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Governance change and governance learning in Europe: stakeholder participation in environmental policy implementation

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ABSTRACT

Current European Union (EU) policies require policy-makers on different levels of government to engage with new forms of governance such as participatory planning, aiming to improve environmental policy delivery. We address the central issue of how policy-makers learn about the appropriateness of different modes of governance. By way of example, we examine recent innovations in EU water governance – primarily through the enactment of the Water Framework Directive (2000) and the Floods Directive (2007), and their requirements for stakeholder participation in the planning process. We discuss scope for policy-induced 'governance learning', wherein policy-makers draw on evidence and experience to learn about how to design and execute effective participatory planning and decision-making. In doing so, we aim to extend work on policy learning by focusing on the procedural dimensions of governance, and make a case for more coordinated and systematic approaches to gathering evidence and learning from ongoing EU environmental policy implementation.

KEYWORDS

Policy transfer; multi-level learning; mandated participatory planning; adaptive governance; collaborative governance; participatory governance

1. Introduction

The multi-level and multi-arena European Union (EU) polity (Héritier, 2002) has posed considerable challenges for the implementation of EU policy in general (Milio, 2010), and environmental policy in particular (Knill & Liefferink, 2007). In response to major implementation deficits in the environmental policy field, various 'new' modes of governance have been introduced to place greater emphasis on decentralization and proceduralization in policy-making, and have afforded member states greater leeway and discretion in policy implementation. This shift has, over the last two decades, given rise to a wide variety of governance approaches and procedures across and within the member states. Despite the hopes placed in new modes and instruments to achieve more legitimate and

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effective environmental governance, the extent to which this has occurred remains unclear (Bäckstrand, Khan, Kronsell, & Lovbrand, 2010; Jordan, Wurzel, & Zito, 2003). In order to gain an understanding of what modes of environmental governance 'work' under what conditions, there is therefore a need for both research and policy practice that is geared towards gathering evidence and learning from the diversity of experiences currently playing out across the EU.

This paper maps out and discusses ways in which learning occurs – and, we suggest, ought to occur – on the basis of evidence and experience with recent EU governance innovations. In particular, we consider provisions for learning that are 'built in' to varying degrees to environmental policy, exploring by way of example the field of EU water governance. We present a conceptual framework for understanding learning by policy-makers, which has emerged out of our work on the recent evolution of participatory and collaborative arrangements in EU water governance. And we argue that this framework is potentially applicable to analyses of learning in other policy fields and contexts. Furthermore, we make a normative argument and a call for more coordinated and deliberate approaches to learning about governance in the EU and beyond in order to understand both what works in collaborative governance, and how we might achieve better water resource governance and environmental governance generally.

We draw on the policy learning literature and neighbouring literatures, to develop the notion of 'governance learning', which we distinguish as learning related primarily to the *processes* and *procedures* of multi-stakeholder decision-making and planning that increasingly characterizes EU environmental policy implementation. The current state of European water policy, we argue, presents several opportunities for different modes of governance learning by policy-makers and authorities at multiple levels. This may be indicative to some extent of scope for learning in other policy fields in Europe and beyond, but in this paper we focus on the field of water governance as shaped by the European Water Framework Directive (WFD) and Floods Directive (FD).

In Section 2, we define and discuss key terminology around governance change and governance learning, focusing in particular on the relationship between change and learning in the EU multi-level governance context. Section 3 briefly outlines key developments in EU environmental governance that, we argue, are indicative of a shift to decentralized participatory planning, and open up both challenges and new opportunities for governance learning. The argument is explicated with reference to the WFD and FD. In Section 4, we propose a typology of modes of instrumental governance learning, which we suggest can aid governance researchers and practitioners alike in exploring and realizing opportunities for learning. We conclude, in Section 5, with reflections on how more coordinated and systematic governance learning research and practice might be advanced for effective environmental governance.

2. Conceptual background: governance change and governance learning

The starting point for this paper lies with the aforementioned implementation deficit with EU environmental policy, and the concomitant need for legitimate and effective environmental governance. New governance arrangements have been put in place, but whether or not they actually deliver (and how, to this end, they must be adapted to local circumstances) will remain uncertain until they have been tested in practice. It is exactly this 'testing in

practice' that requires effective learning processes among the state (and non-state) actors involved (Schout, 2009, p. 1126 speaks of 'EU governance as a multi-layered learning challenge'). From a bird's eye view, governance change in Europe can be seen as a continuous process of (experimental) governance change, learning, and (re-)adaptation – hence, a system of ongoing adaptive governance (Pahl-Wostl, 2009).

Two aspects are of particular importance here. First, the ways and the extent to which this learning actually occurs, is an empirical question. If it turns out that systematic learning is not occurring to any great extent, we cannot really speak of adaptive governance. Here, we conceptually examine possible pathways via which policy actors can and do learn systematically about the success and failure of governance arrangements. Second, recent EU governance innovations are not only geared towards achieving greater effectiveness and legitimacy, but they have also institutionalized learning and adaptation processes in relation to their own performance (secondary policy cycles, as discussed further below).

For the purposes of this paper governance is defined, following Stoker (1998, p. 18), as governing arrangements encompassing institutions and actors both within and beyond government, wherein the traditional governing roles and responsibilities of various actors become increasingly blurred, and governments make greater use of instruments and techniques to 'steer and guide', rather than to command and control. The supposed 'shift from government to governance', and the emergence of 'new modes of governance', however, has been widely debated, as commentators have questioned both the nature and the extent of change that can be said to have occurred (Capano, Howlett, & Ramesh, 2015; Dehousse, 2016; Diedrichs, Reiners, & Wessels, 2011; Jordan, Wurzel, & Zito, 2005). We do not seek to enter into these debates here, but we acknowledge that policy and governance change can proceed both incrementally and abruptly (i.e. via evolution and innovation). Indeed, these are not mutually exclusive, and within the complex multi-level European system, both types of change can be seen to occur simultaneously across levels.

Particularly important in setting the agenda for recent EU governance reform has been the Commission's 2001 White Paper on governance, which placed great emphasis on increased participation, advocating 'opening up the policy-making process to get more people and organizations involved in shaping and delivering EU policy' (European Commission, 2001, p. 2). The subsequent turn to decentralized participatory planning – particularly evident in the procedural requirements of several key EU environmental directives (see Section 3) – must be seen in this wider context. In this paper, we focus specifically on public and stakeholder involvement in governance, by examining the emergence of a 'mandated participatory planning' approach to environmental governance (Newig & Koontz, 2014), and its implications for multi-level governance learning in the water sector. As Diedrichs et al. (2011) note, new modes have generally emerged due to the basic dilemma facing member states in balancing the need to address common challenges through joint action, and the desire to defend state sovereignty as far as possible. Especially where there are intractable differences among member states, as there have been in the environmental arena, EU policy-makers tend to opt for procedure-based instruments – or 'meta-instruments' (Radaelli & Meuwese, 2010) – that change procedures, rather than directly tackling fundamental or substantive issues. As the latest stage in an ongoing evolution from technical towards procedural standards, mandated participatory planning combines material and procedural aspects, explicitly requiring the preparation of plans and programmes by member states and competent authorities (Newig & Koontz, 2014). In so doing, the approach affords member

states considerable discretion and leeway in determining how policy goals will be reached (Scott & Trubek, 2002).

The increasing obligation on member states and sub-national units to plan with the input and active involvement of stakeholders and the public, however, poses considerable challenges for authorities that have not necessarily engaged in participatory and collaborative approaches in the past (Edelenbos, 1999; van der Heijden & ten Heuvelhof, 2013). There is therefore a need for research both to examine empirically what informs policy-makers in approaching the task of designing and running participatory processes (e.g. Newig, Kochskämper, Challies, & Jager, 2016), and to explore potential sources and modes of learning that might foster the improvement, updating and successful adaptation of participatory environmental governance. The literature on policy learning (and related concepts such as policy diffusion, policy transfer, policy experiments and organizational learning) has explored multiple conceptualizations of learning in relation to the policy process (Freeman, 2006; Grin & Loeber, 2007; Marier, 2013). Several typologies of policy learning have been advanced in efforts to systematize the variety of ways in which policy-relevant learning takes place (e.g. Dunlop & Radaelli, 2013; Gilardi & Radaelli, 2012; Hall, 1993; May, 1992; Toens & Landwehr, 2009). We focus here on what has generally been described as instrumental policy learning, wherein learning is defined as the reflexive updating of beliefs based on evidence, experience and new information (Newig et al., 2016).

Given the breadth of the literature and the various treatments of policy learning it is useful to distinguish approaches according to *who* learns, *what* is learned, and *to what effect* – dimensions that Bennett and Howlett (1992) termed, respectively, the subject, object and result of learning. With regard to these dimensions, we are primarily interested in learning (1) by policy-makers and other actors charged with organizing participatory processes, (2) about how to design and run such processes, (3) for more effective stakeholder engagement, participation and collaboration in public environmental decision-making. By 'effective', we mean participatory processes that meet the goals of policy-makers, such as reaching well-informed, implementable, widely accepted and legitimate decisions that are beneficial for environmental sustainability (Newig et al., 2016). We refer to this kind of learning as instrumental 'governance learning'. Whereas policy learning is usually focused on learning about instruments and the content and substance of policy, governance learning is distinctly concerned with the procedural dimensions of decision-making and governance processes.

We recognize that governance learning, like learning generally, may proceed mechanistically or organically (Freeman, 2006). That is, learning may be to varying degrees deliberate and intentional (Dunlop & Radaelli, 2013), being run as a learning exercise (e.g. as experimentation or piloting with monitoring and evaluation) (Sabel & Zeitlin, 2012; Sanderson, 2002), or it may result from ad hoc adjustments to procedure, trial-and-error, muddling through, and less intentional assimilation of experience (Bennett & Howlett, 1992). We acknowledge that intentional instrumental governance learning is only ever boundedly rational (Dunlop & Radaelli, 2013; Jones, 2003; Meseguer, 2006), confronting uncertainty in relation to multiple parameters of governance processes. Clearly there are also other, less explicitly rational and intentional, modes of learning (e.g. symbolic, affective learning) that are potentially important for governance research (Gilardi & Radaelli, 2012). We stress here, however, that it is possible (and indeed also necessary) for instrumental learning to steer governance change and adaptation towards increased legitimacy and effectiveness. Precisely because participatory and collaborative decision-making is becoming more prevalent and

the repertoire of participatory instruments is becoming more complex (see the discussion of European environmental governance below), policy-makers increasingly need to learn how to design and conduct effective participatory processes (see Howlett, 2014).

3. EU environmental governance: decentralization, proceduralization, participation

3.1. New modes of environmental governance

Developments in European environmental governance over the last two decades have, we argue, opened up space for, and to a certain degree encouraged and promoted, multi-level governance learning across jurisdictional and policy areas. Much has been written about contemporary shifts in EU environmental governance (e.g. Golub, 1998; Jordan & Adelle, 2013; Knill & Lenschow, 2000; Knill & Liefferink, 2007; Weale et al., 2000), and scholarly debate over the emergence and implications of 'new modes' of environmental governance and 'new environmental policy instruments' has been vigorous (Holzinger, Knill, & Schäfer, 2006; Jordan et al., 2005). In this paper, we do not offer a comprehensive analysis of change in EU environmental governance, but rather highlight certain recent shifts and trends that provide the context for particular innovations and scope for governance learning in the water policy field.

The EU has been increasingly active in issuing environmental policy over the last three decades. In line with the general trends described above, the mode of environmental policy delivery has evolved, since the mid-1990s, to rely more on a range of new policy instruments, including economic measures, private self-regulation, and greater public and stakeholder participation in decision-making (Jordan, Wurzel, Zito, & Brückner, 2003). These instruments have been introduced in parallel with, and complementary to, more 'traditional' binding regulatory measures, however, which remain important – especially in the environmental policy field (Diedrichs et al., 2011). For example, forms of regulation such as framework directives set binding environmental quality objectives, but leave it up to member states how these are to be achieved (Jordan et al., 2003). Other directives are largely procedural, mandating planning within a general framework for action according to certain procedural requirements and timeframes for information provision and reporting. Knill and Liefferink (2007, p. 39) identify three characteristics of the 'new' European approach to environmental regulation: a renewed emphasis on setting policy goals, leaving the means by which goals should be reached up to the member states; fuller information and participation of a wider range of state and non-state actors; and the addition of cooperative and legally non-binding arrangements among state and non-state actors.

These emergent characteristics have driven, and been driven by, an increasing array of procedural measures and requirements, which introduce obligations on authorities to obtain authorization, to monitor and report, to provide information to stakeholders and the public, and to consult and involve certain stakeholders in planning and implementation. The use of procedural requirements is not new in the EU, but the recent shift towards less prescriptive approaches in terms of the substance of policy and particular policy instruments, has been accompanied by increased intervention in procedural aspects. To some extent this is attributable to the assertion of the subsidiarity principle as laid down in the Maastricht Treaty, which underscores that discretion in certain tasks should remain with member states and sub-national units. An important role for public and stakeholder participation

in environmental governance was affirmed with the signing of the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters,[1] and reflected in subsequent EU directives 'on public access to environmental information' (Directive 2003/4/EC), and 'providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment' (Directive 2003/35/EC).

These overarching, cross-sectoral directives sought to grant extensive public access to information relating to the environment, and opportunities for involvement, and thereby create bottom-up pressure on government at multiple levels to implement existing environmental regulation (Knill & Liefferink, 2007). Article 2.3 of the Public Participation Directive states that

> Member States shall identify the public entitled to participate […] The detailed arrangements for public participation under this Article shall be determined by the Member States so as to enable the public to prepare and participate effectively […] Reasonable time-frames shall be provided allowing sufficient time for each of the different stages of public participation required.

Requirements for varying degrees of stakeholder engagement and participation have also appeared prominently in several important environmental directives since the early 1990s (e.g. directives relating to habitat conservation (Directive 92/43/EEC) and ambient air quality (Directive 2008/50/EC)). However, most explicit in mandating public and stakeholder participation in planning and implementation has been the Water Framework Directive. The WFD goes further than other directives in specifying procedural obligations and timeframes for participation, which is to involve a wide range of stakeholders in all steps of the planning and implementation process over subsequent policy cycles.

This kind of mandated participatory planning affords member states and competent authorities wide discretion and considerable leeway on the procedural side of management. Authorities must themselves decide how to proceed with the various processes of stakeholder participation and collaboration in decision-making, plan-making and implementation. This means that a variety of approaches and strategies emerge across the EU, given the diversity of national political and policy contexts, interest constellations, environmental issues at stake, and past experiences with public and stakeholder participation. Together these factors make for very different starting positions or baselines among the member states and relevant authorities. While some are likely to build on past experience with varying degrees of intentionality and purpose, others are new to participatory approaches, in need of direction, and forced to muddle through. In this sense, both a *need* for governance learning and considerable *opportunity* for governance learning emerge from the current environmental policy landscape.

3.2. Participatory EU water governance

The European water governance context is an ideal setting in which to examine actual and potential governance learning given the important shifts that have occurred. As these shifts – particularly in the case of the WFD and FD – have been explicitly linked to the goal of improving effectiveness, there is a need to examine how far this has been achieved and to

[1]Convention of the United Nations Economic Commission for Europe (UNECE), signed 25 June 1998, entered into force 30 October 2001.

understand how policy-makers might learn about appropriate procedural innovations to this end. As discussed below, the cyclical nature of the directives and their nested secondary policy cycles provide a particularly apt setting for investigation of institutionalized adaptive governance and learning.

Developments in European water governance over the last two decades provide an example of how, on one hand, various provisions for governance learning have been made in EU environmental policy and, on the other hand, how a range of other opportunities for learning have emerged as a result of the changes that different directives have introduced. Most significant in this field has been the Water Framework Directive, which came into force in 2000. The WFD was expected to transform EU water governance (European Commission, 2002; Kaika, 2003), which had previously been highly fragmented, and had failed to address persistent problems of deteriorating water quality and depletion of water resources across Europe (Weale et al., 2000). Heralded as one of the most important pieces of EU environmental legislation (Howarth, 2009), the WFD established a universal target of 'good water status' (defined in chemical, ecological and quantitative terms), which all European water bodies should have reached by the end of 2015. In addition to its ambitious substantive targets, the WFD introduced several important procedural requirements directing member states and competent authorities in terms of *how* implementation and planning should be carried out.

Among other policy innovations, the WFD makes explicit provision for stakeholder participation – particularly in the preparation of river basin management plans. Specific obligations and timeframes are given for the provision of information and for public consultation throughout the planning cycle, and the 'active involvement of all interested parties' (WFD, Art. 14) is to be encouraged at each stage. While the WFD strongly asserts that such stakeholder participation is essential to successful implementation (WFD, Preamble 14), it offers no further advice on how participatory planning is to be conducted. In fact the wording of the Directive is rather ambiguous in this respect, leaving considerable room for interpretation as to who should be involved, when, and how (Wright & Fritsch, 2011). While intensive public participation is promoted in the common implementation strategy (CIS) and associated guidance documents (e.g. European Commission, 2003), these remain legally non-binding, and have limited influence (Brouwer, Rayner, & Huitema, 2013; Jager et al., 2016).

WFD implementation proceeds in six-year cycles of participatory river basin planning and management, which can be seen as nested sub-cycles within the overarching WFD policy cycle. Prescribed tasks include assessment of water bodies and the identification of 'significant water management issues'; preparation of draft and final river basin management plans (RBMPs) and programmes of measures (PoMs); implementation of measures; monitoring, evaluation and reporting; and updating of RBMPs and PoMs. Insofar as the Directive envisages systematic monitoring and updating of plans and measures, the river basin management planning process can be seen as an example of an adaptive management cycle, making explicit provision for learning and continual adaptation. In this way, participatory planning forms an 'intermediate step' (Newig & Koontz, 2014) between the water quality goals of the Directive and concrete measures implemented under the river basin management plans. The 'success' of participation and collaboration processes in this context can be judged in part by the extent to which they serve the goals of the WFD by producing appropriate measures and aiding effective implementation, and in part by the

extent to which they produce beneficial social outcomes and achieve democratic legitimacy. The assessment of participation against these criteria should potentially inform adjustment and adaptation of procedures and processes over time.

As the WFD sets a frame for participatory integrated river basin management, the 2007 'daughter directive' dealing with flood risk management (Floods Directive) makes provision for the alignment and synchronization of planning and implementation with WFD processes (see Newig, Challies, Jager, & Kochskämper, 2014). Aiming to manage and reduce the risk posed by flooding to human health, the environment, cultural heritage and economic activity, the FD also prescribes cyclical planning and stipulates procedural requirements that are binding on member states. Unlike the WFD, the FD does not set concrete targets of any sort, but rather mandates planning on the part of competent authorities, and is thus entirely procedural. As flood risk management measures can potentially both complement and counteract water quality measures, the FD envisages integration and coordination of participatory planning within the broader ambit of the WFD to avoid conflict and harness synergies in this sense. Therefore, the FD (Articles 9, 10) makes explicit reference to the procedural requirements of the WFD, and also envisages the active involvement of interested parties in the production, review and updating of flood risk management plans (for a detailed account see Albrecht, 2016). While a Working Group on Floods, established under the WFD CIS process, has provided some advice on stakeholder participation (e.g. Working Group on Floods [WG-F], 2012), it has not yet issued concrete guidance on integrating WFD and FD participatory planning, and this task also is left to the discretion of member states.

The Commission's own monitoring reports (based on reporting from the member states), while very thorough in many respects, do not examine participation and active involvement in depth or systematically (see European Commission, 2012). A considerable and growing body of research examines the dynamics of participatory planning under the WFD and the FD. Much of this work focuses on detailed case studies of implementation in individual member states. Increasingly, comparative research is examining the uneven process of the institutionalization of participatory planning across the EU (e.g. Bourblanc, Crabbé, Liefferink, & Wiering, 2012; Brouwer et al., 2013; Jager et al., 2016; Paul, Bouder, & Wesseling, 2016; Scheuer & Rouillard, 2008; Uitenboogaart, van Kempen, Wiering, & van Rijswick, 2009), and within particular member states (e.g. Benson, Fritsch, Cook, & Schmid, 2014; Newig et al., 2014, 2016; Woods, 2008). The overriding general finding is that there is a wide variety of approaches and experiences across the different member states and within some member states. Furthermore, it is evident from the slow pace of institutional change, and the persistence of prior planning structures and procedures, that path dependence and institutional inertia play an important role (see Jager et al., 2016). Together these early findings indicate there is a need for policy-makers and authorities to learn about how to design and run public participation, but also scope and potential for more coordinated and systematic approaches to governance learning at and across multiple levels.

4. Scope for instrumental governance learning in Europe

Given the aforementioned need and opportunities for governance learning in the field of participatory water governance, we propose below various paths or modes that such governance learning may take in the European context. Focusing on the examples of the WFD and the FD, we consider how policy-makers might learn from across jurisdictions

and policy fields, and over time through policy cycles in light of the learning opportunities that the directives present. As outlined in Section 2, we define learning as the updating of beliefs on the basis of evidence, experience and new information. This may be deliberate and planned, or it may happen through less intentional assimilation of prior experience. Our point here, however, is that it is possible, and potentially highly beneficial, for policy-makers and other government actors to engage more systematically and reflexively, and with more awareness, in learning about how to design and conduct effective participatory planning processes. We argue that a focus on policy-makers and how they learn is important given increased (bottom-up and top-down) demand for participatory and collaborative modes of environmental governance, yet mixed results and continued uncertainty around 'what works'.

It has been noted in relation to policy learning that the experiential basis for learning is potentially very broad (May, 1992). On one hand, learning can be self-referential, drawing on endogenous sources and direct experience within a given jurisdiction or policy network (Grin & Loeber, 2007). On the other hand, learning may utilize exogenous sources, drawing on experiences observed in other jurisdictions or policy fields with similar procedural requirements. In Table 1, therefore, we distinguish between *endogenous* sources of learning, which refers to experience or new information originating from within a given jurisdiction and policy field (left column, Table 1), and *exogenous* sources of learning, which are in turn further differentiated according to experience drawn from other jurisdictions (middle column, Table 1), and from other policy fields (right column, Table 1). Learning from other jurisdictions typically entails policy transfer and adaptation to the 'domestic' context (Benson & Jordan, 2011; Stone, 2012). Policy-makers may also learn or gather evidence from developments and procedures in other policy fields – within or beyond their jurisdiction. Relevant evidence and applicable lessons are perhaps more likely to come from neighbouring or related policy fields, but this need not be the case – especially where the object of learning relates to the *procedural* governance aspects. Indeed, it is precisely the

Table 1. Types of instrumental governance learning and examples from European water governance.

	Sources of learning		
	Endogenous	Exogenous	
Modes of learning	Same jurisdiction & same policy field	Other jurisdictions	Other policy fields
Serial learning (sequential)	Learning from sequential instances of policy-making & implementation	Learning from other jurisdictions' past experiences in the same policy field	Learning from previous experiences in other policy fields with similar procedural requirements
	E.g.: Successive WFD or FD planning cycles; serial piloting of stakeholder engagement modes	*E.g.: Lesson-drawing by WFD competent authorities in Germany from counterparts in France*	*E.g.: Lesson-drawing by FD competent authorities from WFD planning*
Parallel learning (simultaneous)	Learning from concurrent policy-making & implementation processes	Learning with other jurisdictions, via co-production of knowledge/evidence	Learning in parallel across different policy fields with similar procedural requirements
	E.g.: Parallel piloting of stakeholder engagement modes; randomized trials & experimentation with participatory process types	*E.g.: Coordinated cross-border participatory river basin management planning, implementation, monitoring & evaluation*	*E.g.: Integrated engagement and participation under aligned WFD and FD planning cycles*

Source: Adapted from Newig et al. (2016, p. 355).

focus on learning about governance *processes* (here, public participation processes) that really opens up this cross-policy-field dimension of learning.

Governance learning may result from examining one's own past experiences or those of others through time, in a serial or sequential view (Hall, 1993), or it may derive from witnessing the parallel unfolding of governance processes and their outcomes. In Table 1, we therefore further distinguish between *serial* and *parallel* learning. Serial learning encompasses updating and adaptation over the course of successive policy cycles, and via sequential policy pilots, as well as less formal processes of 'trial-and-error' or 'learning by doing' (top left cell, Table 1). Serial learning may also draw on other jurisdictions or policy fields (top middle and right cells, Table 1). Parallel learning on the basis of endogenous sources includes strategies such as simultaneous piloting and policy experiments conducted to a set timeframe or policy cycle, with monitoring and evaluation (bottom left cell, Table 1). Parallel learning from exogenous sources may occur via coordinated adoption of a mode of governance or decision-making (or similar modes) across two or more jurisdictions in the context of joint knowledge generation and mutual learning (bottom middle cell, Table 1). However, parallel learning is also possible without explicit cross-border coordination, insofar as policy-makers draw lessons and assimilate new information on the basis of developments and unfolding experiences in other jurisdictions addressing similar issues (bottom right cell, Table 1). We do not claim here that any learning mode or source is superior to another. Potentially, a variety of combinations of modes and sources could contribute to effective learning.

The various types of governance learning described above resonate with 'lesson drawing' and 'updating' (e.g. Gilardi & Radaelli, 2012; Toens & Landwehr, 2009), wherein prior beliefs and approaches are revised in light of direct experience and/or new information. As Rose (1991, 2005) explains, lessons drawn from other contexts can inform changes to existing policies or governance programmes. Such change may occur via copying or emulation, as well as degrees of adaptation, hybridization, synthesis and innovation (see Rose, 2005, pp. 80–84). In the context of the EU (and other decentralized and multi-level planning contexts), such lesson-drawing across member states, or sub-national units, and policy fields is consistent with the idea of laboratory federalism (Flynn & Kröger, 2003; Kerber & Eckardt, 2007; Oates, 1999). Here, parallel 'experimentation' in different jurisdictions with a variety of approaches to the same issue is supposed to drive diffusion of effective governance, as it is assumed can occur across and within EU Member States through WFD and FD implementation.

Scope for governance learning in the current policy landscape results both from specific provisions in the respective directives that aim to foster learning, such as their cyclical nature and the procedural elements built into these policy cycles, and from openings and opportunities that emerge due to the generally flexible and open framework for action that the WFD and the FD introduce to the multi-level European system. Most obviously, the directives share a recurring six-year policy/planning cycle, with the explicit aim of updating river basin management plans and flood risk management plans. Insofar as both directives stress the need for stakeholder participation in this updating process, they also provide for governance learning (serial, endogenous) in the form of updating of planning and decision-making processes on the basis of prior experience. Relevant experience may even be drawn from across policy (sub)fields (serial, exogenous), as has occurred in some instances where FD planning processes have been modelled on successful WFD processes

(see Newig et al., 2016). As the FD not only calls for flood risk management planning to be carried out in the context of wider river basin management planning under the WFD, but also specifically encourages the integration of participatory planning processes, it also potentially opens up space for a greater degree of learning between the respective policy fields and authorities (parallel, exogenous). Stipulated common timeframes and deadlines for consultation, planning and reporting by the member states theoretically allow for individual authorities (at national or sub-national levels) to ascertain performance and progress in implementation across the EU. This should potentially aid the identification of good practice in terms of institutional structures and procedural arrangements, and support cross-national lesson-drawing. This could take place subsequent to each policy cycle (serial, exogenous), or within a given policy cycle. Although the latter is, strictly speaking, an exercise in serial learning, it can be defined as parallel, exogenous learning, as particular procedures and processes are employed within the same timeframe. Finally, given the flexibility and openness built into the directives, competent authorities could design their own governance experiments for testing specific approaches, such as in the form of pilots (serial, endogenous learning) or even parallel piloting, which would come close to an active adaptive management approach (Meffe, Nielson, Knight, & Schenborn, 2002; Walters, 1986) on the basis of parallel, endogenous learning. This more intentional learning approach, however, seems not to be a common procedure, as shown for instance in the case of FD implementation among German federal states (Newig et al., 2016).

To foster a more systematic approach, the European Commission, as the 'top' level of governance in the multi-level European system, could play a major role in facilitating and overseeing different types of governance learning across levels. In relation to the WFD and FD in particular, this applies at both the level of the primary policy cycle (EU level), and at the level of the nested participatory sub-cycle (national and/or sub-national levels). With regard to the latter, the Commission could actively facilitate learning among member states and competent authorities (as discussed above) by regularly producing EU-wide assessments and comparative evaluations of member states' progress. This should facilitate lesson-drawing and inform the adaptation of successful processes to local contexts. With regard to the primary policy cycle, the Commission could actively draw on insights from experiences among the member states in order to adjust and adapt the procedural aspects of EU policies. The participatory planning agenda established under the European water directives has triggered a vast array of approaches, which would serve this purpose.

While the member states certainly begin from different baselines – in terms of experience with water resources management planning and with public and stakeholder participation – the wider process of WFD and FD implementation can be seen as a kind of unfolding collective governance experiment. In the same way that the Open Method of Coordination envisages the emergence of best practice over time under soft law, the discretion afforded member states with respect to the procedural dimensions of the WFD could be expected to foster lesson-drawing and incremental adjustment of governance processes towards effectiveness and legitimacy. In line with the notion of laboratory federalism (Oates, 2004), it is possible to see the development of participatory planning as occurring in a federal 'learning laboratory', where there is at least the potential for systematic monitoring of governance processes and procedures, gathering of evidence, evaluation, and updating of practice in a reflexive, adaptive learning process. Such a process could be organized at the EU level, but also within larger federal systems like Germany or among devolved authorities as in the

United Kingdom, for example. This kind of intentional and systematic approach would of course depend on coordinating capacity at an appropriate level – such as the EU or member state level, but also potentially among sub-groupings of member states in collaboration – and willingness to participate on the part of competent authorities.

5. Conclusion

We have sought to outline recent developments in EU water governance and the scope that this governance change provides for more systematic approaches to governance learning in the sense of learning by policy-makers about procedures and processes for participatory planning. Clearly, the WFD and the FD contain certain provisions that are conducive to and even promote learning by policy-makers and authorities, but together they also open up perhaps unintended yet potentially fruitful avenues for governance learning in a federal laboratory type setting. In an effort to conceptually structure instrumental 'governance learning' we mapped types of learning on the basis of endogenous and exogenous sources of learning, and serial and parallel modes, and illustrated these with examples from the water governance field. This is a tentative mapping, as empirical research on the nature and extent of governance learning remains scarce (but see Benson, Jordan, & Huitema, 2012; Newig et al., 2016), but it is our hope that this may prove useful to other researchers working on evidence-based, adaptive governance – especially in the area of participatory planning and collaborative decision-making.

There appears to be considerable potential for both authorities and governance researchers to engage more deliberately and systematically with the phenomenon of governance learning – at least in the context of European participatory water governance explored here. The explicitly cyclical nature of WFD and FD planning makes room for adaptive governance, inviting (and to some extent mandating) systematic monitoring and evaluation of governance change and the updating of planning processes and procedures. This scope for reflection and learning through change from one policy cycle to the next is arguably essential to the development of effective modes of governance. Furthermore, focusing on learning about procedural dimensions of governance opens up the notion of lesson-drawing across policy fields (e.g. between WFD and FD implementation) in addition to serial or parallel learning within or across jurisdictions. This is particularly relevant in the context of EU environmental governance, where participatory planning is increasingly mandated under the assumption that it will underpin more effective planning and implementation. This clearly instrumental rationale on the part of the European Commission demands that we pay attention to how participation is playing out in practice – in (sub)catchments and flood risk areas – and gather the evidence necessary to establish whether it is indeed producing quality plans and aiding thorough implementation.

Therefore, while policy change at the EU level has triggered governance shifts conducive to multi-level learning, the different kinds of governance learning that result can arguably also serve to steer ongoing governance change. The direction of such change is likely to depend on a variety of factors, but the design of governance processes should at least be informed by evidence and learning. Ideally governance learning can inform continual improvement in participatory and collaborative environmental governance – i.e. environmental decision-making that is more effective in terms of delivering beneficial environmental impacts and more democratically legitimate.

One precursor to more systematic approaches to governance learning would appear to be suitable coordination and oversight of such efforts. Whereas various working groups exist at the European level (e.g. within the WFD CIS process) and at the member state level (e.g. the German Länderarbeitsgemeinschaft Wasser – LAWA), these tend to focus largely on recommendations for the design of certain instruments, but not on a posteriori assessment, which could support systematic lesson-drawing. While guidance on participation has been issued under the CIS (European Commission, 2003), this has not been updated or revisited and the CIS does not appear to support any enduring form of governance learning. Another, relevant factor relates to the openness and willingness of policy-makers and officials to engage in governance experiments. While the need for policy learning – in terms of learning about effective water quality and flood protection measures – is relatively taken for granted, the potential to learn about and improve and adapt governance processes appears to be far less widely recognized (Newig et al., 2016). Given these barriers to more systematic governance learning, future research might usefully explore how officials and authorities at different levels can be engaged – perhaps in transdisciplinary research settings – to demonstrate the potential value of experimentalist and evidence-based approaches to participatory environmental planning and decision-making. These efforts need not be confined to a given policy field or governance level, but – especially in the European context – should explore the possibilities for multi-level governance learning and cross-policy-field learning where procedural requirements are similar.

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No potential conflict of interest was reported by the authors.

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