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## CHAPTER 15.

# MULTI-LEVEL LEARNING: HOW THE EUROPEAN UNION DRAWS LESSONS FROM WATER MANAGEMENT AT THE RIVER BASIN LEVEL.

*Marjolein van Eerd and Duncan Liefferink*

### Transboundary water management and River Basin Commissions

Rivers function as veins on the world's continents and many human, economic and ecological systems depend on rivers that cross state borders.<sup>1</sup> Initially, water management followed a technical and instrumental approach, often being the exclusive task of technical and state experts. The main presumption was that water resources could be predicted, managed and controlled. Yet, the urgency of cross-border cooperation and changing climatic conditions have triggered a paradigm shift towards more integrated, transboundary water management.

Challenges for water management, such as water quality issues, flood events and the impact of climate change do not stop at man-made, historical, geographical and territorial borders. Governing water resources should therefore be approached from a transboundary perspective. An example of such perspective is the application of a river basin approach, which inherently leads to challenges for existing, conventional and often deeply embedded governance frameworks.<sup>2</sup> Collaboration across borders is complex due to upstream-downstream asymmetries. Upstream and downstream located states are likely to have different interests, discourses, approaches and problems, yet are dependent upon each other for river basin management. In addition, state sovereignty may hinder the development of cross-border cooperation.<sup>3</sup>

1 See M.C.J. van Eerd, M. Wiering and C. Dieperink, 'Exploring the prospects for cross-border climate adaptation between North Rhine-Westphalia and the Netherlands', *Utrecht Law Review* 10 (2014): 91.

2 See W. Steele, I. Sporne, P. Dale, S. Shearer, L. Singh-Peterson, S. Serrao-Neumann, F. Crick, D. Low Choy and L. Eslami-Andargoli 'Learning from cross-border arrangements to support climate change adaptation in Australia', *Journal of Environmental Planning and Management* 57 (5) (2014): 682–703.

3 See T. Bernauer, 'Explaining success and failure in international river management', *Aquatic Sciences* 64 (2002): 1–19; M.C.J. van Eerd, M. Wiering and C. Dieperink, 'Exploring the prospects for

The current trend of addressing water issues from a river basin management perspective is stimulated by, for example, the European Union (EU).<sup>4</sup> The catchment level plays an important role in today's water management, since it is considered logical to govern water issues along hydrological boundaries. River Basin Commissions (RBCs) can be seen as mediating platforms bridging the gap between various territorially organised organisations concerned with water management at multiple levels.<sup>5</sup> RBCs are unique and functional platforms of collaborative management, involving governmental and non-governmental actors from multiple levels and sectors.<sup>6</sup> In this contribution we assess the International Commission for the Protection of the Rhine River (ICPR) and its role in sparking off learning processes in other institutional contexts, notably the EU. The ICPR has been chosen since collaboration in the Rhine basin has often been referred to as one of the most successful examples of cross-border water management.<sup>7</sup>

### Multi-level learning from practical experiences

Actors ranging from the local to the international and supra-national level are concerned with the daily governance of water quality and quantity issues in Europe. Continuous interplay and interaction take place between these levels of governance, for example via the exchange of knowledge, information and expertise. Such exchanges may enable multi-level learning, which occurs when actors adjust their cognitive understanding of, for instance, policies, and modify them in the light of experiences gained elsewhere.<sup>8</sup>

cross-border climate adaptation between North Rhine-Westphalia and the Netherlands', *Utrecht Law Review* **10** (2014): 91.

- 4 See E. Mostert, 'Conflict and cooperation in international freshwater management: a global review', *International Journal of River Basin Management* **1** (3) (2003): 267–78.
- 5 See J.R. Warner, 'More stakeholder participation? Multi-stakeholder platforms for integrated catchment management', *International Journal of Water Resources Development* **22** (2006): 15–35.
- 6 See D. Huitema and S. Meijerink, *The Politics of River Basin Organisations: Coalitions, Institutional Design Choices and Consequences* (Cheltenham: Edward Elgar Publishing, 2014).
- 7 See T. Bernauer and P. Moser, 'Reducing pollution of the river Rhine: the influence of international cooperation', *Journal of Environment and Development* **5** (1996): 389–415; C. Dieperink, 'From open sewer to salmon run: lessons from the Rhine water quality regime', *Water Policy* **1** (1998): 471–85.
- 8 See P. Hall, 'Policy paradigms, social learning and the state: the case of economic policymaking in England', *Comparative politics* **25** (3) (1993): 275–96; M. Reed, M.A.C. Evely, G. Cundill,

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The practical implementation of policies and their subsequent interaction with implementing agents and target groups generates information about how policies are actually received and work out in practice.<sup>9</sup> This information, which we refer to as *implementation experiences*, is an important resource that can be used to influence the ongoing policy process also in other contexts. It may, for instance, affect processes of setting implementation issues on the agenda, adapting implementation elements or changing policies. Implementation experiences consist of ‘all knowledge, expertise and information acquired by actors during or as the result of the practical implementation of ... policies’.<sup>10</sup> In the specific context of the EU, the European Commission is concerned with monitoring and enforcing policy implementation, yet EU institutions are not directly involved in executing policy implementation at the domestic level. The European Commission is therefore highly dependent upon the implementation experiences of domestic implementing agents to improve the practicability, workability and legitimacy of EU legislation.<sup>11</sup>

Since RBCs have unique expertise about the management of water resources along hydrological boundaries and concerning the collaboration between multiple water-related actors in an international setting, expertise in RBCs may be assumed to be an important additional knowledge resource for agents concerned with EU water governance. However, little is known about how and under which conditions these RBC experiences feed back from the catchment to the EU level.

### **Policy feedback and implementation experiences**

In this contribution we focus on the process of *policy implementation feedback* from the ICPR to the EU, by which practical implementation experiences gathered at the river basin level are taken up in the EU policy process. Such feedback may lead to a reconsideration of existing policies

I.R.A. Fazey, J. Glass, A. Laing, J. Newig, B. Parrish, C. Prell, C. Raymond and L. Stringer, ‘What is social learning?’, *Ecology and Society* **15** (4) (2010): 1.

- 9 See A.R. Zito and A. Schout, ‘Learning theory reconsidered: EU integration theories and learning’, *Journal of European Public Policy* **16** (2009): 1103–1123.
- 10 See M.C.J. van Eerd, C. Dieperink and M.A. Wiering, ‘Opening the black box of Implementation feedback: an analysis of reloading strategies in EU water governance’, *Environmental Policy and Governance* **28** (6) (2017): 426–40.
- 11 See European Commission, *Better Regulation* (Brussels: European Commission, 2016), [http://ec.europa.eu/info/law/law-making-process/better-regulation-why-and-how\\_en](http://ec.europa.eu/info/law/law-making-process/better-regulation-why-and-how_en) (accessed 16 Dec. 2016).

or their implementation. Considering the literature on policy change, it is unlikely that the feedback of experiences will lead to more radical types of policy change, which are rare anyway. Yet, we assume that implementation experiences are an important factor to consider for understanding incremental policy change.<sup>12</sup>

Both the EU and ICPR are institutional arrangements that interact and exchange knowledge and expertise, including implementation experiences. *Institutional arrangements* are (temporarily stabilised) institutions concerned with the governance of a specific policy field, and can be understood as sets of working rules and procedures determining who is eligible to make decisions in a bounded area, and what actions are allowed or constrained. An arrangement consists of four interdependent dimensions: actors and coalitions, resources and power, rules of the game and discourses.<sup>13</sup>

In this study, the ICPR is studied as the 'sending' institutional arrangement, where actors are acquiring and mobilising implementation knowledge. The EU is seen as the 'receiving' institutional arrangement, which might be affected by these experiences. By reviewing the relevant literature, we found that characteristics of both the sending and the receiving institutional arrangements, the relation between them, and contextual conditions affect the exchange of implementation experiences and policy implementation feedback in general. Examples of relevant characteristics of the sending RBC are: its trustworthiness and perceived success,<sup>14</sup> the role and type of actors involved<sup>15</sup> and their resources, capacities and skills<sup>16</sup> as well as

- 12 See F.R. Baumgartner and B.D. Jones, *Agendas and Instability in American Politics* (Chicago and London: The University of Chicago Press, 1993); P.A. Sabatier, 'The Advocacy Coalition Framework of policy change and the role of policy-oriented learning therein', *Policy Sciences* 21 (1988): 129–68.
- 13 See B. Arts and P. Leroy (eds), *Institutional Dynamics in Environmental Governance* (Dordrecht: Springer, 2006); in particular D. Liefferink, 'The dynamics of policy arrangements: turning round the tetrahedron', pp. 45–51; and F.G.W. Jaspers, 'Institutional arrangements for integrated river basin management', *Water Policy* 5 (2003): 77–90.
- 14 See C.M. Radaelli, 'Policy transfer in the European Union: institutional isomorphism as a source of legitimacy', *Governance* 13 (1) (2000): 25–43.
- 15 See P. Hall, 'Policy paradigms, social learning and the state: the case of economic policymaking in England', *Comparative Politics* 25 (3) (1993): 275–96.
- 16 See G. Dudley and J. Richardson, 'Competing advocacy coalitions and the process of "frame reflection": a longitudinal analysis of EU steel policy', *Journal of European Public Policy* 6 (1999): 225–48; D. Pesendorfer, 'EU environmental policy under pressure: chemicals policy change between antagonistic goals', *Environmental Politics* 15 (2006): 95–114.

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its information management,<sup>17</sup> organisational structure, problem-solving capacity and bindingness.<sup>18</sup> Explanatory characteristics of the receiving arrangement, here the EU, include its openness and responsiveness to experiences.<sup>19</sup> With regard to the relation between these arrangements, the degree of ‘fit’ between discourses prevalent in both arrangements<sup>20</sup> and the dependency between them, for instance in terms of rules or resources, are important for policy feedback to occur.<sup>21</sup> In addition, contextual conditions provide opportunities and barriers for policy implementation feedback. For instance, the existing network of actors and venues for exchanging implementation knowledge is important,<sup>22</sup> as well as the timing of the exchange of experiences, since a policy momentum and political or social attention are essential.<sup>23</sup>

### Aim and structure of this contribution

The main objective of this contribution is to better understand the interaction and multi-level learning between the river basin and the EU level, by exploring conditions affecting the policy feedback of implementation knowledge between a river basin commission (the ICPR) and the EU. This contribution is based upon earlier studies conducted by the authors, in

- 17 See P. Huntjens, C. Pahl-Wostl, B. Rihoux, M. Schlüter, Z. Flachner, S. Neto, R. Koskova, C. Dickens and I.N. Kiti, ‘Adaptive water management and policy learning in a changing climate: a formal comparative analysis of eight water management regimes in Europe, Africa and Asia’, *Environmental Policy and Governance* **21** (2011): 145–63.
- 18 See A. Underdal, ‘Conclusions: patterns of regime effectiveness’, in L.M. Edward, A. Underdal, S. Andersen, J. Wettestad, J.B. Skjaerseth, E.M. Carlin (eds), *Environmental Regime Effectiveness: Confronting Theory with Evidence* (Cambridge, MA: MIT Press, 2002), pp. 433–65.
- 19 See M. Howlett, M. Ramesh and A. Perl, *Studying Public Policy: Policy Cycles and Policy Subsystems* (Toronto: Oxford University Press, 2009); B.D. Jones and F.R. Baumgartner, ‘From there to here: punctuated equilibrium to the general punctuation thesis to a theory of government information processing’, *The Policy Studies Journal* **40** (1) (2012): 1–19.
- 20 See D. Huitema and S. Meijerink, *The Politics of River Basin Organisations: Coalitions, Institutional Design Choices and Consequences* (Cheltenham: Edward Elgar Publishing, 2014); E. Mostert, C. Pahl-Wostl, Y. Rees, B. Searle, D. Tabara and J. Tippett, ‘Social learning in European River-Basin Management: barriers and fostering mechanisms from 10 river basins’, *Ecology and Society* **12** (1) (2007): 19.
- 21 See M.S. Yebra, *Learning, Policymaking and Market* (Cambridge: Cambridge University Press, 2009).
- 22 See S. Meijerink and D. Huitema, *Water Transitions, Policy Entrepreneurs and Change Strategies: Lessons Learned* (Cheltenham: Edward Elgar Publishing, 2010); S.B. Pralle, ‘Venue shopping, political strategy and policy change: the internationalization of Canadian forest advocacy’, *Journal of Public Policy* **23** (2003): 233–60.
- 23 See J. Kingdon, *Agendas, Alternatives and Public Policies* (Harlow: Pearson Education Ltd., 2014).

particular the ‘Knowledge for Climate’ research project.<sup>24</sup>

We structured this contribution as follows: the next section presents a historical overview of the development and role of the ICPR and describes the key characteristics of this institutional arrangement. After that, the management of water resources at the European level over time is elaborated upon, characteristics of EU water governance are described, as well as the interaction between this policy domain and the ICPR. Learning and interaction between the ICPR and EU are then assessed, based on two cases of policy feedback between the two arrangements. Whereas the first case deals with water pollution issues, i.e. water quality, the second case focuses on flood risk management, i.e. water quantity. The final section consists of our concluding remarks.

## **The International Commission for the Protection of the Rhine river**

### *A historic overview*

The Rhine is one of the largest rivers in Europe, and flows through some of the most populated and industrialised regions of West Europe. This river is used for several functions, such as drinking water supply, navigation and irrigation.

The first international initiatives of collaboration in this basin date back to 1449. Collaboration to deal with water quality issues in 1950 can be seen as the start of the International Commission for the Protection of the Rhine (ICPR). The ICPR got an official mandate by the 1963 Treaty of Bern, which was renewed in 1999. Germany, France, Luxembourg, the Netherlands, Switzerland and the European Community are formal

24 See for example M.C.J. van Eerd, M. Wiering and C. Dieperink, ‘Exploring the prospects for cross-border climate adaptation between North Rhine-Westphalia and the Netherlands’, *Utrecht Law Review* 10 (2014):. 91; M.C.J. van Eerd, M. Wiering and C. Dieperink, *Possibilities for Transboundary Climate Adaptation Governance: Some Lessons from the Rhine and Danube Commissions* (Nijmegen: Radboud University, Knowledge for Climate research project deliverable 5.2.10, 2014); S. Veenman and D. Liefferink, ‘Balanced policy networks: the cases of airport noise’, *Journal of Environmental Policy and Planning* 15 (3) (2013): 387–402; S. Veenman and D. Liefferink, ‘Transnational communication and domestic environmental policy learning’, *ESSA-CHESS – Journal for Communication Studies* 7 (1) (2014): 147–67; H. Joergens, A. Lenschow and D. Liefferink (eds), *Understanding Environmental Policy Convergence. The Power of Words, Rules and Money* (Cambridge: Cambridge University Press, 2014).

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members of the ICPR.<sup>25</sup> Next to delegates of member states, NGOs and other stakeholders participate in this RBC as well. The ministers from the ICPR member states are responsible for water policy, i.e. they determine the RBC's mandate, working programme and political goals. The ICPR is organised in quite a hierarchical structure: it consists of a plenary assembly, a strategy group and several working and expert groups that concern topics like flood and low water, water quality and emissions, and ecology. In addition, a secretariat supports the Commission.

Between 1950 and 1970, the main activities of the ICPR were monitoring of water quality and knowledge gathering and dissemination.<sup>26</sup> During the early years of collaboration, the Rhine Commission's role can be characterised as learning facilitator and connector, as it institutionalised the exchange of information between the Rhine members. Over time, the frequency and intensity of this information exchange increased due to the establishment of a strong network consisting primarily of government representatives and experts. Close interaction between the members of this network led to a considerable degree of socialisation and the development of common views about problems and solutions.<sup>27</sup> The role of the ICPR thus broadened from being solely a facilitator for collaboration to multiple roles: as an expert organisation, educator, mediator and coordinator.<sup>28</sup>

The substantive role of the ICPR has broadened over time as well, which was enabled by article 2 of the Bern Treaty stating that the ICPR is competent for all tasks that Rhine members jointly agree upon.<sup>29</sup> In the early years of collaboration, the ICPR focused on visible pollution problems and tasks were quite narrowly defined. Awareness concerning other water issues increased over time. Combined with the occurrence of a number of shock events – e.g. the Sandoz pollution accident in 1987 and the floods of 1993 and 1995 – this led to expansion of the ICPR's scope to a broader

25 See ICPR, *Organisation ICPR*, <https://www.iksr.org/en/international-cooperation/about-us/organisation/index.html> (accessed 15 Sept. 2017).

26 See Bernauer and Moser, 'Reducing pollution of the river Rhine'; K. Wieriks and A. Schulte-Wülwer-Leidig, 'Integrated water management for the Rhine river basin, from pollution prevention to ecosystem improvement', *Natural Resources Forum* 21 (2) (1997): 147–156.

27 See Bernauer and Moser, 'Reducing pollution of the river Rhine'.

28 See van Eerd, Wiering and Dieperink, *Possibilities for Transboundary Climate Adaptation Governance*.

29 See M.C.J. van Eerd, C. Dieperink and P. Leroy, 'Building upon implementation experiences? Learning lessons from policy feedback between the Rhine catchment and EU water governance', *Water Resources Management* (under review).



range of issues, such as habitat restoration and water quantity management, aiming at the redevelopment of the Rhine's ecosystem. Examples of important programmes are the Rhine Action Programme against pollution (1987), the Rhine Action Programme on Floods (1998) and the Rhine 2020 programme on the sustainable development of the Rhine (2001).<sup>30</sup> Whereas early programmes had a quite sectoral focus, the latest ones are more integrated, comprehensive plans. Since 2007, topics such as climate change, drought issues and micro pollutants have become important elements of the ICPR agenda as well.<sup>31</sup>

ICPR programmes, however, are not formally binding, as the ICPR does not have sanctioning or legal enforcement powers and decisions are based on consensus between states.<sup>32</sup> Yet, peer and social pressure for compliance with ICPR agreements increased over time. In the early years of collaboration, the process can be characterised as 'gentlemen's consultations' with particularly senior officials participating. During the 1990s, the ICPR became more open and transparent by enabling the participation of international NGOs and business organisations, by organising conferences and workshops and by creating informative brochures and a website.<sup>33</sup>

Over time, the ICPR has been identified as a frontrunner for cross-border water governance and served as a best practice example to inspire the development of new international river basin commissions, such as those for the Oder, Elbe and Danube basins.<sup>34</sup> Currently, as an increasing number of (international) actors are dealing with river basin issues, e.g. the European Union and the Danube Commission, the leading role of the ICPR is becoming less prominent.

### *ICPR as sending arrangement: Key characteristics*

One can conclude that the ICPR has a relatively long tradition of international collaboration on water issues. As a result, a strong network has

30 See Bernauer and Moser, 'Reducing pollution of the river Rhine'; ICPR, *Rhine 2020 – Program on the Sustainable Development of the Rhine*, <http://www.iksr.org/en/international-cooperation/rhine-2020/index.html> (accessed 27 Mar. 2017).

31 See van Eerd, Wiering and Dieperink, *Possibilities for Transboundary Climate Adaptation Governance*

32 See Bernauer and Moser, 'Reducing pollution of the river Rhine'; van Eerd, Dieperink and Leroy, 'Building upon implementation experiences?'

33 See *ibid.*; Wieriks and Schulte-Wülwer-Leidig, 'Integrated water management for the Rhine river basin'.

34 See van Eerd, Dieperink and Leroy, 'Building upon implementation experiences?'

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been created.<sup>35</sup> This network is relatively open to member state representatives, NGOs, IGOs, experts and societal actors. Due to the strong and inclusive network, participating agents are familiar with each other and readily exchange implementation experiences. The European Commission also directly participates in the ICPR network. Over time, a stable ICPR secretariat has been established, which possesses an important knowledge base concerning river basin management. Other institutional arrangements have great confidence in this expertise.<sup>36</sup>

The ICPR functions as a platform for (sub-)national experts to exchange implementation experiences. The ICPR is technically very advanced and considered as a frontrunner concerning (technical) implementation. In comparison to the EU, the innovative and adaptive capacity of the ICPR is positively affected by the greater distance of its working and expert groups to the political level. Although member state representatives are involved at the ICPR's strategic level, it is fair to say that the political accountability of the ICPR is lower as compared to the EU. Another characteristic affecting the ICPR's freedom to act is its weak bindingness. Although the ICPR is based on the Rhine Treaty (1999) and its policies comprise deadlines and norms, their legal bindingness and enforceability is low. At the end of the day, their impact is based on mutual commitment. According to the actors involved, the lower bindingness in comparison to the EU has enabled the establishment of more ambitious objectives and innovative programmes.<sup>37</sup>

Furthermore, the ICPR's member states have a comparable socio-economic and cultural background and have developed a largely comparable understanding about good water governance. Hence, the ICPR favours consensus relatively easily, which enables policymaking at the ICPR level.<sup>38</sup>

## **EU Water Management**

### *A historic overview*

The broadening scope of the ICPR's focus, i.e. towards high water issues, is not unique and should be placed in a European perspective. Concern-

35 See C. Dieperink, 'Successful international cooperation in the Rhine catchment area'. *Water International* 25 (3) (2000): 347–55.

36 See van Eerd, Dieperink and Leroy, 'Building upon implementation experiences?'

37 See *ibid.*

38 See *ibid.*

ing flood risk management, for instance, EU INTERREG projects were conducted parallel to the ICPR's development. These parallel tracks of international river basin management enabled a reciprocal exchange of expertise. For understanding interaction and learning between the EU and ICPR level in the upcoming section, we first summarise key developments in EU water management in this section.

In the EU context, water governance is part of the environmental policy field and thus comes under the responsibility of the Directorate-General for the Environment (DG ENV). Environmental policy has gradually developed in the EU since the early 1970s. It acquired a formal Treaty basis in 1987. Since then, it has evolved into a sophisticated, multi-level governance system, constituting one of the EU's major fields of activity.<sup>39</sup> Water was among the first subsectors of EU environmental policy to be developed. It still is one of its most comprehensive sectors.<sup>40</sup>

Three waves of EU water governance can be identified. The first directives focused predominantly on water quality standards, public health and the protection of surface waters allocated for drinking. The second wave, from 1991, focused not only on setting acceptable water quality standards, but also on controlling emission levels as a means of achieving desired standards. Hence, focus was broadened to pollution control and environmental management.<sup>41</sup> The key policy output in this phase was the Nitrates Directive (Directive 91/676/EEC) which is aimed at protecting ground water and surface water against nitrates from 'diffuse' (i.e. mainly agricultural) sources.

The third wave combines the preceding approaches and seeks to integrate them. It started with the adoption of the Water Framework Directive (WFD) in 2000 (Directive 2000/60/EC). This Directive provides an ambitious and innovative framework for water policy based on a river basin approach. It aims to achieve a good chemical and ecological water status for all water bodies. Hence, a paradigm shift from pollution control to integrated river basin management can be identified.<sup>42</sup> The WFD was

39 See C. Knill and D. Liefferink, *Environmental Politics in the European Union. Policy-making, Implementation and Patterns of Multi-level Governance* (Manchester: Manchester University Press, 2007).

40 See G. Kallis and P. Nijkamp, 'Evolution of EU water policy: a critical assessment and hopeful perspective', *Journal of Environmental Law and Policy* 3 (2000): 301–55; J. Richardson, 'EU water policy: uncertain agendas, shifting networks and complex coalitions', *Environmental Politics* 3 (4) (1994): 139–167.

41 See Kallis and Nijkamp, 'Evolution of EU water policy'.

42 See B. Boeuf and O. Fritsch, 'Studying the implementation of the Water Framework Directive in Europe: a meta-analysis of 89 journal articles', *Ecology and Society* 21 (2) (2016): 19; B. Page

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followed in 2007 by the Floods Directive (FD) (Directive 2007/60/EC), which requires Member States to assess risks of flooding and to prepare comprehensive flood risk management plans.<sup>43</sup> Both the WFD and the FD will be introduced and discussed in more detail below.

Hundreds of stakeholders can be identified in the water policy field, ranging from water suppliers and polluting industries to environmental groups and consumer organisations. Therefore, the EU water policy process has been described as ‘a rather messy amalgam of interrelationships between non-governmental actors and formal institutions’. A potentially large constituency of European level interest groups is interested in the policy area of water, yet only some, such as EUREAU (European Federation of National Associations of Water Services) and ECPA (European Crop Protection) are continuously participating in the EU policy process.<sup>44</sup> The policy domain of EU water management is often referred to as an open policy system, due to, for instance, the extensive public access to information and the multiple venues and channels in which (new) actors can engage.<sup>45</sup> Another example of open collaboration and exchange of expertise in the field of EU water management is the Common Implementation Strategy (CIS), which is an institution for harmonising and enabling the implementation of EU water legislation. The CIS provides a well-organised network for the exchange of information and expertise.<sup>46</sup>

As issues addressed in water policy are quite technical and complex, and include a high degree of uncertainty and ambiguity, the scientific community has a big influence on the EU water agenda. Experts play a key role in identifying issues and providing technologies and solutions.<sup>47</sup> Hence, the water policy domain is dominated by experts and governmental actors.<sup>48</sup> National ministries are ultimately responsible for the implementation of EU water legislation. Governmental actors at the national level transpose

and M. Kaika, ‘The EU water framework directive: Part 2 policy innovation and the shifting choreography of governance’, *European Environment* **13** (6) (2003): 328–43.

43 See M.C.J. van Eerd, C. Dieperink and M.A. Wiering, ‘A dive into floods: exploring the Dutch Implementation of the Floods Directive’, *Water Policy* **17** (2) (2015): 187–207.

44 See Richardson, ‘EU water policy’.

45 See T. Moss, ‘The governance of land use in river basins: prospects for overcoming problems of institutional interplay with the EU Water Framework Directive’, *Land Use Policy* **21** (2004): 85–94; Richardson, ‘EU water policy’.

46 Van Eerd, Dieperink and Leroy, ‘Building upon implementation experiences?’

47 See Richardson, ‘EU water policy’.

48 See Kallis and Nijkamp, ‘Evolution of EU water policy’.

these directives to national legislation and set up a framework for practical implementation. In practice, however, regional and local water authorities are concerned with the daily implementation

### *The EU as receiving arrangement: Key characteristics*

Over time, multiple issues have arisen concerning democratic legitimacy in the EU, its so-called implementation deficit and its transparency. Since the early 1990s, the EU has taken steps to increase its transparency and openness.<sup>49</sup> This trend has also affected the policy sector of EU water management, which used to be relatively open anyway (see above). The policy subsystem's increasing openness enables policy implementation feedback. However, it also means that there are many actors competing for influence.<sup>50</sup>

Responsiveness of EU actors to the needs, preferences and experiences of their stakeholders is important for the political legitimacy of EU policies.<sup>51</sup> The relevance of implementation experiences in this regard is increasingly acknowledged by EU institutions. The Commission, for instance, seeks to improve the quality and legitimacy of EU legislation by learning from practical experiences in the ongoing 'Better Regulation' programme. As the EU is not directly involved in the practical implementation of its policies, it is dependent upon other actors to acquire implementation experiences.<sup>52</sup> Hence, EU agents, such as the Commission, are willing to learn from other actors' experiences.<sup>53</sup>

### *The relationship between the ICPR and the EU*

Over the years, a strong relationship was established between the ICPR and EU. Three types of links that favour the exchange of implementation experiences exist between these arrangements.

First, since 1976, the European Community, represented by the EU Commission, has been a formal member of the ICPR. The EU's direct participation in the ICPR put pressure on the establishment of agreements

49 See Knill and Liefferink, *Environmental Politics in the European Union*.

50 See van Eerd, Dieperink and Wiering, 'Opening the black box of implementation feedback'.

51 See M. Bovens, 'New forms of accountability and EU-governance', *Comparative European Politics* 5 (2007): 104–20.

52 See European Commission, *Better Regulation*.

53 See European Commission, Personal communication staff member European Commission DG Environment, Feb. and Sept. 2016; van Eerd, Dieperink and Wiering, 'Opening the black box of implementation feedback'.

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in the Rhine RBC, as a supra-national organisation was now looking over the shoulder of the ICPR member states. Furthermore, lessons drawn from the ambitious collaboration agreed upon for the Rhine basin could be used by EU institutions as input for EU legislation, which is – in contrast to ICPR policies – legally enforceable. At certain periods in time and for topics that fit the European interest, the EC has been a very active ICPR member. The EU was particularly pro-active in the period after the Sandoz accident (1986) and preceding the development of the Nitrates Directive (1991).<sup>54</sup>

Second, and inversely, the ICPR also participates in EU working groups and the EU strategic coordination group of the CIS network. Initially, this participation consisted merely of observing EU actions. Yet, over the last decades, the ICPR has actively started to mobilise its expertise at EU workshops, meetings and conferences. Capacity constraints, however, hamper the representation of ICPR staff in all EU CIS meetings.

A third, yet more informal, link for policy implementation feedback are the ICPR and EU's common delegates. In practice, national representatives and experts participating at the EU and ICPR level are often the same people. This overlap and ongoing exchange strengthens the network and enables effective learning.<sup>55</sup>

*Understanding multi-level learning: Two cases of policy feedback*

In this section, two cases of policy implementation feedback between the catchment and EU level are elaborated upon in order to gain a better understanding of multi-level learning. The first case concerns ecological issues, while the second has to do with flood issues. Selection of these specific cases can be justified since both have been – and still are – key issues on the EU water governance agenda. The WFD and the FD that focus on these issues constitute the cornerstones of EU water management. For both cases, learning and the feedback of implementation experiences from the RBC to the EU level is assessed by applying a process-tracing analysis. Data collection consisted of semi-structured interviews, policy document and scientific literature analysis, and observation research at both the EU and ICPR level.<sup>56</sup>

54 See van Eerd, Dieperink and Leroy, 'Building upon implementation experiences?'

55 See *ibid.*

56 See *ibid.*

**Case One: Addressing Ecological Challenges**

Since its inception, the ICPR has been a frontrunner in water governance. The initial work of the ICPR concentrated on water pollution problems in the Rhine basin.<sup>57</sup> This central concern resulted in the Chemical and Chlorides Convention in 1976. More ambitious goals came in reach after 1 November 1986, when a disaster hit the Rhine as a chemical site at Sandoz, near Basel, caught fire. Chemicals flowing into the Rhine and inadequate handling by the fire brigade caused a toxic wave downstream, killing almost all organisms. This accident triggered a lot of publicity and public concern, which put pressure on the ICPR to formulate transboundary actions to prevent comparable accidents in the future. This resulted in the Rhine Action Programme (RAP) of 1987.<sup>58</sup> The RAP had a broader chemical, biological and ecological scope than earlier ICPR policies.<sup>59</sup> It envisioned redevelopment of the Rhine's ecosystem by stimulating ecology and habitat restoration and the return of previously indigenous species by the year 2000, of which the salmon became a symbol. Concrete pollution reduction goals were included. The riparian states, for instance, agreed on a reduction of at least half of the river's load of heavy metals, organic pollutants and fertilisers. Other actions included the building of fish ladders and improving spawning conditions. Compared to other international agreements at this time, the Rhine policies, and in particular the RAP, were very ambitious, comprehensive and specific.<sup>60</sup> Development of this ambitious programme was enabled by social and political pressure, the ICPR's history of collaboration, the involvement of primarily experts and the ICPR's relatively low bindingness. Although the programme was not legally binding, it yielded an active and significant tackling of pollution issues in the Rhine basin.<sup>61</sup>

After failed attempts to introduce a somewhat more ecological ap-

57 See Dieperink, 'From open sewer to salmon run'.

58 See *ibid.*; ICPR, *Rhine Action Programme ICPR against Pollution*, Strasbourg, 8th Conference of the Ministers, 1 Oct. 1987, <http://www.iksr.org/en/international-cooperation/rhine-2020/index.html> (accessed 22 May 2017).

59 See Bernauer and Moser, 'Reducing pollution of the river Rhine'; Dieperink, 'From open sewer to salmon run'.

60 See *ibid.*

61 See Dieperink, 'Successful international cooperation in the Rhine catchment area'; ICPR, *Rhine Action Programme ICPR against Pollution*; and see ICPR 1998, *Action Plan on Floods*, Rotterdam, 12<sup>th</sup> Conference of Ministers, 22 Jan. 1998.

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proach in EU water policy in the early 1990s, pressure for a fundamental rethink of EU water policies came to a head in 1995, as actors continued their call for deregulation and decentralisation of the complex water policy patchwork. This resulted in the design of an integrated directive.<sup>62</sup> The ICPR's experiences concerning the practical implementation of comprehensive water governance provided significant input during the five-year drafting process of what eventually would become the WFD. More specifically, the ICPR's RAP served as a key model for the WFD, since it was widely acknowledged as an innovative and concrete programme that had proved its success. The European Commission, moreover, was eager to draw upon this programme, as the RAP was, at that time, the only international plan that had been implemented in practice and which covered all aspects of water quality management.<sup>63</sup> Examples of WFD elements based on lessons learned from the ICPR relate to integrated water management, the river basin principle and transboundary cooperation, the involvement of stakeholders and the public, dealing with groundwater issues and using programmes of measures.<sup>64</sup> However, not all RAP elements were taken over in the WFD. For example, the ICPR's work was more advanced with regard to integrated water management since it already combined water quantity and quality measures to create win-win situations, and the WFD focuses less on the return of species.<sup>65</sup>

In this case, the existing links between the EU and ICPR supported the exchange of implementation experiences. Common delegates placed the RAP's measures and actions in the spotlight at EU venues. Representatives of Rhine riparian states, for example, defended the river basin management approach, and this concept eventually became a cornerstone of the WFD. Moreover, the EU representative in the ICPR at this time was a very active participant at the Rhine catchment level while the ICPR's president was a former EU staff member. This established an additional, more direct link enabling the mobilisation of implementation experiences. Finally, ICPR

62 See European Commission, *Introduction to the New Water Framework Directive* (Brussels: European Commission, 2017), [http://ec.europa.eu/environment/water/water-framework/info/intro\\_en.htm](http://ec.europa.eu/environment/water/water-framework/info/intro_en.htm) (accessed 24 Apr. 2017); Kaika, 'The Water Framework Directive'.

63 European Commission, *Personal communication staff member European Commission DG Environment*, Feb. and Sept. 2016.

64 Ibid.

65 See ICPR, *Rhine Action Programme ICPR against pollution*, Strasbourg, 8th Conference of the Ministers, 1 Oct. 1987, <http://www.iksr.org/en/international-cooperation/rhine-2020/index.html> (accessed 22 May 2017).



staff members participated in EU workshops throughout the drafting process of the WFD.<sup>66</sup> Important venues for exchanging expertise included EU working and expert groups in the CIS process as well as the ICPR's ecology working group. Learning took place as experiences were repeatedly discussed at these venues. The continuous exchange of implementation experiences in all stages of the policy process enabled decision makers at the EU level to use their knowledge base during the WFD's agenda setting and policy formulation stages. Throughout the process, moreover, the EU Commission remained keen on additional experiences from the ICPR.

### Case Two: Addressing Flood Issues

Following the floods of 1993 and 1995 in the Rhine basin, the focus of the ICPR was broadened from water quality to water quantity management. Pressure from the downstream riparians in the Netherlands and Germany triggered the ICPR to also include high water issues in its policies.<sup>67</sup> Policies were relatively easily established due to the ICPR's long history of collaboration, the established trust, network, and the existing ICPR structure. As a result, the Rhine Action Plan on Floods (RAPF) was established in 1998, aiming to improve flood protection by 2020 and to extend and enhance floodplains of the Rhine. Five principles were considered leading: the storage of water, giving space to the river, alignment with other sectors, creating awareness for flood risks, and integrated river basin action in the spirit of solidarity.<sup>68</sup> The plan was a bundle of activities and measures, which acts as a target framework that is continuously adapted. An important outcome was the Rhine Atlas (2001, renewed in 2015), mapping flood risks along the Rhine system, which was and still is important for information management and increased public awareness.<sup>69</sup> The latest evaluation of the RAPF shows that the Rhine riparians successfully implemented integrated flood risk management (IFRM) between 1995 and 2010.<sup>70</sup>

66 European Commission, Personal communication staff member European Commission DG Environment.

67 See van Eerd, Dieperink and Leroy, 'Building upon implementation experiences?'

68 See M. Disse and H. Engel, 'Flood events in the Rhine basin: genesis, influences and mitigation', *Natural Hazards* 23 (2001): 271–90; ICPR, *Action Plan on Floods*. Rotterdam.

69 See *ibid.*

70 See ICPR, *Evaluation of Measures to Reduce the High Water Levels in the Rhine: Implementation of the Action Plan on Floods 1995–2010 including foresight for 2020 and 2020+*, report 199 (Koblenz:

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Parallel to the ICPR's shifting focus towards flood issues, several developments can be identified at the EU level. INTERREG projects focusing on high water management across borders were implemented from the 1990s onwards.<sup>71</sup> In 2004, the urgency of flood issues was formally recognised in an EU Communication, calling member states to express their thoughts about an EU FD. This directive was established after a relatively short drafting period in 2007 (Directive 2007/60/EC).<sup>72</sup> Initiating members were France and the Netherlands. Austria, having the Presidency of the EU Council of Ministers at that time, was also strongly involved in the development of the FD. The expertise of representatives from those countries provided important input and enabled the drafting process, as they were involved in both the EU and ICPR network, had a long tradition with domestic IFRM and had experiences with the RAPF's implementation process in the Rhine basin.<sup>73</sup> Due to capacity constraints and the distance between Brussels and daily water governance, actors involved at the EU level were keen on input from these implementing agents. Because of its direct involvement in the ICPR, the EU was well informed about IFRM measures taken in the Rhine basin. Furthermore, the staff of the ICPR was consulted to present best practices of the RAPF in order to convince reluctant EU member states about the need for a FD. Evaluations of the RAPF's implementation (2000 and 2005), and in particular its clear and ambitious measures and targets (e.g. for flood forecasting and water retention) provided important input for the establishment of the FD. However, the ICPR was not the only source of implementation experiences. Flood risk management practices from the Danube Commission, INTERREG projects and other (domestic) institutional arrangements were also important. Implementation experiences concerning the rigorous and detailed WFD also strongly influenced the drafting process of the FD. These experiences, in combination with the limited EU mandate to

ICPR, 2014); ICPR, *Action Plan on floods 1995–2010: Action Goals, Implementation and Results. Short Term Balance*, report 200 (Koblenz: ICPR, 2014).

- 71 See M.M. van der Giessen, *Coping with Complexity. Cross-border Cooperation between the Netherlands and Germany*, dissertation (Nijmegen: Radboud University, 2014).
- 72 See European Commission, *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: flood risk management, flood prevention, protection and mitigation* (Brussels: European Commission, 2004), COM 2004/0472.
- 73 See van Eerd, Dieperink and Wiering, 'A dive into floods: exploring the Dutch Implementation of the Floods Directive', *Water Policy* 17 (2) (2015): 187–207.

work on spatial governance, resulted in a more flexible and largely procedural directive.<sup>74</sup> Several elements from the RAPF were used in the FD. Both policies are based on the solidarity principle, identify similar phases of IFRM (assessment of risks, mapping, and taking action) and offer a framework setting (ICPR 1998). Yet, overlap is less clear when compared to the ecological case described earlier.

Implementation experiences were exchanged particularly at the working group level, i.e. in the ICPR and EU flood working groups. The EU flood working group falls under the institutional structure of the WFD's implementation guidance institute, the CIS network. As flood issues are strongly expert-based and technical, often the same persons represent the Rhine member states at both the EU and the Rhine catchment level, which enabled learning between these institutions. Both during agenda-setting and policy formulation, as well as during the implementation of the FD, experiences of members played an important role.



The two case studies confirm that implementation experiences of the ICPR affected complex water resource management at the EU level. Key ICPR policies served as models for the development of EU water legislation. This can be explained by the *innovative, ambitious* character of these ICPR policies and their reliance on *clear and concrete* programmes, norms and measures that had *proven to be successful*. The relatively high innovative capacity of ICPR policymaking and implementation can be explained by the RBCs relatively *low political accountability*, the *involvement of primarily expert oriented agencies* and its *lower degree of institutionalisation and bindingness* in comparison to the EU setting. Furthermore, the ICPR's *long tradition of collaboration*, its *well-organised and stable secretariat* and *mutually familiar members* facilitated reaching consensus. These institutional characteristics determined the ICPR's freedom to act and explain its front-running position in substantive and regulative precision and coverage of water governance.

In addition, evidence from this study shows that the *institutional context* in which both arrangements are embedded played an important role as well. The *existing network and links* between these arrangements, and in particular

74 See van Eerd, Dieperink and Leroy, 'Building upon implementation experiences?'

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the large share of actors who have a *combination of memberships* at both the RBC and EU level, enables the exchange of implementation experiences. *Existing venues*, and in particular the working and expert groups at both the EU and ICPR level, can be seen as important platforms for actor interaction and the exchange, bundling and selection of implementation experiences.

Concerning the condition of timing, we found that policies in both cases were established following *external (shock) events* and related public and political *pressure*, e.g. accidental pollutions or flood events. However, timing appeared less relevant for explaining policy implementation feedback between the studied arrangements, which was observed to entail a more long-term, continuous and reciprocal process of exchange.

Furthermore, the two cases suggest that the chance for feedback of implementation experiences is higher when the receiving arrangement is open and responsive to such expertise. In both cases, the EU appeared as *accessible, open and eager to learn* from the expertise of RBCs. However, the *responsiveness* of EU institutions to the ICPR's implementation experiences differs between the cases. With regard to water quality, the ICPR's RAP was the only international and integrated plan that had been implemented in practice at the time. Hence, the European Commission was eager to learn from the unique front-running expertise of the ICPR. With regard to flood risk management and the RAPF, however, more expertise was available, decreasing the responsiveness and lowering the EU's exclusive reliance on the ICPR's knowledge. Furthermore, as the formal authority of the EU and the ICPR differ with regard to flood risk management, and the EU lacks formal competence to work on spatial issues, the ICPR's experiences and policies could not serve as a blueprint so easily (*discursive and institutional misfit*). Hence, variation in the relation between both arrangements, the competition for expertise and the characteristics of the receiving institution explain differences between both cases in the extent to which experiences of the RBC have affected EU water governance.

We can conclude that, in our two cases, learning based on implementation experiences predominantly draws upon informal communication and actor interaction. Mutually familiar members, combined membership, the exchange at working group level and existing networks appear as important explanatory factors. This is in line with findings from other research,<sup>75</sup>

75 E.g. see K. Holzinger, C. Knill and B. Arts, *Environmental Policy Convergence in Europe: the Impact of International Institutions and Trade* (Cambridge: Cambridge University Press, 2008); Joergens, Lenschow and Liefferink (eds), *Understanding Environmental Policy Convergence*; S.A. Veenman,

which also provide evidence of the prevalence of communicative, often informal, channels of exchange over the impact of formal regulation or competitive pressures through the market mechanisms in the transfer of policies – or aspects of policies – from one institutional arrangement to another.

Future EU water governance is not likely to progress without implementation experiences from daily water governance at both the local, regional, national and river basin level. Our analysis has shown that river basin organisations can have a key role in providing these experiences, by acting as best practice examples on river basin management for EU water resources management. Following current developments in the EU water policy domain, we expect that river basin organisations will contribute to new EU policies in the field of climate adaptation, micro pollutants and combating medicines and hormones in the EU's water systems.