

## Doing Everything You Can, but Not (yet) Getting it Right: Challenges to Brussels' Great Expectations for Water Quality<sup>1</sup>

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**ABSTRACT** To arrive at a good status of all European water bodies is the main objective of the European Union (EU) Water Framework Directive (WFD). Since its adoption in 2000, the policy has fundamentally changed the institutional, procedural and organizational structures of Member States' water management, leading to an Europeanization of national legislation and decision-making structures. The case of WFD implementation in Schleswig-Holstein is an example of the policy's highly innovative governance architecture that unfortunately is not (yet) able to take that one last hurdle: to improve water quality and establish a *good water status* across EU Member States by 2015 or 2027.

### KEY MESSAGE

This case study contributes to an understanding of (a) multi-level governance, (b) Europeanization as a consequence of institutional and policy misfit as well as (c) participatory decision-making across political-administrative levels and ecological scales.

### INTRODUCTION

Water management in the European Union's (EU's) Water Framework Directive (WFD) is both a poster child for environmental governance and also a case of not (yet) reaching envisioned water quality standards – thus a case of 'not getting it right'. Adopted in 2000, the policy initiated immense rescaling of decision-making arenas by (a) introducing the river basin as a new administrative level to match ecological scales (Article 3) and (b) demanding broad, public participation in decisions on water management (Article 14, 1). 'Competent river-basin authorities' designate the relevant water bodies quality and initiate participatory river-basin management planning, which results in river-basin management plans (RBMP) and programs

of measures (PoMs). There are two complementary motivations behind this approach. First, it is considered more efficient and effective to address environmental problems at the level where they are happening [2]. Managing water pollution at the river basin is therefore preferred to arrangements that are solely based on political-administrative boundaries. Second, broadening participation might strengthen the EU's democratic legitimacy, while making it more accessible to citizens in their everyday lives [2,3,4,5]. Furthermore, it has been assumed that participation can increase the effectiveness of environmental governance as well as the environmental quality of decisions [6,7].

While the WFD governance setup is thus an innovative and state-of-the-art application of environmental governance standards, the quality of its outcomes is debatable. The WFD aims at 'good status' for all EU-waters (Article 2, 20). Surface water status is 'good', if water bodies meet chemical, biological and hydromorphological parameters (categorizing high, good, moderate, poor and bad status); groundwater quality is either 'good' or 'poor' based on chemical and quantitative criteria [8]. With this the WFD follows a holistic environmental approach [6], as it considers several interrelated parameters to assess water quality. German provincial

1. Reference [1].

water governance in Schleswig-Holstein (SH) – Germany’s northern-most federal state – has followed EU guidelines on WFD implementation and institutionalized new, innovative governance structures for water management. Implementation in the region can be called ambitious in comparison [6,7]. SH did promote broad participation early on and insitutuionalized all relevant new governance structures. Yet, it did not improve its water quality. The following case study illustrates the promises and pitfalls of the EU’s environmental governance in the context of WFD implementation in Schleswig-Holstein, Germany.

### CASE EXAMINATION: GOVERNANCE ACROSS SCALES FOR GOOD WATER STATUS

#### *How Does the EU Operate?*

The EU and its 28 Member States interact in a vertically and horizontally differentiated *Multi-level Governance* (MLG). EU MLG allows for diversification and integration within a common frame [9] to balance the tension between common objectives and territorial differences [10]. The *Principle of Subsidiarity* underscores shared allocation of responsibilities for policy and law-making between the European national and sub-national levels. Power and decision-making authorities are divided vertically among the Commission, Council, Parliament and Court; and horizontally among local, national and transnational levels [11]. EU directives – such as the WFD – present vague guidelines on implementation, following a dynamic of self-commitment rather than a set of strict principles, so that regional differences can be accounted for [12]. What’s good about this flexibility is that it allows for location, context and time-specific implementation against a common background [13]. Such flexible decision-making and policy implementation, however, often leads to normative and factual uncertainty [14]. On a normative dimension, flexible governance arrangements raise questions of legitimate inclusion, representation and delegation in decision-making process as well as the power relations associated with access to participation [13]. Factual uncertainty is tied to a lack of knowledge on the issues that need to be discussed and a lack of information on potential effects of a policy. These concerns put a damper on the high, flying hopes associated with participation in a multi-level environmental decision-making context.

To get the WFD implementation process started and overcome factual uncertainties, the EU invited a number

of actors to produce a *Common Implementation Strategy* (CIS) in 2001 [8]. The network of water practitioners was organized in working groups to create a set of documents with non-binding recommendations, intended to harmonize policy implementation across member states [5,8]. The idea was to set everyone on defined tracks without letting go too much of the flexibility for knowledge creation in regional contexts. The WFD therefore considers and acknowledges Member States’ varying concerns about country and region-specific implementation costs as well as differing interpretation of ambiguous terms (disproportionate costs)<sup>2</sup> and subsequent exceptions [8]. The CIS documents are an example of the way in which EU policies balance supranational common objectives and diverging national and regional realities. Voluntary measures and guidelines – such as the CIS documents – are the glue between the different decision-making levels. However, due to their non-binding character, the guidance put forward in CIS documents need not be implemented, let alone known by implementation bodies [7]. In other words, Member States are left with considerable leeway [6]. The following section describes national level approaches to the WFD implementation.

#### *WFD: From the Supranational to the National Level*

Approximately 80% of environmental and agricultural policies that are implemented in Germany come from the European level [15]. This fact alone suggests a large degree of interdependence. The process of restructuring national decision-making structures to address the misfit between the supranational and lower institutional levels is called *Europeanization* [15,16]. ‘The lower the compatibility between European and domestic processes, policies, and institutions, the higher the adaptational pressure’ [15, p. 5]. In case of the WFD, the pressure to change was high.

The WFD implementation has been described as ‘[. . .] an experiment for governments, involved stakeholders and citizens across the European Union’ [13, p. 1011]. In Germany, it resulted in several formal changes in water management structures and has produced 16 different implementation strategies, one for each federal state [13]. Before the WFD implementation, water management used to be highly formalized. As most German water policies

2. Disproportionate costs or expenses are a reason for exemptions, as are technical feasibility and natural conditions. An exemption allows extended deadlines for WFD implementation [8].

were not governed in a participatory way, the restructuring of legislation and authorities in WFD decision-making context took time and resources that eventually shifted the focus from political to natural scales while retaining institutional stability. The German planning system is traditionally sectoral and hierarchically organized [17]. Cross-sectoral cooperation or public consultation were not part of the decision-making process on water governance before implementing the WFD, neither was the river-basin as a political sphere [18]. Germany adapted its legislative structures for water governance by implementing federal reforms in 2006, a new Water Law (*Wasserhaushaltsgesetz*) in 2010, state law on water (*Landeswassergesetz*) as well as *Landesverordnungen*, which allowed the Länder to apply region-specific regulations. The following section gives an example of WFD structures and outcome in Schleswig-Holstein, a German federal state.

#### *WFD Implementation in Schleswig-Holstein*

While Schleswig-Holstein put an organizational structure in place that could realize a collaborative implementation of the WFD, it could not improve its water quality in the process. Already in 2002, after an inventory at state level, it became clear that 95–98% of the water bodies in Schleswig-Holstein would not reach a ‘good status’, mainly due to bank reinforcement and straightening as well as high nutrient concentrations [19]. Connectivity and diffuse nutrient intake are the main factors that lead to SH’s bad water quality [6,20]. They were already addressed in water SH-specific regulations prior to the WFD [21]. SH changed water legislation according to WFD standards in August 2003, which coincided with an early start of implementation and planning to meet WFD deadlines [6]. Governance structures of implementation and different effects of WFD implementation in the region are explained as follows.

Administration and regulation of water governance in Schleswig-Holstein – the northern-most state in Germany – has not changed too much with the WFD [20], as the Ministry of Energy, Agriculture, the Environment and Rural Areas (MELUR) retained much of its powers in water management processes, which is quite common in WFD implementation [7]. However, with the implementation of the river-basin as the main decision-making arena, some degree of administrative rescaling was inevitable. The restructuring process provides for policy integration,

with the designated areas for WFD implementation fitting the criteria of the Natural Habitat (92/43/EWG) and the Wild Birds Directives (79/409/EWG), as well as the Floods Directive and the Marine Strategy Framework Directive, which makes compliance to policy-measures as well as monitoring of policy implementation easier.

SH comprises 10 WFD planning units, two of which traverse other German *Länder* (Hamburg and Mecklenburg-Vorpommern), three river-basin districts (Elbe, Schlei/Trave, Eider) and 34 working groups for distinct regions within the districts that are responsible for implementing the WFD [6,20]. While the MELUR together with the State Agency for Nature and Environment (*Landesamt für Natur und Umwelt*, LANU) assumed the role of process organizers, the main participatory processes – river-basin management planning and implementation of measures – are conducted at sub-basin level [20]. Table 1 gives an overview of the tasks and responsibilities of the relevant stakeholders in SH.

In general, centralization of planning and a limited uptake of knowledge in WFD implementation have been more frequent than expected [7], which is not the case in SH [6,20]. SH is thus a case of comparatively ambitious WFD implementation. Most stakeholders were appointed to participate (e.g. the Water Boards, who chaired working groups) [6,17]. The Water and Ground Associations (Water Boards, *Wasser- und Bodenverbände*), an organization of mostly agricultural stakeholders, the MELUR and the *Staatlichen Umweltämter* (StUA) were the responsible authorities for the implementation process at the river-basin scale. These took decision-making powers away from cities and municipalities, who then decided to block the processes by boycotting participation for the first round of meetings [20].

Initial satisfaction rates amongst participants was rather low in face of the tasks’ complexity, which is largely a result of new roles assumed in the process, knowledge gaps, as well as a rather complicated, new regional implementation structure [20]. Satisfaction rates improved significantly over time [6]. Local processes seem to be dominated by economic actors with a vested interest in water management across Germany [13]. In the case of SH, agricultural actors most prominently impacted decisions on water management and WFD implementation [20]. Their participation was considered relevant to increase acceptance amongst land-owners, which is important since implementation to a large degree relied on voluntary actions [6].

**TABLE 1.** MLG setting of WFD implementation.

European Union framework	Supranational level	Policy-formulation and agenda-setting
GERMANY	National level	Provide legislative setting and take responsibility for overall outcome
Transpose legislation, adapt structurally to meet EU benchmarks and indicators		
SCHLESWIG-HOLSTEIN (SH)	Federal level	Management of implementation processes, normative and strategic guidance, propose concrete management plans
MELUR (competent authority, responsible for implementation in SH, process organizer)		
LANU (technological and scientific know-how)		
Planning Group (WFD implementation)		
River-Basin Advisory Board	River-basin	Coordination between different stakeholder groups with a vested interest in the policy outcome
34 Working Groups	Region within the river-basin	Discuss and implement measures

Source: Own depiction (Bruns 2010, p. 152ff).

In the end, the RBMPs and PoMs in SH largely targeted river connectivity issues, which improved in the process of implementation [6]. Dealing with diffuse pollution and the high level of nutrient intake, mainly due to agricultural production, has proven to be more complicated. The measures mostly did not address diffuse pollution, which was no priority amongst the stakeholders [6]. The voluntary character of actions further decreased activities [6]. Another factor that has been named as a barrier to implementation of the WFD measures is the German Renewable Energy Source Act that led to increased investment in land to produce maize [6]. While maize has a higher nitrate-N load than grassland, indirect  $N_2O$  emissions due to nitrate leaching can be considered as almost negligible [22]. Maize is used for biogas production, which shows similar nitrate-leaching potential as animal slurry [23]. This comes as a trade-off: while biogas further promotes renewables, it may exacerbate the problem of high nutrient surpluses – especially in SH with its high animal density [23]. Furthermore, SH has made use of exemptions under Article 4 WFD. These factors contribute to an explanation of why SH's water quality has not improved significantly although WFD structures have been implemented. Additionally, it might well be that changes in water parameters do not yet show because of lag times. It might also be worthwhile to consider in how far a governance structure is able to contribute to environmental quality.

Although environmental objectives have not (yet) been reached in SH, participants in the working groups show a high degree of acceptance of the proposed measures [6].

This is not the case in most other implementation processes, where institutional adaptation has been limited or participation has not allowed for participants to actually influence decision-making [7]. Thus, while the innovative setup might not have guaranteed an improved water quality in the region, procedural, intermediary outcomes (learning, acceptance) of WFD implementation in SH should not be disregarded.

#### FINAL COMMENTS

The innovative WFD governance architecture has led to an institutionalization of hydrological scales, and promoted participation across scales and decision-making levels [13]. However, the European Commission and some stakeholders are rather dissatisfied with the implementation of the WFD, specifically with the use of exemptions as a mechanism to undermine environmental goals [8]. The WFD has encountered a fair number of structural obstacles to its implementation [6,7,8]. The objective to arrive at 'good water' status across EU Member States has also not (yet) been met. However, some of the social or intermediary policy goals have been met: the WFD did encourage a broadening of participation, confidence amongst stakeholders was built up in the process of implementation, and communication and understanding of environmental problems improved and collective learning processes were initiated [6,17].

The implementation of the WFD and its outcomes are interesting for water management in the EU

specifically, and EU environmental governance in general. Integrated river-basin management under the WFD is an attempt to reduce the complexity of human-nature interaction by harmonizing natural and administrative scales [6,7,8,13]. This is an example of a paradigm shift in EU environmental governance that increasingly draws on participatory planning and polycentric governance structures [2,7]. At its very core, this shift is about levelling the playing field and finding common solutions to environmental problems. Examples of WFD implementation show that the reality of the EU's environmental governance is a balancing act. Multilevel governance structures and a common EU objective with flexibility of implementation along the line allow for considerable discretion. This leads to different environmental outputs and outcomes across EU Member States as well as regions within Member States. Different environmental policies might not always complement each other, such as the WFD and the Renewable Energies Act. Participation comes with its benefits, but also with challenges as it opens up new questions of representation and legitimacy, as can be seen with the participation of cities in SH. In the end, an innovative governance structure might solve neither environmental nor democratic challenges, but create new facets of what we have been dealing with all along.

### CASE STUDY QUESTIONS

1. Are there more arguments for or against local and participatory implementation of environmental policies?
2. How and why are intermediate results (such as learning, acceptance etc.) of participation in the WFD implementation process important?
3. Considering environmental outcomes, what are the benefits of polycentric governance mechanisms that leave considerable discretion to many decision points and what are the benefits of top-down steering?

### AUTHOR CONTRIBUTIONS

The primary author is responsible for the conception of the work, the analysis and interpretation, and the drafting of the article.

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### COMPETING INTERESTS

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