

ISSN: 0250-8060 (Print) 1941-1707 (Online) Journal homepage: <http://www.tandfonline.com/loi/rwin20>

Assessing the legitimacy of flood risk governance arrangements in Europe: insights from intra-country evaluations

Maria Pettersson, Marleen van Rijswijk, Cathy Suykens, Meghan Alexander, Kristina Ek & Sally Priest

To cite this article: Maria Pettersson, Marleen van Rijswijk, Cathy Suykens, Meghan Alexander, Kristina Ek & Sally Priest (2017) Assessing the legitimacy of flood risk governance arrangements in Europe: insights from intra-country evaluations, *Water International*, 42:8, 929-944, DOI: [10.1080/02508060.2017.1393716](https://doi.org/10.1080/02508060.2017.1393716)

To link to this article: <https://doi.org/10.1080/02508060.2017.1393716>



© 2017



Published online: 13 Nov 2017.



Submit your article to this journal [↗](#)



Article views: 124





View related articles [↗](#)



View Crossmark data [↗](#)

Full Terms & Conditions of access and use can be found at
<http://www.tandfonline.com/action/journalInformation?journalCode=rwin20>

Assessing the legitimacy of flood risk governance arrangements in Europe: insights from intra-country evaluations

Maria Pettersson ^a, Marleen van Rijswick^b, Cathy Suykens^{c*}, Meghan Alexander ^d, Kristina Ek^a and Sally Priest^e

^aDepartment of Business Administration, Technology and Social Sciences, Luleå University of Technology, Sweden; ^bDepartment of Law, Utrecht Centre for Water, Oceans and Sustainability Law, Utrecht University, the Netherlands; ^cInstitute for Energy and Environmental Law, Katholieke Universiteit Leuven, Belgium; ^dSchool of Earth and Ocean Sciences, Cardiff University, UK; ^eFlood Hazard Research Centre, Middlesex University, London, UK

ABSTRACT

Legitimacy has received comparatively less attention than societal resilience in the context of flooding, thus methods for assessing and monitoring the legitimacy of flood risk governance arrangements are noticeably lacking. This study attempts to address this gap by assessing the legitimacy of flood risk governance arrangements in six European countries through cross-disciplinary and comparative research methods. On the basis of this assessment, recommendations to enhance the legitimacy of flood risk governance in Europe are presented.

ARTICLE HISTORY


Received 8 June 2016
Accepted 15 October 2017

KEYWORDS

Legitimacy; flood risk governance; comparative study; governance; Europe

Introduction

With rising concerns over increased flooding, the pursuit of societal resilience has risen up the socio-political agenda (Driessen, Hegger, Bakker, Van Rijswick, & Kundzewicz, 2016). On the other hand, the notion of legitimate flood risk governance often remains implicit, though legitimacy is widely seen as a founding principle of good governance. Legitimacy becomes increasingly complex in the context of contemporary flood risk governance, where the number of actors involved in the decision-making process has increased and the scope of action has broadened across different types of public, private and civil society actors (Hegger et al., 2014). This has corresponded with a shift in management approaches, from a defence-oriented ‘working against nature’ paradigm towards holistic flood risk management, which embraces the use of measures to alleviate both the hazard and consequences of flooding should it occur (Driessen, Dieperink, Van Laerhoven, Runhaar, & Vermeulen, 2012). This shift has prompted the inclusion of other policy fields, such as spatial planning and emergency management, and hence dispersion of responsibilities across a wider range of actors (Gilissen et al., 2016; Mees, Driessen, & Runhaar, 2014; Van Buuren, Driessen, Teisman, & Van

CONTACT Maria Pettersson  Maria.Pettersson@ltu.se

*Cathy Suykens is now at Utrecht University.

© 2017

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

Rijswick, 2014). Simultaneously, the state–citizen relationship also appears to be subject to scrutiny, with calls to encourage more citizen involvement in flood risk management (Mees, Suykens, et al., 2016). While the benefits of diversification are almost self-evident and seen as necessary for societal resilience (Aerts, Botzen, Van Der Veen, Krywkow, & Werners, 2008; Driessen et al., 2016; Mees et al., 2014), this has raised a number of challenges for defining and securing legitimate forms of decision making (Alexander, Doorn, & Priest, 2017).

Flood risk governance is recognized as a distinct form of risk governance, with flood risk governance arrangements embodying the actor networks, rules, resources, discourses and multilevel coordination mechanisms through which flood risk management is pursued (Alexander, Priest, & Mees 2016). Flood risk governance includes a mix of measures, ranging from prevention, defence and mitigation to warning, evacuation and recovery, involving policy fields such as land-use planning, water management, urban planning and building requirements, as well as civil protection. The process, outcome and impact of governance arrangements all raise implications for the pursuit of legitimacy (Lindgren & And Persson, 2010; Schmidt, 2013).

The aim of this article is to assess the legitimacy of flood risk governance in Europe. Concentrating on factors that support or potentially constrain legitimacy, the study draws on national and comparative research conducted in six European countries: Belgium (Flemish Region), England, France, the Netherlands, Poland and Sweden. The selection of countries is motivated by their similarities, e.g. all are EU member states that are obliged to implement the EU Floods Directive, as well as their differences, i.e. physical conditions, flood experience, the flood risk management strategies that are in place, and their economic, social, administrative and legal contexts (Hegger et al., 2014). Thus, this enabled us to examine how the legitimacy of flood risk governance has been shaped under various contextual conditions. This approach facilitates much-needed insight into the extent to which current flood risk governance arrangements are supported in legitimacy aspirations, or conversely constrain under different contextual conditions.¹

The multi-faceted construction of legitimacy

The concept of legitimacy and its meaning have been subject to a number of studies concerning democracy, justice, policy making, and governance more generally (Brown, 2016; Héritier, 1999; Kohler-Koch, 2000; Maignette, 2003; Scharpf, 1999; Suchman, 1995); in relation to water governance (OECD 2015); and more specifically in relation to flood risk governance (Alexander et al., 2017; Johnson, C., Penning-Rowsell, E., Parker, D., 2007; Mees et al., 2014; Mees, Suykens, & Crabbé, 2017; Van Buuren et al., 2014). The term ‘legitimacy’ has been defined in different ways by different scholars (Bäckstrand, Khan, Kronsell, & Lövbrand, 2010; Suchman, 1995) and can, in short, be explained as the extent to which an institution is perceived as having the right to rule and doing so in a way that it is accepted by society. Legitimacy can thus be viewed as a resource that regulators, companies and actors need to acquire in order to continue to rule, operate or act (Tilling, 2004).

Legitimacy reduces conflicts in society, for example in terms of how risks and burdens are divided among societal partners. It follows that certain activities can

increase legitimacy, while others can decrease it. Authority and accountability are important concepts when considering legitimacy and trigger questions about whether flood risk governance arrangements have the necessary power and societal acceptance to take action. Indeed, accountability is widely held as an intrinsic component of legitimacy discourse (Dyzenhaus, 2001), but equally the accountability for decisions that are taken or similarly failure to take action (Lloyd, 2005). Legitimacy becomes increasingly complex in the context of contemporary flood risk management as the number of actors increases, power becomes more diverse and diffuse, and the scope of decision making broadens. Both flooding in itself and measures taken to e.g. prevent, defend against or mitigate floods can have a significant impact on peoples' lives, property and well-being (Mason, Andrews, & Upton, 2010; Tapsell, 2000; Tapsell, Penning-Rowsell, Tunstall, & Wilson, 2002).

One way of improving the legitimacy of decisions and decision making is to more actively involve the public, which supposedly 'enhances both the efficiency and the legitimacy of European governance' (Magnetite, 2003). The acceptable level of risk or the standard of safety requested by society must therefore be transparent and enable participation in decision making to avoid *unwillingness* to accept flood risk management measures. The 'active involvement' of the public is promoted by the EU Water Framework Directive and the Floods Directive. Although it is not a strict requirement for compliance with the public participation requirements stemming from the directives, shared decision making has been identified as a good practice in water management in the context of the Common Implementation Strategy (European Commission, 2014). Participation however raises questions about who is a legitimate stakeholder, what entitlement they hold in the decision-making process, whose interests are represented, and who is included or excluded from the process (Few, Brown, & Tompkins, 2007; Sørensen, 2010).

Methodology

This study is the result of cross-disciplinary research carried out within the EU FP7-funded project 'STAR-FLOOD', which examined flood risk governance from both legal and public administration perspectives across selected EU member states (www.starflood.eu/). As part of this research, the notion of *legitimate* flood risk governance was examined through empirical research conducted in Belgium (Flemish Region), England, France, the Netherlands, Poland and Sweden. Clarifying the conceptual confusion of this term, Alexander, Priest, and Mees (2016) developed a framework for evaluating legitimacy, informed by a comprehensive review of international governance literature, grey literature and legislative analysis. The multi-faceted construct of legitimacy is thus operationalized through four criteria: *access to information and transparency*; *participation*; *procedural justice and accountability*; and *social equity* (Table 1). This evaluative framework was used to steer national-level assessments of flood risk governance, deriving data from positive legal analysis, including in-depth study of primary and secondary legislation, as well as informal ('soft') law. These insights were further accompanied and validated through semi-structured interviews with key actors in flood risk

Table 1. Criteria and benchmarks for evaluating the legitimacy of flood risk governance. Adapted from Alexander, Priest, and Mees (2016, p. 41).

Evaluation criteria	Benchmarks for legitimate flood risk governance
Access to information and transparency	<ul style="list-style-type: none"> • Stakeholders have equal access to relevant information and policy documents about the problem and how it will be managed in a timely manner • The decision-making process is clear so all can see how decisions were made
Participation	<ul style="list-style-type: none"> • Stakeholder participation is sought through various stages in the decision-making process • The views of stakeholders are considered and/or taken into account and integrated in decision making • A range of stakeholders is involved in participation
Procedural justice and accountability	<ul style="list-style-type: none"> • There are opportunities for stakeholders to challenge decisions before the courts • Access to courts is available at a reasonable cost, and decisions are made within a reasonable time span • Stakeholders have equal access to the appeal process • There are opportunities for stakeholders to appeal decisions • Decisions are subject to review
Social equity	<ul style="list-style-type: none"> • Policy makers strive for social equity in flood risk management decision-making processes • Flood risk management protects vulnerable and financially deprived groups

governance, representing a multiplicity of perspectives, from policy makers to practitioners. A total of 313 interviews were performed during the STAR-FLOOD project.

To report these results and facilitate comparisons, we adopted a qualitative form of scoring according to high, medium or low (or combinations thereof), according to the benchmarks outlined in Table 1. The results are summarized in Tables 2–5 and discussed in turn in the forthcoming sections. While the scores reflect intra-country assessments, as opposed to inter-country comparisons, this method serves as a useful springboard for discerning cross-country similarities and differences, as well as underlying factors to which these are attributed. Although the information in the tables is based on extensive research undertaken in each country, the reader should bear in mind that, for pragmatic reasons, the following analysis draws on illustrative examples only. These selected examples serve to

Table 2. Analyzing the degree to which certain features of flood risk governance support access to information and transparency in selected European countries.

Benchmarks for legitimate flood risk governance	The					
	Belgium	England	Netherlands	France	Sweden	Poland
Legislation and policy documents are made available to the wider public in a timely manner	High	High	High	High	High	Medium
Public inquiries and independent reviews are implemented	Medium	High	Medium	Medium	High	Low
There is clarity about how decisions are made	Medium	Medium	High/medium	Low	Medium	Medium

Table 3. Analyzing the degree to which certain features of flood risk governance enable participation in selected European countries.

Benchmarks for legitimate flood risk governance	Belgium	England	The Netherlands	France	Sweden	Poland
Stakeholder participation is sought through various stages of the decision-making process to enable actual influence	Low/medium	Medium/high	High/medium	Medium	Medium	Low
There is a legal duty to take into account the outcome of the participation procedure	Medium/low	Medium/high	High	Low	Low	Low
Participation is not limited to certain categories of actors, for example public actors	Medium	High	High	Medium	Medium	Medium

Table 4. Analyzing the degree to which certain features of flood risk governance enable procedural justice and accountability in selected European countries.

Benchmarks for legitimate flood risk governance	Belgium	England	The Netherlands	France	Sweden	Poland
Stakeholders have equal access to the appeal process and have the opportunity to challenge decisions made	High	Medium	High	High	Medium	Low/medium
Access to the relevant courts is available at a reasonable cost and court decisions are available within a reasonable time span	Medium	Medium/low	High	Medium	Medium	Low/medium
Decisions are subject to independent reviews and public scrutiny	Medium	High	High	Medium	High	Medium

Table 5. Analyzing the degree to which certain features of flood risk governance enable social equity in selected European countries.

Benchmarks for legitimate flood risk governance	Belgium	England	The Netherlands	France	Sweden	Poland
Policy makers strive for social equity in decision-making processes	Low	Medium/high	High	Medium/high	Low	Low
Flood risk governance protects vulnerable and financially deprived groups	Medium/high	Medium/high	High	High	n.a.	Low

highlight examples of good practice as well as examples that appear to undermine legitimacy.

Evaluating the legitimacy of EU flood risk governance

Access to information and transparency in flood risk governance

In the STAR-FLOOD project, the criterion of access to information has been formulated in terms of a condition that stakeholders have equal access to relevant information on flood-related issues and how this information will be managed. To fulfil the criterion, equal opportunities to be properly informed must be provided by law, and the decision-making process must be transparent; it must be clear to the public how their interests have been taken into account. The degree to which access to information and transparency in the examined countries are supported by certain features of flood risk governance is illustrated in [Table 2](#).

In general, the availability of flood risk information has improved since the implementation of the Floods Directive, and access to information and transparency do not appear to be problematic. In the majority of the examined countries, the evaluation indicates that information in the form of legislation or policy documents is made available to the public in a timely manner. In Sweden, the Netherlands and Belgium (Flemish Region), for instance, all official documents are in principle public. The extent to which public inquiries and independent reviews are undertaken is however less uniform; only Sweden and England score High in this regard, and in Poland the degree to which such measures are undertaken is considered Low. As to the clarity of how decisions have been made, only for the Netherlands is this feature considered High/medium, with France on the other end of the scale, scoring Low.

A good example of an instrument that supports proactive disclosure² of information is the 'duty to inform', which was introduced in the Flemish Region in Belgium through a legislative reform in 2013. The instrument requires the dissemination of information regarding the vulnerability to flooding in every real estate transaction. Beyond specific legislation and policy instruments, the use of the Internet has also facilitated widespread access to flood risk information in understandable forms (e.g. searchable databases, flood risk maps). Indeed, many of the previous barriers, such as the need to request information and the costs of processing and fulfilling those requests, have been removed.

However, country analyses also reveal areas that could be improved. For instance, some uncertainty about how decisions are made, e.g. in terms of the trade-offs, is reported in most of the countries, and in particular in France, where a lack of transparency in decision making and policy implementation is reported as a constraining factor (see further Larrue et al., 2016). A lack of knowledge about how to access certain documents or even awareness of what flood risk information actually exists and what the information means was also reported in all countries. While most countries have national legislation which requires public notice of certain decisions, for example in relation to spatial planning, stronger requirements for such proactive disclosure would probably increase the public's awareness and knowledge and hence the legitimacy of the process.

Public participation in flood risk governance

The national-level evaluations reveal that in several countries, including Sweden and the Netherlands, participation is low in practice and limited to the end of the decision-making process (Mees, Suykens, et al., 2016; Ek, Goytia, Pettersson, & Spiegel, 2016). While there are many possible explanations for this, including individuals' lack of awareness of issues relating to liability and risk, the design of the process is often limited to a formal inquiry and dissemination of information. There are also large differences between the national and local levels. In the Netherlands, for instance, participation at the local level is rather high and sometimes leads to solutions and measures other than those initially proposed (Terpstra & Gutteling, 2008), whereas there are other examples, including Geraardsbergen in the Flemish Region, revealing that citizens feel excluded from the decision-making processes (Ek, Pettersson, et al. 2016).

However, in keeping with the – rather generic – requirements of the Floods Directive, public participation is organized in the context of flood risk governance in the studied countries; the public is consulted on flood risk management plans, and all countries have made these publicly available.³ As mentioned above, ‘active’ involvement is not a strict requirement of the Floods Directive, although it is strongly encouraged. The degree to which certain features of flood risk governance support participation in the examined countries is summarized in Table 3. While public participation requirements certainly are part of the countries’ formal institutional frameworks, the forms of the participatory procedures vary. The evaluation for example indicates that the possibilities for actual influence in the decision-making process is relatively low in all studied countries except in England and the Netherlands. The pattern is similar regarding the formal requirements to take into account the outcome of the participation procedure.

In England, the Netherlands and the Flemish Region, participatory results and any consequent actions are openly reported (Environment Agency, 2015). But only in the Netherlands is there a legal duty to take the outcome of the participation procedure into account. The Flemish River Basin Management Plans, which include the Flood Risk Management Plans, for the period 2016–2021 indicate how the outcome of public participation processes have been taken into account (Coördinatiecommissie Integraal Waterbeleid, 2015). Sweden, Poland and France are all Low, and the Flemish Region Low/medium. In France, for example, there is no reporting on the results of the consultation.

A further problem is that participation is often organized too late in the process, i.e. when actual influence on the final decision is no longer feasible. This is for example the case in France (Larrue et al., 2016). Efforts to engage local communities are however increasingly encouraged in the Netherlands, e.g. through the Delta Programme (Kaufmann, Priest, & Leroy 2016), and well established in English flood risk governance (Alexander, Priest, Micou, et al. 2016; Mees, Suykens, et al., 2016). In Poland, decision making in flood risk governance is reported as ‘professionalised, with little involvement of the public’, although public participation has increased over the last decades (Matczak, Lewandowski, Choryński, Szwed, & Kundzewicz, 2016, p. 33). Participatory activities do moreover appear to be somewhat limited in terms of who is invited to participate; all countries except for England and the Netherlands (rated High) are Medium in this regard.

Procedural justice and accountability in flood risk governance

Regarding access to relevant courts at affordable costs and with decisions delivered within a reasonable timeframe, France and Sweden are Medium, implying that this is perhaps not a big issue. The situation in England and Poland, however, appears to have room for improvement, as they are Medium/low and Low/medium, respectively, in this regard. The Flemish Region and the Netherlands are High on this issue, indicating a well-functioning system for procedural justice.

On the subject of appeal possibilities and the opportunity to challenge decisions, the evaluation ranges from High in France and the Netherlands to Low/medium in Poland. In Belgium (Flemish Region), there is discussion on social inequities regarding access to justice, while in Poland there is a discrepancy between the limited resources of the civil society and the dominant position of the administration and private companies. The

implementation of independent reviews and public scrutiny is also an important aspect of the accountability of the governance system. Based on the evaluation, accountability mechanisms appear to be available in all examined countries. It can be mentioned here that in England and the Netherlands independent reviews and public scrutiny of flood risk governance are increasingly common, while in France it is possible to assert the liability of politicians and public officials in (criminal) courts (Larrue et al., 2016).

Social equity in flood risk governance

Another fundamental, albeit sometimes implicit, theme attached to debates on legitimacy refers to social equity and fairness. In the context of flood research, these themes are typically discussed in the context of distributive justice and assume that the outcome of the governance process should be considered fair, as opposed to necessarily equal (Johnson, C., Penning-Rowsell, E., Parker, D, 2007; Penning-Rowsell & Pardoe, 2015; Thaler & Hartmann, 2016). It is important to note that what is perceived as fair depends on the normative system that is prevalent (Driessen & Van Rijswick, 2011; Keessen, Hamer, Van Rijswick, & Wiering, 2013; Tennekes, Driessen, Van Rijswick, & Van Bree, 2014; Van Doorn-Hoekveld, 2014; Van Doorn-Hoekveld et al., 2016). While from a solidarity perspective it is considered fair that people in low-risk areas also contribute to flood protection measures, if social equity is interpreted as 'beneficiary pays', the situation will be perceived as fair if contributions are based on risk (Keessen et al., 2016). But market-based mechanisms and solidarity are not mutually exclusive; an insurance-based compensation scheme can be strongly based on the solidarity principle, provided that residents in low-risk areas also contribute to the scheme and that a risk differentiation exists to discourage building in high-risk areas. This is the case in Belgium (Flemish Region) (Suykens, Priest, Van Doorn-Hoekveld, Thuillier, & Van Rijswick, 2016). In the Netherlands a mixed system has developed with regard to the defence strategy, in which everyone in the 'dike ring area' is protected in the same way and up to the same level. Regional taxes are paid based on property value, which leads to higher costs for those who have more property (higher stake, higher payments) (Van Rijswick & Havekes, 2012; Wiering, Green, Van Rijswick, Priest, & Keessen, 2015). In addition to this regional system, large investments in new defences in the Netherlands are partly paid from general taxes; thus solidarity implies that costs are spread across all taxpayers. Implicit in those countries where taxes pay for some or all flood management is that those who pay more tax (arguably the more affluent) will ultimately contribute more.

In addition, the perception of fairness will differ depending on which aspect of flood risk governance is subject to study. For example, emergency management is based on the solidarity principle, as it is usually funded through general means, whereas for flood recovery the systems in the examined countries range from a strongly prevailing solidarity principle, for example in the Netherlands, to market-based insurance systems in England and Sweden (Suykens et al., 2016). In case a country focuses on prevention instead of recovery, pre-flood compensation mechanisms may also contribute to social equity and distributional justice (Van Doorn-Hoekveld, 2014; Van Doorn-Hoekveld et al., 2016). The degree to which certain features of flood risk governance support social equity in the examined countries is summarized in Table 5.

The evaluation indicates that policy makers in the Netherlands strive for social equity to a High extent and in England and France to a Medium/high extent, although the interpretation of what is fair is likely to be fundamentally different (Van Doorn-Hoekveld, 2017). The situation in Sweden, Belgium (Flemish Region) and Poland differs considerably in this regard; here, the evaluation indicates that the degree to which social equity is a goal for flood risk governance is Low. However, in Belgium (Flemish Region), social equity in flood risk governance should be viewed in the wider context of the extensive Belgian welfare mechanism for citizens with limited financial resources. The inclusion of other matters related to social equity, such as the degree to which vulnerable and financially deprived groups are protected above other groups, also varies between the researched countries. In England, where the evaluation indicates Medium/high on this matter, social deprivation is factored into the funding calculator. Households in different deprivation bands will qualify for funding on a sliding scale (Department for Environment, Food and Rural Affairs, 2011). This means that in theory schemes initiated in areas of high deprivation are more likely to receive government funding. In the Netherlands, financially deprived groups do not pay (or pay less) taxes for flood protection to the regional water authorities (Kaufmann, Van Doorn-Hoekveld, Gilissen, & Van Rijswijk, 2016), which thus motivates a High degree to which vulnerable and financially deprived groups are protected in Dutch flood risk governance. This is also the case in France, whereas in Sweden, the issue is not applicable (as the distributional impacts of floods are considered to be limited, due to relatively few flood events) (Ek, Goytia, Pettersson, & Spiegel, 2016). In Poland, matters of social equity are, in contrast, comparatively underdeveloped (Maczak et al., 2016), and the evaluation result is Low.

To what extent are flood risk governance arrangements achieving aspirations of legitimacy?

This assessment reveals interesting insights into the different ways in which legitimacy is both constructed and undermined by elements of flood risk governance in different contextual settings.

In relation to *transparency and access to information*, this research revealed that access to information is ensured through statutory requirements embedded in national legislation. Moreover, the availability of flood risk information has improved as a result of the implementation of the Floods Directive, particularly through duties to publish and make flood risk management plans available for public consultation. But there is room for improvement, especially with regard to public awareness and the grounds for which decisions are reported. It must be made clear to the public how their views and interests are taken into account, and crucially how trade-offs between different interests are made. Increased requirements of proactive disclosure may increase public awareness and knowledge, which in turn could encourage citizen involvement in flood risk governance and help facilitate local-based action. The implementation of specific legal instruments, like the Flemish ‘duty to inform’, could constitute a significant added value in raising awareness with citizens at both national and EU levels. In turn, this may facilitate greater motivation among at-risk households to take a degree of ownership in terms of managing their own risk and encourage households to adopt actions (e.g.

installing property-level measures) that enhance resilience to flooding. However, we observe the need for more transparent public debate on the subject of flood risk management responsibilities and the distribution of these across civil society and public and private actor groups, particularly where shifts in this distribution are occurring.

Regarding *participation*, the results are more complex. Although there are examples of policies and best practices around participation (for example in England), and the legal frameworks governing flood risk governance certainly support participation, significant challenges remain. This is at least partly because while it is fairly straightforward to formulate legal rules in a way that ensures access to information and transparency, participation and in particular ‘effective participation’ is primarily a qualitative process which is difficult both to implement effectively and to enforce and evaluate. This study has identified a number of specific problems in relation to public participation in flood risk governance in particular. First, in practice, participation is often low. This also relates to a lack of awareness, both of risk and in relation to activities, plans and policies, which can be partly remediated by instruments such as duties to inform. Second, the design of the participation process is often limited to a formal inquiry and transference of information, often towards the end of the decision-making process, at a time when few substantive amendments can be made. Third, efforts to actively involve (local) communities still appear to be uncommon in the studied countries (except in England; Alexander, Priest, Micou, et al., 2016; Mees, Suykens, et al., 2016). Moreover, it remains unclear how much the public are truly able to influence the decision-making process or whether participation exercises only serve to legitimize a decision that has already been made (Alexander et al., 2017; Few et al., 2007). Fourth, the participation may not always be representative of all interests; and finally, legal provisions are in general nonprescriptive. It is also important to emphasize that more participation does not necessarily improve the legitimacy of the decision-making process per se. Since participation involves a cost to the individual, resourceful groups are more likely to commit to the process, and it is not uncommon that various interest groups dominate the agenda (Spyke, 1999). More participation may thus reinforce the interests of the already powerful, for example stakeholder representative organizations (Dieperink, Raadgever, Driessen, Smit, & Van Rijswick, 2012). This problem is found in all the examined countries, at least to some degree.

Overall, for government to make a shift towards ‘real’ participation, one that is based on co-decision making (Arnstein, 1969) and coproduction (Mees, Crabbé, et al., 2016), it is necessary to determine both what constitutes effective participation and how this can be implemented. Such requirements must not necessarily be established legally, but it is important to create a normative system that sets out the objectives of effective citizen participation and how it should be carried out to provide the most solid legitimate basis. The Floods Directive therefore needs to be clarified in regard to this. Moreover, a clear emphasis should be put on conveying precisely to what extent the comments stemming from the public consultation rounds of the flood risk management plans have been taken into account, and this should be translated into the evaluation of the plans. Furthermore, people must be (better) informed of their rights and responsibilities and the scope thereof. The ways in which they can actually and effectively contribute and carry out their responsibilities in practice must be conveyed more clearly. Considerable attention should be paid to matters of how to attract different

groups and how to utilize their knowledge, for example, so that participation processes are not geared only towards the more educated part of the population (Squintani, 2017). The feasibility of substantive legal rules to this effect should be investigated.

This analysis revealed that relatively few hurdles exist with regard to *procedural justice and accountability*. Although procedural justice in general is supported in the researched countries, as access to justice is typically provided by the national legal systems, several member states have been criticized for undue limitations of this access (Darpö, 2013). However, the increasing focus on plans or programmes instead of, or as complementary to, substantive legal requirements, stemming from both the Water Framework Directive and the Floods Directive, can be considered to lead towards more ‘policy’ than ‘law’. Since access to the courts (‘justice’) is part of upholding the rule of law, and thus the separation and balancing of power between the legislator, the administration and the courts, it is crucial that citizens be granted effective legal protection at the national level, with effective remedies as well (Ortlep & Widdershoven, 2015). For example, should an MS fail to implement a certain directive within the required time span, citizens should be able to rely on the directive directly before their national courts. This possibility is however subject to certain requirements, namely that the provisions are unconditional and sufficiently precise (the ‘doctrine of direct effect’, see e.g. European Court of Justice, 1974, 1982, 1989).

The fact that the Floods Directive does not set forth substantive requirements implies that individuals cannot rely on the directive directly, but are referred to the discretion of the national courts (European Court of Justice, 1977, 1996, 2004). Moreover, as flood risk management measures are set out in flood risk management plans instead of in an applicable legal framework, the possibilities for citizens to have recourse to courts specialized in environmental law are slim, even though their civil rights might be harmed. As a last resort there is of course the possibility of taking the case to civil court, but it is questionable whether this can result in effective remedies. This is the case in the Netherlands, for example. Overall, this proceduralization is a consequence of greater focus on procedures at both the EU and national level, which can be considered part of the evolution from ‘government’ towards ‘governance’ (Howarth, 2009; Scott, 2009; Van Rijswick & Havekes, 2012). The increased proceduralization has also had an impact on access to justice; although e.g. planning decisions, plans and programmes can sometimes be challenged to a higher authority, the room for discretion is often substantial, and flood risk management plans in Sweden, for instance, are not even grounded in law.

Finally, to maintain a high degree of legitimacy, flood risk governance must include mechanisms to ensure *social equity* as well as to address distributional justice. In this context, the research points towards some important factors. What is perceived as fair depends on the prevailing normative system, and thus the question arises whether flood risk management can ever be fully legitimate, although it can be more legitimate. The prevailing normative system is in turn different for different flood risk management strategies (Van Doorn-Hoekveld, 2017): prevention, defence, mitigation, preparation and recovery. On this front, this research observed how the solidarity principle and ‘beneficiary pays’ are present to various degrees and with different expressions, for example implying that a market-based system can still be based on the solidarity principle. In the end it is the combination of elements that we have described above that makes flood risk governance legitimate in all aspects. An important finding of this research is that social equity is gained by a combination of approaches that strengthen,

instead of undermining, each other by shifting burdens from one phase of flood risk governance to another, or between different societal groups (Suykens et al., 2016).

The origin of this study was in the observation that issues of legitimacy have received less attention than societal resilience in flood risk governance. This analysis has demonstrated ways that the various facets of legitimacy can in fact support and promote resilience goals. Therefore, we wish to assert the possibility of uniting resilience and legitimacy endeavours in the pursuit of effective flood risk governance.

Notes

1. With respect to Belgium, this analysis focusses on the Flemish Region, as the main competences with respect to water and flood risk management are regionalized in Belgium; the three regions (Flemish Region, Walloon Region and Brussels-Capital Region) each have their separate flood risk policies and legal frameworks.
2. *Reactive* disclosure entails that individual members of the public receive information only on request (Darbishire, 2010).
3. The Floods Directive (2007/60/EC) includes participation in Articles 9 and 10, which regulate the coordination with the Water Framework Directive (2000/60/EC); it follows that 'the active involvement of all interested parties ... shall be coordinated, as appropriate, with the active involvement of interested parties under Article 14 of Directive 2000/60/EC', according to which different stakeholders, including the public, should participate in the process of drafting management plans. Article 10 in turn requires that member states make available to the public preliminary flood risk assessments, flood risk and flood hazard maps, as well as resulting Flood Risk Management Plans. Further stipulations are made that member states '*encourage active involvement of interested parties in the production, review and updating of the flood risk management plans*'.

Acknowledgements

This publication was supported by the European Union's Seventh Framework Programme for Research through a grant to the integrated project STAR-FLOOD (Strengthening and Redesigning European Flood Risk Practices: Towards Appropriate and Resilient Flood Risk Governance Arrangements) under Grant Agreement no. 308364.

Disclosure statement


No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Seventh Framework Programme for Research [308364].

ORCID

Maria Pettersson  <http://orcid.org/0000-0003-0767-4908>

Meghan Alexander  <http://orcid.org/0000-0003-3147-085X>

References

- Aerts, J. C. J. H., Botzen, W., van der Veen, A., Krywkow, J., & Werners, S. (2008). Dealing with uncertainty in flood management through diversification. *Ecology and Society*, 13(1), 41.
- Alexander, M., Doorn, N., & Priest, S. (2017). Bridging the legitimacy gap – Translating theory into practical signposts for legitimate flood risk governance. *Regional Environmental Change*. doi:10.1007/s10113-017-1195-4
- Alexander, M., Priest, S., & Mees, H. (2016). A framework for evaluating flood risk governance. *Environmental Science & Policy*, 64, 38–47.
- Alexander, M., Priest, S., Micou, A. P., Tapsell, S., Green, C., Parker, D., & Homewood, S. (2016). Analysing and evaluating flood risk governance in England – Enhancing societal resilience through comprehensive and aligned flood risk governance, STAR-FLOOD Consortium report: Utrecht, The Netherlands. ISBN 978-94-91933-07-3.
- Arnstein, S. R. (1969). A ladder of citizen participation. *AIP Journal*, 35(4), 217.
- Bäckstrand, K., Khan, J., Kronsell, A., & Lövbrand, E. (eds.). (2010). *Environmental politics and deliberative democracy. examining the promises of new modes of governance*. Cheltenham: Edward Elgar.
- Brown, L. M. (2016). The evolving and interacting bases of EU environmental policy legitimacy. *Global Discourse*, 6(3)1–24.
- Coördinatiecommissie Integraal Waterbeleid. (2015). Flemish river basin management plan for the Scheldt 2016–2021 <http://www.integraalwaterbeleid.be/nl/stroomgebiedbeheerplannen/stroomgebiedbeheerplannen-2016-2021/documenten/Vlaams_deel_stroomgebied_Schelde.pdf>.
- Darbishire, H. (2010) Proactive transparency: The future of the right to information? A review of standards, challenges, and opportunities Governance working paper series. Washington, DC: World Bank.
- Darpö, J. (2013) Effective Justice? Synthesis report of the study on the Implementation of Articles 9.3 and 9.4 of the Aarhus Convention in the Member States of the European Union. 2013 Oct 11 Final.
- Department for Environment, Food and Rural Affairs. (2011). 'Flood and coastal resilience partnership funding: An introductory guide' Retrieved 29 March 2016, from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/182524/flood-coastal-resilience-intro-guide.pdf.
- Dieperink, C., Raadgever, G. T., Driessen, P. P. J., Smit, A. A. H., & van Rijswijk, H. F. M. W. (2012). Ecological ambitions and complications in the regional implementation of the water framework directive in the Netherlands. *Water Policy*, 14(1), 160–173.
- Driessen, P., Dieperink, C., Van Laerhoven, F., Runhaar, H. A. C., & Vermeulen, W. J. V. (2012). Towards a conceptual framework for the study of shifts in modes of environmental governance – Experiences from The Netherlands. *Environmental Policy and Governance*, 22, 143–160.
- Driessen, P. J., Hegger, D. L. T., Bakker, M. H. N., van Rijswijk, H. M. W., & Kundzewicz, Z. W. (2016). Toward more resilient flood risk governance. *Ecology and Society*, 21(4), 53.
- Driessen, P. P. J., & Van Rijswijk, H. F. M. W. (2011). Normative aspects of climate adaptation policies. *Climate Law*, 2(4), 559–581.
- Dyzenhaus, D. (2001). *Legality and Legitimacy*. Oxford: Oxford University Press.
- Ek, K., Pettersson, M., Alexander, M., Beyers, J-C., Pardoe, J., Priest, S., ... van Rijswijk, H. F. M. W. (2016) Design principles for resilient, efficient and legitimate flood risk governance – Lessons from cross-country comparisons STAR-FLOOD Consortium report: Utrecht, The Netherlands.
- Ek, K., Goytia, S., Pettersson, M., & Spiegel, E. (2016) *Analysing and evaluating flood risk governance in Sweden - Adaptation to climate change?* Report. Utrecht, The Netherlands: STAR-FLOOD Consortium.
- Environment Agency. (2015). Acting on your responses to the draft update to the river basin management plan and flood risk management plan consultations 2015 Environment Agency report: Bristol.

- European Commission. (2014). WFD CIS Guidance Document on Public Participation in relation to the Water Framework Directive (European Union 2014).
- European Court of Justice. (1974). Yvonne van Duyn v Home Office Case C- 41/74. Available at: <http://curia.europa.eu/juris/showPdf.jsf?jsessionid=9ea7d0f130d5ace23cbd51f14bea8ee6a15ccb76c95a.e34KaxiLc3eQc40LaxqMbN4OchuOe0?text=&docid=88751&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=560149>.
- European Court of Justice. (1977). Verbond van Nederlandse Ondernemingen v Inspecteur der Invoerrechten en Accijnzen Case C-51/76. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A61976CJ0051>.
- European Court of Justice. (1982). Ursula Becker v Finanzamt Münster-Innenstadt Case C-8/81. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A61981CJ0008>.
- European Court of Justice. (1989). Fratelli Costanzo SpA v Comune di Milano Case C-103/88. Available at: <http://curia.europa.eu/juris/showPdf.jsf?text=&docid=96045&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=561052>.
- European Court of Justice. (1996). Aannemersbedrijf P.K. Kraaijeveld BV and others v Gedeputeerde Staten van Zuid-Holland Case C-72/95. Available at: <http://eur-lex.europa.eu/legal-content/SV/TXT/?uri=CELEX%3A61995CJ0072>.
- European Court of Justice. (2004). Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij Case C-127/02. Available at: <http://curia.europa.eu/juris/showPdf.jsf?text=&docid=49452&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=562650>.
- Few, R., Brown, K., & Tompkins, E. L. (2007). Public participation and climate change adaptation: Avoiding the illusion of inclusion. *Climate Policy*, 7(1), 46–59.
- Gilissen, H. K., Alexander, M., Beyers, J.-C., Chmielewski, P., Matczak, P., Schellenberger, T., & Suykens, C. (2016). Bridges over troubled waters: An interdisciplinary framework for evaluating the interconnectedness within fragmented domestic flood risk management systems. *Journal of Water Law*, 25, 12–26.
- Hegger, D., Driessen, P., Dieperink, C., Wiering, M., Raadgever, T., & van Rijswijk, M. (2014). Assessing stability and dynamics in flood risk governance. *Water Resources Management*, 28, 4127–4142.
- Héritier, A. (1999). Elements of democratic legitimation in Europe: An alternative perspective. *Journal of European Public Policy*, 6(2), 269–282.
- Howarth, W. (2009). Aspirations and realities under the water framework directive: Proceduralisation, participation and practicalities. *Journal of Environmental Law*, 21(3), 391–417.
- Johnson, C., Penning-Rowsell, E., Parker, D. (2007). Natural and imposed injustices: The challenges in implementing ‘fair’ flood risk management in England. *The Geographical Journal*, 173(4), 374–390.
- Kaufmann, M., Priest, S., & Leroy, P. (2016). The undebated issue of justice: Silent discourses in Dutch flood risk management. *Reg Environ Change*. doi:10.1007/s10113-016-1086-0
- Kaufmann, M., Van Doorn-Hoekveld, W. J., Gilissen, H. K. & Van Rijswijk, H. F. M. W. (2016). Drowning in safety. Analysing and evaluating flood risk governance in the Netherlands. Report. Utrecht, The Netherlands: STAR-FLOOD Consortium.
- Keessen, A. M., Hamer, J., Van Rijswijk, H. F. M. W., & Wiering, M. (2013). The concept of resilience from a normative perspective: Examples from Dutch adaptation strategies. *Ecology and Society*, 18(2), 45.
- Keessen, A. M., Wieringa, M., Boezeman, D., Vink, M., Mees, H. L. P., Van Eerd, M., ... Ernst, W. W. P. (2016). Solidarity in water management. *Ecology and Society*, 21(4). Article no. 35.
- Kohler-Koch, B. (2000). Framing: The bottleneck of constructing legitimate institutions. *Journal of European Public Policy*, 7(4), 513–531.

- Larrue, C., Bruzzone, S., Lévy, L., Gralepois, M., Schellenberger, T., Trémorin, J. B., ... Thuillier, T. (2016). Analysing and evaluating flood risk governance in France: From state policy to local strategies, STAR-FLOOD Consortium report: Utrecht, The Netherlands. ISBN: 978-94-91933-08-0.
- Lindgren, K.-O., & And Persson, T. (2010). Input and output legitimacy: Synergy or trade-off? Empirical evidence from an EU survey. *Journal of European Public Policy*, 17(4), 449–467.
- Lloyd, R. (2005). *The role of NGO Self-regulation in increasing stakeholder accountability*. London: One World Trust.
- Magnette, P. (2003). European governance and civic participation: Beyond elitist citizenship? *Political Studies*, 51(1), 144–160.
- Mason, V., Andrews, H., & Upton, D. (2010). The psychological impact of exposure to floods. *Psychology, Health and Medicine*, 15(1), 61–73.
- Matczak, P., Lewandowski, J., Choryński, A., Szwed, M., & Kundzewicz, Z. W. (2016). Flood risk governance in Poland: Looking for strategic planning in a country in transition, STAR-FLOOD Consortium report: Utrecht, The Netherlands. ISBN: 978-94-91933-09-7.
- Mees, H., Crabbé, A., Alexander, M., Kaufmann, M., Bruzzone, S., Lévy, L., & Lewandowski, J. (2016). Coproducing flood risk management through citizen involvement: Insights from cross-country comparison in Europe. *Ecology and Society*, 21(3), 7.
- Mees, H., Suykens, C., Beyers, J. C., Crabbé, A., Delvaux, B., & Deketelaere, K., (2016). Analysing and evaluating flood risk governance in Belgium (Flemish Region). Dealing with flood risks in an urbanised and institutionally complex country, STAR-FLOOD Consortium report: Utrecht, The Netherlands. ISBN: 978-94-91933-06-6.
- Mees, H., Suykens, C., & Crabbé, A. (2017). Evaluating conditions for integrated water resource management at sub-basin scale. A comparison of the flemish sub-basin boards and wallonian river contracts. *Environmental Policy and Governance*, 27, 59–73.
- Mees, H. L. P., Driessen, P. P. J., & Runhaar, H. A. C. (2014). Legitimate adaptive flood risk governance beyond the dikes: The cases of Hamburg, Helsinki and Rotterdam. *Regional Environmental Change*, 14(2), 671–682.
- Ortlepp, R., & Widdershoven, R. J. G. M. (2015). 'Chapter 6. Judicial Protection. In J. H. In Jans, S. Prechal, & R. J. G. M. Widdershoven (eds.), *Europeanisation of Public Law* (pp. 333–434). Groningen: Europa Law Publishing.
- Penning-Rowsell, E. C, & Pardoe, J. L. (2015). The distributional impacts of climate and policy change: Flood risk management in England and Wales. *Environmental Planning C*, 33, 1301–1321.
- Scharpf, F. W. (1999). *Governing in Europe. Effective and democratic?* Oxford: Oxford University Press.
- Schmidt, V. A. (2013). Democracy and legitimacy in the European Union revisited: Input, output and 'throughput'. *Political Studies*, 61, 2–22.
- Scott, C. (2009). Governing without law or governing without government? New-ish governance and the legitimacy of the EU. *European Law Journal*, 15(2), 160–173.
- Sorensen, E. (2010) 'Governance and democracy' Working Paper Series, Centre for Democratic Network Governance. CDNG: Denmark.
- Spyke, N. P. (1999). Public participation in environmental decision making at the New Millennium: Structuring new spheres of public influence. *Boston College Environmental Affairs Law Review*, 26(2), 263–313.
- Squintani, L. (2017). The Aarhus Paradox: Time to speak about equal opportunities in environmental governance. *Journal for European Environmental and Planning Law*, 14, 3–5.
- Suchman, M. C. (1995). Managing Legitimacy: Strategic and institutional approaches. *Academy of Management Journal*, 20(3), 571–610.
- Suykens, C., Priest, S., Van Doorn-Hoekveld, W., Thuillier, T., & Van Rijswijk, M. (2016). Dealing with flood damages: Will prevention, mitigation and ex-post compensation provide for a resilient triangle? *Ecology and Society*, 21(4), 1.
- Tapsell, S. (2000). The hidden impacts of flooding: Experiences from two English communities. *Integrated Water Resources Management*, 272, 319–324.

- Tapsell, S., Penning-Rowsell, E., Tunstall, S., & Wilson, T. (2002). Vulnerability to flooding: Health and social dimensions. *Philosophical Transactions of the Royal Society of Mathematical, Physical and Engineering Sciences*, 360(1796), 1511–1525.
- Tennekes, J., Driessen, P. P. J., Van Rijswijk, H. F. M. W., & Van Bree, L. (2014). Out of the Comfort Zone: Institutional Context and the Scope for Legitimate Climate Adaptation Policy. *Journal of Environmental Policy and Planning*, 16(2), 241–259.
- Terpstra, T., & Gutteling, J. M. (2008). Households' perceived responsibilities in flood risk management in the Netherlands. *International Journal of Water Resources Development*, 24(4), 555–565.
- Thaler, T., & Hartmann, T. (2016). Justice and flood risk management: Reflecting on different approaches to distribute and allocate flood risk management in Europe. *Natural Hazards*. doi:10.1007/s11069-016-2305-1
- Tilling, M. V. (2004). Some thoughts on legitimacy theory in social and environmental accounting. *Social and Environmental Accountability Journal*, 24(2), 3–7. doi:10.1080/0969160X.2004.9651716
- Van Buuren, A., Driessen, P., Teisman, G., & Van Rijswijk, M. (2014). Toward legitimate governance strategies for climate adaptation in the Netherlands: Combining insights from a legal, planning, and network perspective. *Regional Environmental Change*, 14(3), 1021–1033.
- Van Doorn-Hoekveld, W. J. (2014). Compensation in flood risk management with a focus on shifts in compensation regimes regarding prevention, mitigation and disaster management. *Utrecht Law Review*, 10(2), 216–238.
- Van Doorn-Hoekveld, W. J. (2017). Equal distribution of burdens in flood risk management. The application of the 'égalité principle' in the compensation regimes of the Netherlands, Flanders and France. *Review of European Administrative Law*, 10(1), 81–110.
- Van Doorn-Hoekveld, W. J., Goytia, S., Suykens, C., Homewood, S., Thuillier, T., Manson, C., ... Van Rijswijk, H. F. M. W. (2016). Distributional effects of flood risk management - a cross-country comparison of pre-flood compensation. *Ecology and Society*, 21(4). Article no. 26.
- Van Rijswijk, H. F. M. W., & Havekes, H. J. M. (2012). *European and Dutch water law*. Groningen: Europa Law Publishing.
- Wiering, M., Green, C., van Rijswijk, M., Priest, S., & Keessen, A. (2015). The rationales of resilience in English and Dutch flood risk policies. *Journal of Water and Climate Change*, 06(1), 38–54.