Poor communication, collaboration and knowledge sharing can stifle the progress of a participatory process or even prevent its initiation. WFD implementation is dependent upon collaboration and communication between regions and sectors.	- Make sure a communication strategy is prepared for working with stakeholders. - Different water sectors need to collaborate and share responsibilities of the different water use sectors. There need to be efforts for better inter-agency communication and collaboration. - More formal agreements for communication and interaction between different scales of intervention. - Creating alliances between existing and new stakeholders. - Provision of information to the wider public of past, current and planned activities and experiences. - Incorporate ongoing monitoring and feedback mechanisms of all participatory activities so to better understand and meet the expectations of the stakeholders involved throughout the process. - Investigate the potential use of IC Tools and apply them in a transparent way that is meaningful for the stakeholders.
Stakeholder ownership and involvement	If ownership of WFD implementation is not widened nationally and regionally, this can result in targets not being reached. Late involvement of stakeholders can cause rejection of plans. The WFD requires active and dynamic forms of participation that are highly resource dependent.	- Need to extend ownership of WFD implementation to a wider group of stakeholders. Responsibility should not remain in the hands of one administrative organisation. - All stakeholders - including citizens - should be involved from the initial stages of the project – right from its very inception, during the development of the plans. This can result in greater ownership of the process, widen responsibility and ensure that the project is properly implemented and not rejected. - Build teams to build resilience and capacity around key people, facilitators and leaders. - To encourage Social Learning, participatory processes need to facilitate greater interaction between the stakeholders. Such processes depend upon resources such as officer time, training, facilitation skills, communication skills, etc. Sufficient resources needs should be accounted for in the project planning and budgeting. - The use of IC tools should be explored and applied to boost quantity and quality of stakeholder involvement and to facilitate Social Learning. The usability of these tools depend upon the availability of time, money and expertise. - Involve key stakeholders in bottom-up planning.

Issues	Considerations	Recommendations
Political and institutional recognition of public participation	Whether the participatory requirements of the WFD implementation are met depends to a large extent on institutional and political recognition of participatory processes.	- There is still much need for national politics to support participatory processes. This can have a positive impact on resourcing participatory initiatives and on the water manager's resolve to undertake a participatory process. It is necessary for institutions to adopt a culture towards greater stakeholder involvement so that participatory processes are practiced more widely in sectors other than in water. Political structure may support this culture. - Existing policy efforts that already support participatory processes should be built upon and extended.
	Lack of value given to participatory processes by those at a senior level can also prevent effective implementation.	- Senior level officers of governing bodies and water authorities responsible for the overall implementation of the WFD should support stakeholder involvement. This is required to give the water managers the authority to involve stakeholders at the early planning stages, to stimulate Social Learning and to identify common ground in the decision-making processes.

INFORMATION AND COMMUNICATION TOOLS IN SOCIAL LEARNING

In the HarmoniCOP project, information and communication tools (IC-tools) are defined as artefacts, devices or software that can be seen and touched, and can be used in a participatory process to facilitate Social Learning (Ridder et al., 2005). A method is a way, technique or process for doing something, but contrary to the tools does not have a material reality.

In the complexity of current water management, the sharing of information and knowledge, and enhancing communication between stakeholders are crucial components. IC-tools and methods can support participation and Social Learning in different ways, for example by supporting the interaction between stakeholders. Tools and methods can be controlled directly by the stakeholders or through a facilitator. They can bring individuals (and groups) together and improve communication between them. Examples of methods that support and enhance interaction are focus groups, citizens juries and round table conferences. Whilst IC-tools and methods can support participatory processes, tools and methods themselves can also be participatory. An example of such participatory methods is group model building in which stakeholders build a model together to improve their understanding of the issue.

IC-tools and methods can also provide a means for managing and disseminating information and knowledge. For example, a geographical information system (GIS) can support the storage, analysis and sharing of information between stakeholders. Such a tool can help to create a common knowledge base.

A third way that IC-tools and methods can support participation and Social Learning is by contributing to the elicitation of interests, positions and perspectives. A role playing game in which stakeholders play different roles in a real or imaginary context, may make explicit the way in which stakeholders have 'framed' their reality (Craps, 2003). Framing and reframing

workshops will allow stakeholders to explore different analytical frameworks and refine their problem perception. Methods such as role playing games and (re)framing workshops can be supported by a range of IC-tools such as GIS, graphical toolkits, maps and simulation models.

Certain methods and tools may be more appropriate than others for use in specific phases of the participatory process and for achieving the required level of participation. Different IC-tools can be applied in the development and initiation, implementation and monitoring/evaluation phase of the participation process. Within these participatory phases IC-tools can be used to achieve/inform (co-knowing), consult (co-thinking) or actively involve (co-operate) stakeholders. The HarmoniCOP handbook (Ridder et al., 2005) presents a way to analyse the applicability of IC-tools and methods for each participation phase and level.

Concerning the perceived usability of tools, some lessons learned in the HarmoniCOP case studies concerned the required degree of sophistication of the tools. High-tech tools, such as computer models, can strengthen the technical leadership of some institutions or present an added value to simulate complex phenomena. On the other hand, inadequate use of IC-tools with a heavy technical content can act as a barrier to Social Learning, by overwhelming actors with complex or technical information which is not relevant or understandable for them (Rees et al., 2005). Many stakeholders call for simple communication tools which can make the information more accessible to a wide range of audiences (Maurel, 2003). In Flanders, Belgium, a television documentary contributed most significantly to an increased understanding and a positive image of the river valley under study (Craps and Prins, 2004). A site visit or field trip may be very helpful to complement complex modelling, showing in an interactive and real setting the potential effects of a specific proposed intervention.

HarmoniCOP'S HANDBOOK AND TRAINING

The main findings of the research carried out in the HarmoniCOP project were translated into practical guidelines in a Handbook for practitioners. The printed version is available in English. Translations in various European languages are available on the project website (www.harmonicop.info). The following outlines the scope and contents of the Handbook and the results of three training sessions that were organised to introduce it.

Scope and contents of the Handbook

The Handbook was written for water managers at the regional level. This of course should not stop scientists, students, water managers at international or local level or any others from reading the book, but it does give some hints as to the restrictions that can be expected in scope.

The handbook can be read from start to finish, but for quick reference an extended reference is included, while keywords in the margin and functional use of colours facilitate easy access. Each subchapter ends with a list of references for further reading. For some subjects extensive references to the internet are provided.

Chapter 1 deals with "How to get started". It forms the basis of the book. It introduces the Social Learning concept in more detail and discusses how to develop and initiate a participation strategy that fosters Social Learning. It discusses everything that needs to be considered before starting a participatory process.

Chapter 2, "How to manage", gives ideas and suggestions for managing participatory processes. It discusses issues such as the selection of locations and presents a number of methods and tools that can be used. Moreover, it discusses how to follow up a completed step of a participatory process as well as tricks to apply and traps to avoid during the process.

Chapter 3, "How to improve", gives information on monitoring and evaluation to improve current and future participatory processes. It presents an evaluation checklist and discusses how the lessons learned can be communicated to people that were not involved in the process.

The appendix, "How this handbook developed", at the end of the handbook describes the background and objectives of the HarmoniCOP project, of which this handbook is one of the results. Moreover, it describes and evaluates the development of the handbook as a Social Learning process in its own right.

Dissemination and training sessions

Some of the key messages of the handbook were presented and discussed during the final conference of the HarmoniCOP project (Osnabrueck, Germany, October 2005):
- Social Learning requires flexibility in planning and programming. This means that project managers must be willing to work accordingly and to question external settings instead of simply accepting them as unchangeable;
- Social Learning entails a process of reflection on the assumptions, the steps taken and even the results. Time must be devoted to questioning and verifying intermediary results. There is a need to have a "neutral mirror" throughout the process;
- Social Learning is about the network of relationships and roles that exist among a group of stakeholders: both the possibilities for adaptive change and for learning depend on the capacity to manage such relationships. The question is, to what degree such capacity exists and how it can be promoted;
- To guarantee the aspects mentioned above, the role of external (third-party) facilitation of participatory processes is emphasised;
- External facilitators are responsible for proposing clear rules and roles for all participants;
- As Social Learning not only leads to changes of common practices but to changes in understanding and comprehension of problems, it is a more sustainable way of participation;
- Changes in understanding can occur at local or regional level but not at a higher institutional level. To accomplish the latter, it is necessary to improve the connections between different levels;

- Thanks to the openness of the Social Learning process, it offers the possibility to better recognise uncertainties and better react to necessary changes. The management style becomes more adaptive;
- Social Learning also entails new roles for governmental actors.

The HarmoniCOP team provided training to practitioners in water management, based on the HarmoniCOP Handbook. This training was conducted in Germany, the Netherlands, Hungary, Spain, Belgium and France.

Training session in Germany

A training workshop was conducted in Hanover, Germany, for a group of experts from different organisations involved in water management, agriculture and administration. The training proved the hypothesis that people involved in such collaborations are confident about their technical knowledge but feel insecure with regard to issues like internal communication, team management and the participation of additional stakeholders or even the public.
There is a clear lack of skills in fields like communication, moderation and tools and techniques that allow people to effectively get involved. Despite a very positive notion towards more collaboration and participation in water management, the question 'how?' still remains unsolved.

During the training, techniques like group model building, role playing and a planning game were applied. Participants expressed their interest to try out group modelling with selected young farmers in their work.

The participants' feedback on the training was very positive; the training was considered useful for their work. Another conclusion was that moderators with a professional background in water management are perceived as essential to conduct workshops where certain types of tools are used. This is especially true when realistic scenarios must be created or role plays conducted. Another advantage for moderators having the right professional background was that they have a better standing because they belong to the same peer group.

The expressed need by the expert group of becoming a better team by respecting each others' needs and interests showed that further training activities would be welcomed. In general, the expert group proved to be very open to participation as such and to the concept of Social Learning. As many activities and pilot projects of implementing the WFD have taken off or are taking off, there is a clear need of making more training on Social Learning and participation available.

Training session in the Netherlands

In the Netherlands a training afternoon was organised for a group of 24 water managers involved in implementing the WFD in one of the Dutch parts of the Rhine basin district and members of a stakeholder advisory board.

The concept of Social Learning was easy to explain to this audience. Social learning is not alien to the Dutch consensus culture and water management practice, but the concept triggers reflection and highlights some weaknesses in the Dutch practice. Differences are often not discussed openly and people just continue to do their own work, without much real collaboration. The Social Learning concept suggests alternative courses of action that may better serve the interests of all involved.

All participants were moderately to very supportive of active involvement and saw potential benefits from it. Problems were seen as well, such as the limited time available before the strategy should be implemented and limited personnel. This was recognised as a problem for both the water managers and the stakeholders. Lack of expertise and unfamiliarity was not noted as a major problem. However, there were concerns about the commitment of politicians to active involvement.

At the end of the workshop recommendations were formulated for consideration by communication experts and the political level in the area:
-    An active participation process for the implementation of the WFD should be designed with involvement of the stakeholders;
-    It is essential to conduct a kind of stakeholder analysis;
-    Active involvement should be seen as an integral part of implementing the WFD;
-    "Ambassadors" should be created early on in the process who are willing to take the responsibility of learning about and actively promoting participatory processes;
-    Look for unexpected opportunities that the WFD creates - The WFD forces authorities and stakeholders to co-operate and to get into contact with each other, and this creates new and unpredictable opportunities;
-    There is a need for developing participatory tools such as role-plays and other tools that can help to raise awareness of the importance of active involvement;
-    The issue of who takes responsibility of what - at the catchment level or by the individual organisations - should be addressed.
-    Involvement of the municipalities requires proper attention. Municipalities often have limited capacity and are confronted with many different initiatives from the water sector.

DISCUSSION

The aim of the HarmoniCOP project is to contribute in solving the problems that water managers face, as described in the introduction. This contribution will help to improve the quality of responses to increased demands on the water management system, by involving stakeholders and by promoting the establishment of sustainable connections between them.

However, this is not the complete contribution that HarmoniCOP has to offer. As was stressed throughout the paper, Social Learning is more than an adaptation of procedures to involve stakeholders. It calls for a change in attitude of policy makers and water managers, to embark upon true involvement of stakeholders in planning processes, from very early stages. The authors hope they have been able to draw an attractive picture of what lies waiting when these steps are taken.

ACKNOWLEDGEMENTS

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