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Area co-operations as an instrument of public participation for implementing the EU Water Framework Directive: networking and social learning

Topics addressed: Implementation of the EU Water Framework Directive, Social Learning, Social Networks

Abstract

This paper summarises the results of an evaluation that was conducted in order to investigate the role and potentials of the participatory process according to the Water Framework Directive (WFD) in Lower Saxony, Northwest Germany. The most important participatory instruments within the implementation process of the WFD in Lower Saxony are the 30 ‘area co-operations’. As a local and direct form of active involvement, the co-operations were designed as long-term instruments with the aim of contributing to drafting river basin management plans. Focussing on the view of stakeholders involved in the co-operations, the paper analyses the process along different criteria regarding the improvement of networking and social learning within the process of public participation.

Zusammenfassung:

Der Beitrag befasst sich mit den Ergebnissen einer Evaluierungsstudie im Rahmen einer Analyse der Rolle und Potentials des partizipativen Prozesses zur Umsetzung der Wasserrahmenrichtlinie (WRRL) in Niedersachsen, Nordwestdeutschland. Das wichtigste partizipative Instrument im Rahmen des Implementationsprozesses der WRRL in Niedersachsen sind die 30 Gebietskooperationen. Als eine lokale und direkte Form aktiver Einbindung wurden die Gebietskooperationen als langfristige Institutionen und Instrumente geschaffen, um zur Erstellung der Flussgebietspläne beizutragen. Mit Fokus auf Stakeholdern, die in den Gebietskooperationen vertreten sind, analysiert der Artikel den Prozess entlang verschiedener Kriterien in Bezug auf die Verbesserung von Netzwerktätigkeiten und Sozialem Lernen innerhalb dieses Beteiligungsprozesses.

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1 Introduction

Public participation is considered a key issue for adaptive and integrated water management (Pahl-Wostl and Hare 2004; Craps et al. 2005). Within European legislation, the EU Water Framework Directive (WFD) was the first material directive to explicitly combine substantive environmental policy goals with public participation. Stringent policy goals demand a ‘good status’ of most European waters by 2015 (Art. 4 WFD). At the same time, the directive calls for various modes of information, consultation and involvement, which creators of the WFD believe determine the success of the directive’s implementation (Preamble 14 WFD). In line with the subsidiarity principle, decisions should be taken “as close as possible to the locations where water is affected or used” (Preamble 13 WFD). Moreover, participation within the implementation process of the WFD is expected to enhance the acceptance of decisions by involving the views and experience of those affected by those decisions (Kaika 2003; EU 2002, p 6). Those who are closest to a problem are assumed to develop the best understanding of it (Steele 2001; Thomas 1995). Hence, environmental decisions can benefit from the knowledge local actors have about environmental issues concerning them (Rydin and Pennington 2000; López Cerezo and González García 1996; Newig 2007). Likewise, the authorities in charge depend on the compliance of the actors who will ultimately be influenced by the measures conducted. For this to succeed, stakeholders have to undergo learning processes to understand and acknowledge the divergent interests and to jointly develop solutions that are then likely to gain the support of all actors.

Likewise, and illustrated by the ‘Guidance on Public Participation in relation to the Water Framework Directive’, active involvement is also an essential element of social learning (cf. EU 2002, p. 13). According to this guidance, active involvement (later called active participation) “implies that stakeholders³ are invited to contribute actively to the planning process by discussing issues and contributing to their solution”. Social learning can therefore be considered as a) the goal of active participation processes and b) the precondition for the sustainability of the process.

But how successful is public participation according to the WFD in terms of supporting social learning and in terms of its impacts on policy solutions and their implementation? This paper aims to explore the extent to which and by which means a newly developed instrument of active participation was evaluated by the stakeholders concerned, and how the instrument succeeded in contributing to the implementation of the WFD.

For this purpose, aspects of social networks will be also considered in order to understand different levels of actors, their connectedness and the structure and behaviour of the investigated networks (cc. Hanneman et al. 2005, chapter 7). Since the distance between actors and their connectedness determine the extent of individual’s and group’s communication and learning, networks with all their attributes provide good indications of social learning. This relation is also depicted by a case study on wetland management, where it was concluded that “key stewards within social networks can establish functional links within and between organizational levels in times of change and facilitate the flow of information and knowledge applied in the local ecosystem management context” (cc Olsson et al. 2004, p. 21). Hence, if we wish to know more about how social learning works, we need to find out more about the social actors and their networks.

Social learning as a precondition and goal of participatory processes was used to operationalise the research question. Our case of reference is Lower Saxony, one of the

³ A stakeholder is “an individual or group influenced by – and with the ability to significantly impact (either directly or indirectly) – the topical area of interest” (Glicken 2000, p 307).

German *Länder*⁴ in the Northwest of Germany. The paper will be based on the results of an evaluation conducted in spring 2007 to investigate the role and potentials of the participatory process according to the WFD in Lower Saxony (Ridder et al. 2007). In Lower Saxony, so-called “area co-operations” (*Gebietskooperationen*) were established at the sub-regional level in order to encourage a defined number of stakeholders to become actively involved in the implementation process of the WFD.

Besides summarising the main results of the evaluation, we will also discuss the potential of these area co-operations under different circumstances and institutional settings.

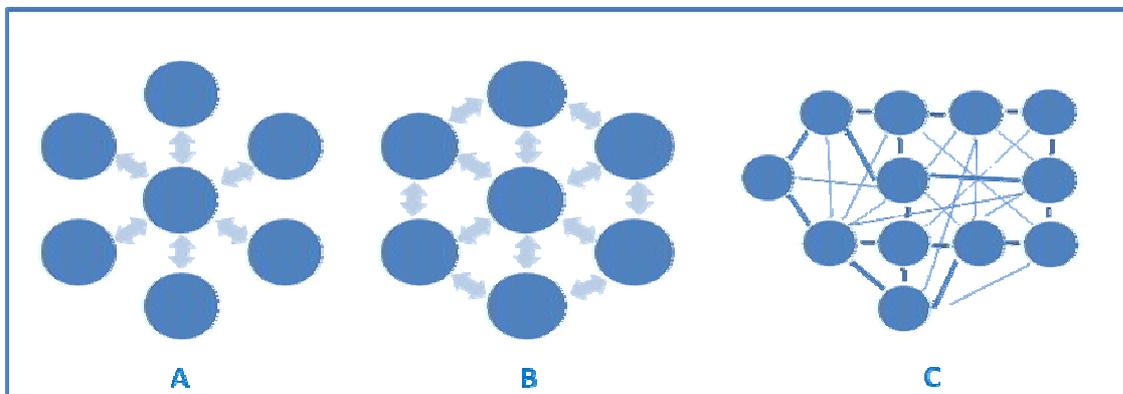
2 Theoretical and methodological approach

2.1 Steps towards social learning

Social learning has been defined as “learning together to manage together” or, more precisely, “learning in and by groups to handle shared issues...” (Ridder et al 2005, p. 2 and 96).

A first step in the direction of social learning in participatory processes is when the process provides a platform to motivate collaboration, socialising and the development of trust between the different stakeholder groups, offering them the opportunity to build up and improve their networks. The development of new institutions in the form of networks, working groups and new formal and informal relationships is a major criterion for social learning in participatory processes (Imperial & Hennessey 2000, p. 16-19; Hannemann et al. 2005, Ison et al. 2007). A newly institutionalized process in particular can provide the opportunity “to break open closed policy networks”, and to allow new outcomes to be produced beyond contextual constraints (Mostert 2003:185). Moreover, new participatory structures and the enlargement of the content to be negotiated may finally lead to institutional change in existing actor networks (Pahl-Wostl et al. 2007).

Networks featuring social learning and innovation (Schubert 2002) are characterised by a polycentric structure. Nonetheless, within working groups and often promoted “round tables”, the established relationships often have a star-like structure, centred around one pivotal character instead of a polycentric structure (cf. Fig. 1) (ibid.). Thus, not all multi-party structures that are assumed to be networks promote social learning and innovative solutions. Innovations are only supported by networks where actors come together to act jointly (cf. Schubert 2002, p. 7).



⁴ In Germany, it is not the federal government but the *Länder* that are in charge of implementation of the WFD and, consequently, the participatory approaches.

Fig. 1: The evolution of star-like relationships (A) as often seen in “round tables” and “workshops” (B) towards polycentric networks (C) as a structure promoting innovation.

Various public participation scholars have developed a range of success factors for social learning (e.g. SLIM project 2004; Schusler et al. 2001). The European project HarmoniCOP (www.harmonicop.uos.de) developed a “pool of questions” (Craps 2003) to identify and improve social learning in river basin management, especially during the implementation of the WFD. This analytical concept was also turned into a handbook for water managers to design and guide participatory processes with a special emphasis on social learning (Ridder et al. 2005).

In this paper, the analysis was designed along the lines of the concept presented in the HarmoniCOP handbook. The fact that criteria and indicators for achieving social learning are often identical with the success factors as preconditions for social learning is crucial for operationalising social learning. For example, improving the network among stakeholders may be both a precondition for and outcome of social learning. This can be described as positive feedback. In practices, it means even being sensitive to slight changes in the system once an evaluation has been carried out.

The following table summarizes the criteria used for this evaluation. It is based on the criteria and indicators jointly developed by stakeholders in the course of a moderated process within the development of a vision for the river Ribble (UK) (cf Davis et al. 2004, p.13). The table was adapted from Ridder et al. 2005.

Table 1: Criteria and indicators for social learning in active participation as used for the evaluation of public participation in Lower Saxony (cf Ridder et al. 2005)

Analysis criteria	Indicators and additional factors
1. Developing new institutions, particularly network building between partners ⁵	New networks, working groups, new formal and informal relationships
2. Seeking the involvement of all major sectors, interests and geographic areas	The type and numbers of stakeholders involved, representativeness and continuity of participation
3. Effectively communicating the process and role of stakeholders in the process	The majority of stakeholders consider the process transparent; they can cope with the information (amount and flow); they agree on and support process management; they understand the process and their role in it
4. Improving the capacity of the stakeholders to make joint decisions	The majority of stakeholders consider the process worthwhile, their contribution made a difference. The time and work invested by stakeholders in the process is considered appropriate
5. Enhancing mutual understanding of the views and positions of stakeholders	Stakeholders report an improvement in the understanding of others' viewpoints and

⁵ Here, it must be taken into consideration that the process is relatively “young”. It can be assumed that the results will improve once implementation has commenced.

	that new perspectives have been gained; the way in which conflicts are reported by stakeholders; the effects of participation in terms of developing a common perspective and vision of the participatory process and a better understanding of each other's position
6. Developing a shared perception of problems	Perceived potential of process to solve conflicts
7. Reflecting on the process as such and giving feedback	Reported feedback, evaluations

2.2 Case study - Active stakeholder participation in the implementation of the WFD in Lower Saxony

As a regional and direct form of active involvement, the Ministry of Environment of Lower Saxony established 30 so-called 'area co-operations' in autumn 2005 (MU Nds. 2005), covering the whole of Lower Saxony. They were designed as long-term institutions with the aim of contributing to the implementation of the WFD. The area co-operations typically consist of approximately 15 participants, representing different regional organisations, including water management, agriculture and nature conservation. It is assumed that the most important discussions, and possibly decisions, will take place within these area co-operations, as institutions of active participation (Kastens and Newig 2008).

The evaluation of the participatory process, which took place in spring 2007, referred to all area co-operations in Lower Saxony. The objective was to assess the participatory process from the viewpoint of the stakeholders. Accordingly, stakeholder satisfaction with the process was one element of the evaluation. Another objective of the evaluation was to gain an insight into the extent to which 'learning' processes among area co-operation stakeholders had already occurred, leading to the possible improvement of the sustainability of future decisions on measures and actions to be taken.

The empirical research for the evaluation was conducted using semi-open questionnaires. Lower Saxony Ministry for the Environment, which is in charge of the implementation of the WFD in the *Land*, distributed the questionnaires. The completed questionnaires were sent directly to the evaluation team. In total, the 32 area co-operations involve 388 participants, 100 or so of whom are involved in two or more area co-operations. At over 80 %, the response by the area co-operations was highly representative. The response by sector (e.g. water management, agriculture, nature conservation) was also representative.

3 Area co-operations in the light of networking and social learning

Many of the answers given by area co-operation participants in the questionnaires could be used to interpret more than one of the criteria (see Section 2.1/ Table 1). The results of the questionnaires were clustered into three main groups, each involving various indicators of the eight criteria: in Section 3.1, the analysed participatory process was considered supportive of social learning once an increase of networks among stakeholders was detected. By analysing the continuity and representativeness of the area co-operations, it was investigated whether the interaction between the participants, especially from different stakeholder groups, had

improved. These two indicators reflect that the process supports one of the main criteria for social learning, namely whether the process involves all major sectors, interests and geographic areas. The second group (Section 3.2) includes the evaluation of the transparency of the process as perceived by the participants, and the incorporation of the different interests in the decision-making process. The final group (Section 3.3) includes the effects of participation and perceived conflicts. In this paper, this group has been linked to the impact of the participatory process on finding solutions and their implementation, including the approach to conflicts.

3.1 Network building, continuity and representativeness of the area co-operations

In our case study focusing on Lower Saxony, we investigated whether the interaction between the participants, especially from different stakeholder groups, had improved (Criterion 1, Table 1). With regard to the development of new networks, the evaluation confirmed that nearly 60% of respondents had improved existing and/or established new ties with other stakeholder organisations as well as with the authorities in charge. Most of the intensified and new contacts refer to representatives of organisations belonging to the same sector albeit in different geographical areas. The fishery sector and environmental organisations in particular established specific new contacts with external organisations, such as administrative counties and local authorities, as well as the agricultural sector.

For the area co-operations in Lower Saxony, 78% of the interviewees confirmed the continuity of participants in the area co-operations (Criterion 2). The analysis also revealed that the administrative counties, local authorities and agricultural organisations are represented by more participants than the other stakeholder organisations. Although single interest groups are relatively well represented in single co-operations, 73% of respondents agreed that all groups and organisations which have or could have a stake in the implementation process of the WFD are represented. Only 15%, most of whom represented nature conservation organisations, thought that further stakeholders should be involved.

In the context of representativeness, the distribution of votes was nevertheless criticised by some interviewees (Criterion 2). Area co-operations follow an equity approach, where all participants have the same voting rights. Due to different resources and spatial misfits (Moss 2003), some stakeholder groups, such as the administrative counties or agricultural organisations, have more seats in the process than other groups, such as environmental NGOs or water boards. Some participants believe that not all of the decisions taken to date in the course of the process were made on the basis of fair representation. They hold that the proportion of votes is not weighted correctly within the area co-operations, since the “one head – one vote regulation cannot lead to appropriate results”, and since the co-operations are “partially over-staffed with agriculture and administrative counties”.

3.2. Transparency and inclusion of interests

Successful participatory processes are perceived as transparent if the participants are able to relate the contents and decision-making process to the implementation results, and if trust is placed in the process (EU 2002:78). Moreover, transparency helps to incorporate the various interests of the different sectors involved in the process. The process and the role of stakeholders have to be effectively communicated by making sure that all stakeholders are provided with sufficient information about – and understand – the process and the role that stakeholders have therein (Criterion 3). The capacity of stakeholders to make joint decisions

has improved, as confirmed by the number of stakeholders who considered the process worthwhile and the number of stakeholders who believed that their contribution made a difference (Criterion 4).

In general, the majority of stakeholders (72.5%) consider the process and information flow to be widely transparent. Yet 27% of respondents remained sceptical. They criticised the fact that the amount of work and the strict time scale of the implementation leaves virtually no room for detailed processing and the development of the implementation steps. Moreover, some participants stated that the management of the co-operations lacks neutrality in discussions and that data and information is often not taken into account adequately by the authorities in charge (Criterion 7). The importance of transparency is underlined by the participants' assessment of their opportunities to bring in their own interests.

Nevertheless, even here a slight majority of 55% agreed that they have the possibility to bring in their interests. However, many interviewees also stated that although the right to bring in stakeholders' interests is formally given, it is not entirely possible in practice. Nearly 28% of respondents emphasised that their information and data input are not adequately taken into account by the authorities in charge of implementation. Some participants even stated their belief that the results gained so far within the co-operations did not have any influence on the decisions made at higher levels. Often, and even on request, insufficient feedback is given as to why specific contributions were not taken into account.

It has to be considered that participatory processes involve stakeholder groups with different organisational structures. While some groups, such as agricultural or water associations, have a clear profile, groups with a less precise profile are also involved. In Lower Saxony, the latter particularly holds true for environmental NGOs. On the basis of the WFD's water management approach, these groups are organised at catchment scale in the form of umbrella organisations composed of all NGOs with environmental and nature protection objectives. For each of the area co-operations, a representative of one of these organisations was named as the participating stakeholder. Consequently, the environmental NGOs in the area co-operations are represented by persons with very different organisational and working backgrounds. On the one hand, this leads to difficulties in the coordination of environmental interests. On the other, communication structures are far more challenging for the umbrella organisation and its members than for other stakeholder groups with a more uniform structure. An important document to help understand the aim of the process and the participants' role (Criterion 3) is the edict issued by the Ministry for the Environment of Lower Saxony for the institutionalisation of the area co-operations (MU 2005). According to the edict, the area co-operations should support dialogue between water authorities and stakeholders at the regional and local catchment scale, and should initiate an alliance between all of the partners. Moreover, all participants pledge to work actively within the co-operations and should act as multipliers to feed back the results of the co-operation to their own organisation, and vice versa (*ibid.*: 2). The role of the participants is described as being actively constructive, with them giving recommendations and decision support to those drafting river basin management plans, while leaving the final decision competence to the state authorities (*ibid.*: 3).

While both the authorities in charge and the participants have a fairly similar understanding of the aims of the process, the participants' interpretation of their own role within area co-operations is not entirely congruent with the understanding manifested in the official edict. The evaluation showed that the respondents see their role as mainly protecting their own interests. Interviewees also often stated that they participate in the area co-operations within the context of their official jobs. Even though the possibility to influence implementation of the WFD at the regional and local scale is clearly intended by both the authorities in charge and the stakeholders, the primary aims of the edict, namely to build up an alliance between all

parties in water management and to encourage active and constructive work by the participants in order to achieve a better implementation, does not seem to be the stakeholders' primary reason for participating in area co-operations.

Clarification by the authorities in charge is also needed in terms of the stakeholders' role as addressees of assignments of tasks for implementation. Interviewees stated that assignments are often placed too late and are defined imprecisely. In consequence, the participants do not have enough time to complete the tasks or to understand their roles within the jobs. The evaluation also made clear that the participants' role as multipliers still needs intensification in terms of bringing information from their home organisation into the process, and vice versa. As mentioned above, the stakeholders requested the stronger involvement of environmental interests.

The capacity of stakeholders to make joint decisions is highly dependent on whether the stakeholders feel that their contribution makes a difference and their efforts are worthwhile (Criterion 4). In this context, the stakeholders' assessment of the efficiency of the effort they put into the process remains indifferent. Most participants in area co-operations invest between 5 and 10 hours per month to prepare for meetings. The assessment of whether or not one's efforts invested in the participatory process in terms of time and/or money pay off by way of acceptable and agreeable process results is presumably one indicator to ensure that all participants are satisfied with the process. Only half of the interviewees feel that their input and work is worthwhile and decisive to the process. Moreover, where resources are seen to be insufficient, the closing of resource gaps is mainly seen to be the responsibility of the government and authorities in charge. This aspect is crucial, as it makes clear that the implementation of the WFD is still seen as an externally initiated task (e.g. by the government or the EU Commission) and has not been adopted as a beneficial regional instrument for improved water management. The awareness of water management as a collaborative challenge, however, must be intensified accordingly.

The evaluation revealed that all partners agree that the WFD has to be implemented, that the European water management goals more or less have to be achieved by the year 2015 and that, at least, infringements have to be avoided. However, as to the question whether active involvement will ultimately contribute to a better water status, the interviewees remained indifferent. While 45% expect an improvement, about 17% stated that they are currently unable to estimate the consequences of the process. In many cases, respondents emphasised that, more so than other forms of participation, active involvement in particular provides the opportunity for better water protection. Nevertheless, several uncertainties were highlighted, leading to the general impression that most participants only expect the achievement of water protection goals if certain conditions are met. These conditions include the elimination of misgivings, the development of a group feeling for water management goals, the willingness to compromise, funding possibilities for measures and a greater public awareness of the goals of the WFD.

To summarise, most participants believe that the process is transparent and that the different interest groups are adequately involved. Nonetheless, the area co-operations have a significant backlog demand concerning the authorities' consideration of and feedback on the input stakeholders make during the process. The same holds true for the assignment of tasks in which the stakeholders' roles have to be defined more precisely by the authorities. In particular, in order to provide the opportunity of joint decisions within the co-operations as a significant precondition for social learning, stakeholders clearly need to see that their contributions are being taken into account in the official implementation process and that their work within the process is a necessary contribution. To avoid later disappointment, the role of

stakeholders in the process has to be pointed out more clearly and probably even negotiated in part.

Finally, the most important result of the conducted evaluation is that the area co-operations established in Lower Saxony are considered by the stakeholders to be an effective means of active participation. Overall, the analysed process shows several signs of successful social learning.

3.3. Effects of participation and conflicts

Participatory processes are usually initiated in order to improve policy solutions and implementation decisions. Furthermore, within the scope of the WFD, participation is not an end in itself, but provides a basis for better implementation of measures to achieve the environmental goals of European water management (EU 2002: 7). These “material” results are generally better achieved if participants develop a common appreciation of water protection and its challenges (Criterion 6) as well as the interests of other groups. This goes along with the aptitude of knowing and accepting different perspectives of problems (Criterion 5). A further ambitious goal of participation is to intercept and solve conflicts before they block goal achievement. The extent to which the participatory process in Lower Saxony lives up to these expectations was investigated by asking the interviewees about potential and actual conflicts within the process.

In many cases, the process was seen as an aid to achieve a better understanding of water protection issues and concrete measures. 74% of respondents noted that the process of active involvement improves co-operation, and enhances a mutual understanding of different interests. However, only 27% gained new perspectives on their work in water management due to the process. Nonetheless, interestingly, 80% of participants who gained a new perspective also confirmed that they had intensified and enlarged their network thanks to participation in the area co-operation.

Concerning potential or actual conflicts, half of the interviewees do not perceive great difficulties or conflicts. 25% of the participants, however, named concrete conflicts and are more pessimistic about their solution, due to major differences between the interest groups. Some of the conflicts named referred to differences in environmental or water and economic interests, definitions of water management and their consequences for measures to achieve the goals, as well as methodological problems in terms of the operationalisation of the European water legislation. The conflicts named usually referred to the different interests of the various groups involved rather than individual participants. Most of the interviewees who named actual or potential conflicts are also confident that most of the difficulties will be solved within the area co-operations and that active participation enhances a culture of negotiation, consensus finding and compromises.

In some cases, however, the capacity of the process to solve conflicts is doubted. Solutions are rather expected to come from external influences, as these participants also perceive external factors, such as financial resources for the implementation, as the reasons for conflict. To some extent, externalisation of conflict solutions can also be related to a lack of decision-making competence and the absence of willingness to take responsibility for solutions. In general, conflict-solving is seen as an issue in the competence of the authorities in charge rather than the whole group. Trust and a feeling of taking more responsibility for the output of discussions therefore has to be strengthened, e.g. by proving that stakeholders’ contributions are taken seriously and implemented to the greatest possible extent.

4 Social learning: precondition and result of successful processes – discussion and conclusions

The study at hand investigates social learning in a newly institutionalised participatory process, area co-operations as instruments of active participation for the implementation of the WFD in Lower Saxony, Northwest Germany. The article analysed the results of an evaluation conducted with area co-operations in order to find evidence of social learning that had occurred in the course of these participatory processes.

Various forms of active participation to involve stakeholders in the implementation process of the WFD are currently being conducted all over Europe. The intensity of involvement within the Lower Saxony area co-operations is certainly not normal. The report revealed a high level of satisfaction of participants with the process, and that networking as a basis for social learning has increased. The reasons why this positive result was possible certainly refer to the continuity of participation and the completeness of representatives in terms of different sectors and actors involved. A further supportive element was the overall perceived transparency of the process. The opinions of stakeholders differ concerning the contribution of participation and social learning to a qualitative improvement of the water bodies. Here, the analysis showed that the process was too “young” to provide valuable information on the impacts of participation or expected/experienced conflicts.

The results support the hypothesis that participatory processes that lead to social learning enhance the mutual understanding of the views and positions of stakeholders and even help to develop a shared perception of problems. Despite the relatively positive evaluation by the participants, it is no guarantee for the positive continuation of the process. At the moment, area co-operations in Lower Saxony are – at least in most terms – open enough to allow iterations and procedural changes. Although they are not considered as such, area co-operations can be considered a long-term experiment that is new to all parties involved in Lower Saxony water management. The process is still “young”, and the planning and implementation of concrete measures had not started at the time of the evaluation. The early stage of the existence of the co-operations implies that further process improvements are possible, and the idea to conduct an evaluation by external experts is a first sign of the willingness to improve the situation. However, this must not mislead us from the fact that the process still has a long way to go until the water management goals of the WFD are achieved. Particularly in the context of finding the right measures to achieve the WFD’s goals, potential conflicts are expected by the stakeholders, due to their different interests. These conflicts may even be worsened by the fact that it is unclear how the measures will be funded. Here, the analysis showed that the necessary transparency of the authorities in charge is still not given. Important aspects for process improvement thus refer to a stronger ownership of the process by both the authorities in charge and the stakeholders.

In the context of defining favourable conditions of resource systems to overcome collective action problems, Ostrom (2004) stated that “the resource system should be moderately sized”. The establishment of area co-operations was one step towards obtaining more decentralised water management, as also requested in the WFD Art.13 “...decisions should be taken as close as possible to the locations where water is affected or used.” (Directive 2000/60/EC). Ostrom (2004) also requests national authorities and policy-makers “...to create institutional mechanisms that local participants can use to organize themselves...”. Whereas area co-operations comply with this requested mechanism, there is still scope for improvement if the area co-operations should fully comply with the idea of having “mechanisms for discourse and debate by local users in their effort to learn from one another and discover new strategies”

(ibid). But achieving such functionality requires learning processes not only on the part of the authorities and policy-makers but also on the part of the participants in the process.

The objective to allow true involvement within the decision-making process of the WFD by establishing area co-operations can be assessed as a very positive attempt. It offers an example of successful active participation – leading to joint decision-making and eventually to collective action. The edict of the co-operations grants wide opportunities for the authorities to hand over real decision-making competencies to stakeholders. These opportunities should be used. Nonetheless, a dynamic component is also involved. Within the process, both the authorities in charge and the participants can define who should be involved in which kind of decision-making competence. How openly or narrowly the individual roles are interpreted also depends greatly on leadership – a component of social learning that was not considered within the study at hand. Leadership as an emergent element during multi-party processes is usually taken by one actor alone. The actor who takes the lead connects people, e.g. by building trust among participants, and supports the convergence of opinions. Leadership can also become apparent by bringing in new perspectives, spanning boundaries and creating and communicating visions to deal with the issue at stake. Here, further research is needed to understand the role of leadership for participatory processes within the implementation of the WFD.

The example described offers opportunities for the other federal *Länder* in Germany to consider comparable mechanisms of active participation for implementing the WFD. Whether the participative instrument of area co-operations would also be successful in other countries is by no means an easy question. As ongoing discussions on the adoption of laws from one country to another show, many determining factors such as history, the environment, culture, the political context need to be considered (Chodosh 2004).

Certainly, multi-party processes in other European countries can build upon the experiences made with the instrument of area co-operations. Further analysis on the institutional context into which the area co-operations are embedded could provide information on the potential to adapt the instrument to different circumstances and contexts.

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References

- Chodosh, H.E. (2005). *Global Justice Reform. A Comparative Methodology*. NYU Press, New York
- Craps, M., E. van Rossen, S. Prins, T. Taillieu, R. Bouwen and A. Dewulf. 2005. Relational Practices to make Social Learning Happen: A Case Study in Water and Nature Management. In *Active Citizenship and Multiple Identities in Europe. A Learning Outlook*, eds. D.A. Wildemeersch, V. Stroobants and M. Bron Jr. Frankfurt a.M / u.a.: Peter Lang.
- Davis, M. & Y. Rees (2004). Public Participation in the Ribble River Basin. Case study report produced under Work Package 5 of the HarmoniCOP Project (www.uos.harmonicop.info)
- EU. 2002. Guidance on Public Participation in Relation to the Water Framework Directive. Active Involvement, Consultation, and Public Access to Information. Luxembourg.
- Glicken, J. 2000. 'Getting stakeholder participation 'right': a discussion of participatory processes and possible pitfalls.' *Environmental Science & Policy* 3: 305-10.
- Hanneman, Robert A. and Mark Riddle. 2005. *Introduction to social network methods*. Riverside, CA: University of California, Riverside (published in digital form at <http://faculty.ucr.edu/~hanneman/>)
- Imperial, M. & Hennessey, T. (2000). Improving watershed governance: Collaboration, public value, and accountability. Paper prepared for presentation at the American Political Science Association's (APSA) 96th Annual Meeting, 31/8-3/9, Washington, DC.
- Ison, R., N. Röling and D. Watson. 2007. Challenges to science and society in the sustainable management and use of water: investigating the role of social learning. In *Environmental Science & Policy* 10 (499-511)
- Jonsson, A. 2005. 'Public Participation in Water Resources Management: Stakeholder Voices on Degree, Scale, Potential, and Methods in Future Water Management.' *Ambio* 34 (7): 495-500.
- Kaika, M. 2003. 'The Water Framework Directive: A New Directive for a Changing Social, Political and Economic European Framework.' *European Planning Studies* 11 (3): 299-316.
- Kastens, B. and J. Newig. 2008. 'Will participation foster the successful implementation of the WFD? The case of agricultural groundwater protection in North-West Germany.' *Local Environment* 13 (1): 27-41.
- Lee, K.N. 1999. Appraising adaptive management. In: *Ecology and Society* 3 (2).
- López Cerezo, J.A. and M. González García. 1996. 'Lay knowledge and public participation in techno-logical and environmental policy.' *Phil & Tech* 2 (1), [Online Article]: cited <http://scholar.lib.vt.edu/ejournals/SPT/v2n1/pdf/CEREZO.PDF>.
- Maurel, P., M. Craps, F. Cernesson, R. Raymond, P. Valkering and N. Ferrand. 2007. Concepts and methods for analysing the role of Information and Communication tools (IC-tools) in Social Learning processes for River Basin Management. In *Environmental Modelling & Software* 22 630-639)
- MU Nds. 2005. Erlass des Umweltministeriums vom 15.03.2005. Konzept für die Umsetzung der Wasserrahmenrichtlinie im Geschäftsbereich des Niedersächsischen Umweltministeriums - Bildung von Gebietskooperationen. Vol. 49. Hannover.
- Newig, J., C. Pahl-Wostl and K. Sigel. 2005. The Role of Public Participation in Managing Uncertainty in the Implementation of the Water Framework Directive.' *European Environment*. 15 (6):333-43. See: <http://www.interscience.wiley.com>.
- Newig, J., 2007. Does public participation in environmental decisions lead to improved environmental quality? Towards an analytical framework, *Communication, co-operation, participation.*, 1 (1), 51-71.
- Olsson, P., Folke C & T. Hahn (2004). Social-Ecological Transformation for Ecosystem Management: the Development of Adaptive Co-management of a Wetland Landscape in Southern Sweden. In: *Ecology and Society* Vol.9, Issue 4, <http://www.ecologyandsociety.org/vol9/iss4/art2/>
- Ostrom, O. 2004. Understanding Collective Action. In: R. S. Meinzen-Dick & M. Di Gregorio (eds). *Focus 11. Collective Action and Property Rights for Sustainable Development*. IFPRI
- Pahl-Wostl, C. 2007: Transitions towards adaptive management of water facing climate and global change. In: *Water Resour Manage* 21: 49-62.
- Pahl-Wostl, C., M. Craps, E. Mostert, T. Taillieu, D. Tabara and A. Dewulf. 2007. 'Social learning and water resources management.' *Ecology & Society* 12 (2), [Online Article]: cited <http://www.ecologyandsociety.org/vol12/iss2/art5/>

- Pahl-Wostl, C. and M. Hare. 2004. 'Processes of Social Learning in Integrated Resources Management.' *Journal of Community & Applied Social Psychology* 14 (3): 193-206.
- Ridder, D., B. Kastens and I. Borowski. 2007. Bericht zur Evaluierung der Öffentlichkeitsbeteiligung zur Umsetzung der WRRL in Niedersachsen. Studie im Auftrag des Niedersächsischen Umweltministeriums. Osnabrück, Hannover.
- Ridder, D., E. Mostert, H.A. Wolters (eds.) 2005. 'Learning together to manage together - Improving participation in water management'. Handbook of the HarmoniCOP project. ISBN 3-00-016970-9. 99 pp.
- Rydin, Y. and M. Pennington. 2000. 'Public Participation and Local Environmental Planning: the collective action problem and the potential of social capital.' *Local Environment* 5 (2): 153-69.
- Schubert, H. 2002. Aus der Praxis des Netzwerkmanagements. Beitrag zur Auftaktveranstaltung zur zweiten Rundes des BMBF-Programmes "Lernende Regionen" am 13. Juni 2002 in Bonn, <http://www.lernende-regionen.info/dlr/download/NETZMANAGEMENTschubert.pdf?PHPSESSID=f5ff>
- SLIM Project, 2004. Social Learning as a Policy Approach for Sustainable Use of Water - A field-tested framework for observing, reflecting and enabling. accessed: November 18, 2004. <http://slim.open.ac.uk>.
- Steele, J. 2001. 'Participation and Deliberation in Environmental Law: Exploring a Problem-solving Approach.' *Oxford Journal of Legal Studies* 21 (3): 415-42.
- Thomas, J.C. 1995. *Public Participation in Public Decisions. New Skills and Strategies for Public Managers*. San Francisco: Jossey-Bass Publishers.
- Henk Wolters, Dagmar Ridder, Erik Mostert, Henriëtte Otter, Mita Patel (2007). *Social Learning in Water Management: Lessons from the HarmoniCOP Project*. E-Water. European Water Association (EWA) Art. 2007/01. <http://www.ewaonline.de/journal/online.htm>
- http://www.wupperverband.de/C7A45C5E279D5FF6C1257310003EA4AC_E641180C90DE7FD7C1257310003B3B2A.html