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Broekema, W.G.; Graaf, B. de; Bron, R.

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Rethinking legislation to cope with transboundary crises

Wout Broekema¹  | Beatrice de Graaf² | Roland Bron³

¹Leiden University, Leiden, Netherlands

²Utrecht University, Utrecht, Netherlands

³Ministry of Infrastructure and Water Management, The Hague, Netherlands

Correspondence

Wout Broekema, Turfmarkt 99, 2511 DP Den Haag, The Netherlands.

Email: w.g.broekema@fpga.leidenuniv.nl

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Abstract

Societies are increasingly subject to transboundary crises that pose new challenges to crisis management and require a structural rethinking of longstanding arrangements. This study explores which governance aspects could be embedded in legislation to facilitate the organization of such transboundary crisis management. It builds upon research findings from the comprehensive 2020 governmental evaluation study of the Safety Regions Act in the Netherlands and the relevant literature. First, we provide a framework for a systematic study of the relationship between law and practice. Second, we present a model on how legislation for crisis management could be adapted to better fit with transboundary crises. This consists of a set of 10 key aspects categorized into five pillars: the *interconnectedness* of the various phases of crisis management and risk assessments as a starting point; flexible crisis management organization and *network* collaboration; allocated facilitator and exceptional decision-making *power*; professional *competences* and netcentric information management; and learning capacities and democratic *feedback*. This model provides a point of departure for researchers and policymakers alike for rethinking the role that legislation can play in preparing for the crises of the future.

KEYWORDS

crisis management, legislation, transboundary crisis

1 | INTRODUCTION: LEGISLATION AND TRANSBOUNDARY CRISIS MANAGEMENT

Crises are becoming increasingly transboundary (Ansell et al., 2010; De Graaf, 2020). The worldwide COVID-19 crisis showed once again that crises can assume previously unimaginable dimensions. Modern-day societies face large and complex threats that test their governments. They face cyber-attacks, financial crises, climate change related hazards, health related crises, societal polarization, and populist or activist revolts (think of “yellow vests” or farmers). Local crises frequently assume transboundary aspects. Train collisions, such as the one that took place near Barendrecht, in the Netherlands, in 2009, may lead to a severe disruption of freight

transport internationally (Dutch Safety Board, 2011). Such crises are transboundary along three axes: territorial, functional, and temporal (see below). Against this backdrop, long-used crisis management arrangements are no longer adequate. As Farber (2018) puts it, a truly transboundary crisis such as climate change “is not only an inconvenient truth; it also poses inconvenient governance problems” (p. 132). Transboundary crises require a fundamental reconsideration and reorganization of our crisis management infrastructure (see Blondin & Boin, 2020; Boin, 2019).

In line with this, transboundary crises have an immediate bearing on the role that legislation plays in organizing crisis management. We argue that transboundary crises require a fundamental rethinking of crisis management legislation, and more specifically of what

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governance aspects need to be embedded so that it better fits with the new governance challenges posed. The literature has so far failed to grasp the transforming relationship between managing longer lasting, creeping, transboundary crises and crisis management legislation. Indeed, over recent decades, a growing body of research has emerged on legislation for extreme situations (Farber, 2018, p. 12). This research encompasses a wide range of interdisciplinary studies scattered across academic disciplines using diverse terms (Farber et al., 2015; Gross & Nâi Aolâin, 2006; Laut, 2015a; Lyster & Verchick, 2018). However, studies on the role of legislation in relation to extreme events tend to predominantly focus on disasters with less attention given to crises (for the difference, see Quarantelli, 1985). Most prevalent are studies that take a judicial approach. Such studies describe, often in great detail, a specific law, legal components, or an institutional system in a country related to a specific, or specific type, of disaster or crisis (Baum, 2007; Cohen et al., 2015; Farber, 2018; Furukawa, 2000; Gaire et al., 2015; Laut, 2015b; Malloy, 2009; Zhang et al., 2013). They also mostly focus on legal issues such as: liability, victim compensation, criminal justice, or temporary emergency decrees, and less on the framework of legislation that organizes crisis management as such (e.g., Farber, 2012; Faure, 2016; Raikes & McBean, 2016). Despite the wealth of recent crisis literature, the role of structural legislation that is aimed at organizing general—that is, noncrisis and policy-domain-specific—crisis management processes remains under-researched. We argue that a more integrated, 'normalized' view on crisis management as embedded in everyday law is necessary. The impact of legislation on the practice of crisis management and the nexus between legislation and the more creeping, transboundary type of crisis (as opposed to the 'traditional' bounded flash crisis and related temporary emergency decrees) are also largely overlooked. For open western societies, as protests against COVID-19 restrictions have demonstrated, this is of paramount importance, if only for maintaining the integrity of the legal system.

This study explores which governance aspects could be embedded in legislation to facilitate the organization of transboundary crisis management. We argue that current crisis management legislation has limitations in its ability to accommodate transboundary crisis governance, let alone help governments prepare for the 'crises of the future'. We therefore investigate how the general, noncrisis-type or policy-domain-specific, legislation for crisis management can be improved to facilitate organizing transboundary crisis management. We aim to create a new perspective by developing a model that can help in adapting crisis management legislation to transboundary crises. That is, in improving and streamlining the relationship between law and practice. This leads us to the following research question:

Building upon an evaluation of the Dutch Safety Regions Act, how can we conceptualize the relationship between crisis management legislation and practice, and how from these insights can we derive a generic model for improving this relationship?

Our article builds upon research that we took part in evaluation,¹ as part of an evaluation study of the Safety Regions Act

(WettenBank, 2024) in the Netherlands, by interpreting the findings—based on a large amount of empirical data—and linking these with the literature. We aggregate the findings to a level of abstraction that is relevant for legal systems and crisis management frameworks in other open Western democratic societies. We look at legislation aimed at the governance aspects of crisis management, excluding temporary legislation such as specific emergency decrees and emergency measures. We take a governance perspective rather than a judicial one, meaning we focus on what governance aspects in legislation work for practice and do not address how these could be translated into specific legal provisions through specific laws. In this article, the term 'legislation' does not refer to specific legal provisions, but to the body of legislation that together organizes crisis management in a country. Whereas the literature on transboundary crises tends to focus on collaboration between countries, we show that transboundary crises require much more, including a new, more coherent approach to crisis management within countries. One that not only covers collaboration, but an array of governance arrangements, which are interconnected. In line with this more coherent approach, we have included processes of both preparation, mitigation, response, and recovery, before, during, and after crises.

In the following section, we will discuss transboundary crisis management and the role of legislation from a theoretical perspective. We will then introduce our research design, including a framework for studying relations between law and practice, and how we build upon the evaluation report of the Safety Regions Act. In the analysis section we will present our model for adapting crisis management legislation to cope with transboundary crises. We conclude with a discussion of our findings.

2 | THEORY: GOVERNING TRANSBOUNDARY CRISES AND THE ROLE OF LEGISLATION

2.1 | Introducing transboundary crises

A *crisis* can be defined as a situation in which the vital interests of society are threatened, potentially causing major social disruption. This calls for quick organizational actions under high levels of uncertainty, surprise, and large public and political involvement and pressure, with potentially long-term societal consequences (Rosenthal et al., 2001). We can view a *transboundary crisis* as a crisis that crosses territorial, functional, and/or temporal boundaries (see Ansell et al., 2010).

Crises cross *territorial* boundaries when they not only affect the geographical area of a single political jurisdiction (municipalities, provinces, regions, countries, functional organizations) but multiple areas, either at the same time or consecutively. Further, within each area, the crisis might take on different forms and have different impacts. Affected policy domains do not even have to be adjacent, as the origin—for example, with a cyber-attack on a software system—might not be linked to a particular geographical location.

Crises cross *functional* boundaries by affecting multiple policy and functional domains and spilling over from one domain to another, inflicting cascading effects (Pescaroli & Alexander, 2016). As effects are scattered across policy domains, multiple vital structures in a society can become threatened simultaneously. For example, a zoonosis outbreak could affect public health, animal disease, economic safety, public order, agriculture, food safety, border control, and environmental policy domains.

Crises cross *temporal* boundaries by lacking a clear start and end, and often do not evolve linearly over time: they can evolve incrementally, or rapidly change in form and character. This makes it hard to capture them in a clear time frame. Creeping crises, such as climate change, unfold gradually over time but at certain points quickly become heavily politicized (Boin et al., 2020). Crises can have a long incubation time, such as the threat of antibiotics resistance, or slumber on long afterwards, and suddenly reignite and become re-politicized. This means that the different phases of the crisis management cycle—mitigation, preparation, response, and recovery—are more diffuse and intertwined than in a 'bounded' crisis. There is no precise moment when preparation efforts transition into response efforts. It is unclear when the recovery phase begins, which may very well commence before the response has even started. Moreover, determining when a crisis 'ends' and regular policymaking resumes is problematic. The same crisis might be in different phases of the crisis management cycle across various boundaries. To create robust governments and systems in the face of such crises, it is important that the dimension of time is incorporated, and that one does not only look at the acute phases of crises (Pot et al., 2022).

2.2 | Network collaboration challenges

Transboundary crises create administrative and political challenges since arrangements made for 'bounded' crises do not necessarily work well when organizing crisis management for scattered crises (Boin, 2019). As transboundary crises cross functional policy domains at multiple levels of administration and tend to be highly complex in nature, crisis management typically involves a large number and wide variety of organizations and officials. In this article, we refer to actors that participate in crisis management as 'crisis partners'.

To carry out the large and complex tasks, these crisis partners have to work together in multi-layered networks (Kapucu, 2006; Moynihan, 2009). Collaboration between crisis partners in response to transboundary crises creates many new challenges (Blondin & Boin, 2020). A major challenge stems from the fact that there is great variation in the characteristics of crisis partners, such as in their responsibilities and power, policy domain, the jurisdiction they operate in, their administrative level (local/regional/national/international), possibly located in different countries, public or private, their working routines and procedures, organizational culture, hierarchical structure, available capacity, and experience in crisis management (see Broekema et al., 2018). Depending on the context of a crisis, a potentially endless range of societal organizations can become a crisis

partner. In addition, the structures and configuration in which network collaboration takes place during a crisis differ from what occurs in more normal times. Often, partners start by hardly knowing each other's organization, responsibilities, and way of working.

In responding to a crisis, the crisis management organization² in charge and assigned officials need to make sure important tasks are coordinated between the different crisis partners, both horizontally, at the same administrative level, and vertically, across administrative levels (local, regional, and national). However, at the same time, due to difficult circumstances such as high complexity and time pressure, full coordination of network collaboration in a transboundary crisis is challenging if not impossible (see Boersma et al., 2014; Boin et al., 2014). Another difficulty is that in responding to a crisis, the responsibilities and competences of the crisis partners typically overlap to some extent. Vulnerabilities need to be addressed across organizations with different tasks and responsibilities, operating in different policy domains and at different administrative levels in a country.

Typically, the question arises as to under what conditions should what decisions be made by what organizations and at what administrative level. A recurring issue of debate is what should happen when decision-making powers move from one official or body to another. Crisis partners might have to operate in parallel within different networks at the same time. This creates questions of how the networks are organized, coordinated, and governed (Provan & Kenis, 2008). Especially in the wake of a crisis, collaboration between organizations creates challenges in terms of coordination. Often, organizations have different perceptions of what is going on, how to solve things, and how collaboration should be shaped (Wolbers & Boersma, 2013). It is therefore challenging but useful to embed aspects that promote collaboration between crisis partners not only in ad hoc but in more structural, legally sanctioned, frameworks.

2.3 | The ambiguous role of legislation in crisis management

Legislation is one of the main instruments used to organize the system for disaster management in a society (Farber et al., 2015; Farber, 2012; Laut, 2015b). Legislation can provide the structure for political prioritization, create incentives, provide resources, enforce measures for disaster management, designate responsibilities and competences, and enforce limitations of power (Laut, 2015b). Correspondingly, a lack of legislation can create difficulties with implementing actions to mitigate disasters (Zhang et al., 2013, p. 2226).

One of the ways in which legislation provides a basis for institutional design, and the relationships between organizations, is that it determines how key responsibilities and powers are distributed among officials and organizations. The law can structure decision-making processes, and indicate who may sit at the table, and when. Legislation can facilitate the rapid setting up of an organization in the initial response to a crisis and create a common framework for all the crisis partners involved. Legislation can also play an important

role in the process of crisis learning. Crises create political momentum which can serve as a catalyst for change. New knowledge and insights obtained by evaluating a crisis can be translated into changes in legislation (Birkland, 2006; Broekema et al., 2017).

At the same time, legislation can also stand in the way of effective crisis management. Legislation can hinder by restricting the room for flexible behaviour. It can inhibit crisis partners from adapting quickly to unknown and rapidly changing circumstances, while effective crisis response may require deviating from pre-established formalized processes. It can hinge on professionals and leaders who must think out of the box and make decisions that may not follow regular routines and processes (Gilpin & Murphy, 2008; Wilson & McCreight, 2012). In such situations, legislation may function more as a burden than as a facilitator of effective crisis management.

Most research starts from the assumption that legislation is rooted in the dichotomy between normal times and crisis times, between structural legislation and a state of emergency. Traditionally, exceptional powers are given to authorities in emergency situations (Gross & Nâi Aolâin, 2006; Laut, 2015b). However, with the increasing role of government over time and the rise of the risk-adverse society, the role of legislation in organizing exceptional powers in times of crisis is no longer sufficient to grasp crisis management. As crises become transboundary, creeping, and more permanent, the boundaries between normal and exceptional times, between normalcy and crisis, crumbles. That research in disaster management has been very much focused on events and their societal impact, rather than on processes that enhance resilience (Manyena et al., 2013), is therefore problematic when seeking a better understanding of the relationship between transboundary crisis management and the role of legislation.

In short, given the increase in transboundary crises, the challenges that this poses to network collaboration, the importance of legislation in facilitating (rather than hampering) crisis management, and the lack of insights into what aspects needs to be embedded in legislation in the existing disaster literature, we argue that a more systematic analysis of the relationship between transboundary crises and legislation is warranted.

3 | RESEARCH DESIGN

3.1 | Context: Crisis management in the Netherlands

The system for general crisis management in the Netherlands is based on an administrative structure reflecting a 'decentralized unitary state' in which different layers of government work together (Toonen, 1987). Crisis management responsibilities are shared between the local, the regional, and the national levels of government. In 2010, the Dutch Safety Regions Act was enacted, moving the focal point of the decentralized crisis management structure from the municipal to the regional level. The Act structured the territory of the Netherlands into 25 regional inter-municipal

collaborative zones labelled 'safety regions'. Decentralized crisis decision-making powers are exercised on a local or regional level determined by the scope of an incident. The safety regions are based on the principle of extended local governance, meaning that the municipalities in a region have a shared 'ownership'. Within each safety region, there are generally around 20 municipalities and emergency services that work together in carrying out crisis management tasks. The Safety Regions Act was created to enhance crisis management capacity, expertise, and decisiveness, and to promote collaboration among the various emergency services. The organizational system of general (i.e., not type-specific) crisis management in the Netherlands has largely been enshrined in the Safety Regions Act, but also in related legislation, such as the Municipal Act (Brainich et al., 2019). At the national level, the National Handbook on Decision-Making in Crisis Situations prescribes the national crisis management system for collaboration between the different ministries involved in a crisis.

3.2 | Building on the evaluation of the Dutch Safety Regions Act

The current study builds upon the report of the evaluation study of the Safety Regions Act in the Netherlands that was conducted by the Safety Regions Act Evaluation Committee between September 2019 and December 2020 (Ewv Evaluatie wet Veiligheidsregio's, 2020) and the literature. The present authors were researchers in that evaluation. This earlier evaluation study included an in-depth analysis of the functioning of the Safety Regions Act (and related legislation) in organizing general (not type-specific) crisis management against the backdrop of the Netherlands' institutional and judicial context. One of its main conclusions was that the Dutch legislation plays an important role in organizing crisis management for 'traditional' and bounded flash crises, but is less well equipped for organizing responses to a transboundary crisis (Ewv Evaluatie wet Veiligheidsregio's, 2020, pp. 3–11).

In the evaluation study, the researchers developed an analytical framework for systematically analysing the relationship between the law and the practice of crisis management (see Figure 1). The researchers compared legislation and practice in three steps. They first analysed the topics of success and attention in legislation in the Safety Regions Act (and related legislation). They then analysed these topics as encountered in crisis management practice. Finally, they compared the topics of success and attention between legislation and practice. In their findings, the researchers distinguished four 'ideal-types' of relationship between legislation and practice. First, legislation can *facilitate* practice. For example, if a legal provision incentivizes an organization to start organizing a task. Second, legislation may be *without influence* on practice. For example, if a legal provision is hard to implement or it becomes no longer useful due to developments in society or the administrative system. Third, legislation can *hinder* crisis management. For example, if a legal provision has not been formulated in a clear way or if it has unintended negative side-effects. Fourth, legislation may be incomplete, meaning that something that is required is missing. For example, if a legal provision is lacking that practice requires to initiate a process.

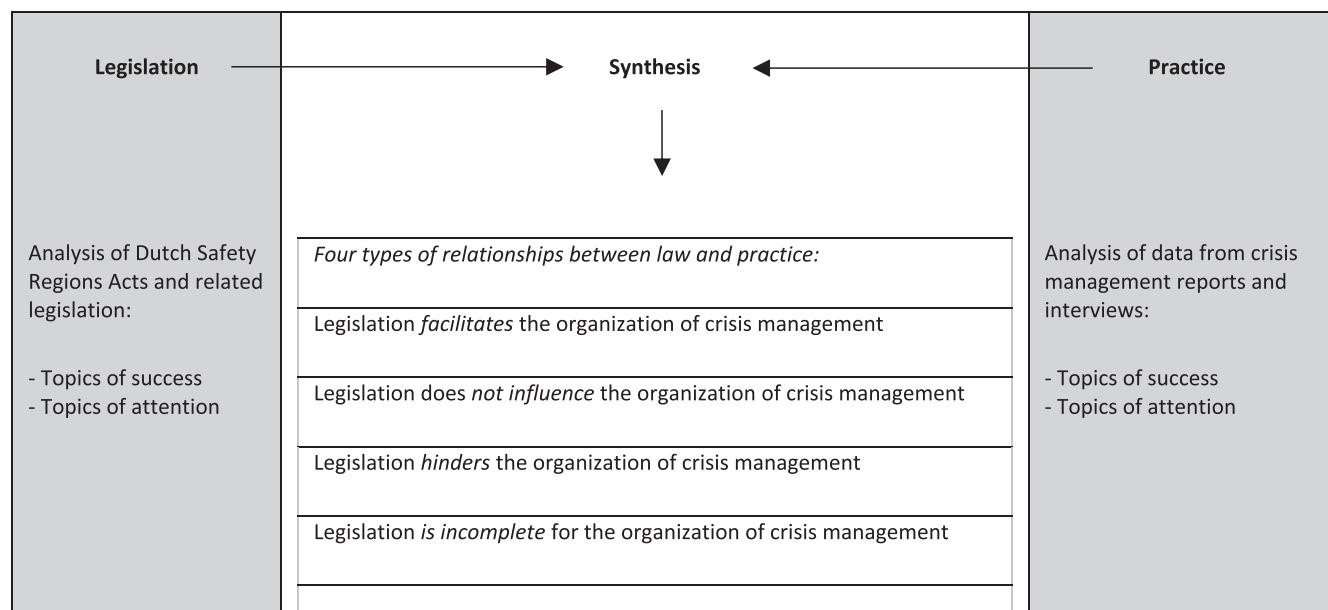


FIGURE 1 Framework for a systematic comparison of legislation and practice (adapted from the evaluation report).

TABLE 1 Data collection as part of the original evaluation of the Safety Regions Act.

Data source	Number	From which organizations
Crisis management reports	150	Several, including the Ministry of Justice and Security, Inspectorate of Justice and Security, Dutch Safety Board (OVV), Dutch Institute for Safety (IFV), 25 Safety Regions
Interviewees	84	Fire commanders, mayors, Institute for Safety, chair of the Association of mayors, Association of municipal council members, Leiden University, Nijmegen University, Twente University, provinces, NCTV, Police Academy, four private consultancy organizations, directors of safety regions, directors of public health services, representative of public prosecution service, water boards, National Police, ambulance services, labour unions
Focus groups participants	51	A selection of public and private organizations mentioned above
Consultation meetings participants	35	Advisory group, Security Council, Council of directors of the safety regions, directors meeting crisis management Ministry Justice and Security, network of King's commissioners, national public health association, citizen care network, Ministerial crisis management sections, vital businesses, judicial section Ministry of Justice and Security, each of the 25 safety regions

3.3 | Data collection

In the evaluation study, the researchers used four methods to collect empirical data. The researchers analysed around 150 crisis management reports published between 2010 and 2020, including policy reports, system evaluations, crisis management handbooks and plans, parliamentary documents, and crisis evaluation reports, and academic literature. They also conducted semi-structured interviews with 84 crisis management professionals and experts in the field (each involving at least two interviewers and up to five interviewees) that, due to COVID-19, were largely held remotely using MS Teams. Representatives were selected from organizations that have a central responsibility in crisis management using a stakeholder analysis. The researchers further organized 16 focus groups with crisis management professionals and experts, each consisting of 8–10 participants and two coordinating researchers. Participants were selected based

on having an important role in crisis management and ensuring a diversity of backgrounds: different types of expertise; operational/tactical/strategic tasks; and decentralized/centralized levels of operation. In addition, the researchers held consultation meetings with 10 key organizations and with all 25 safety regions. Interviews and focus groups were audio recorded, summarized in a written report, and (re)coded (See Table 1).

3.4 | Analysis

In the present study, we used the evaluation committee's findings as a starting point for exploring what model could be used to adapt the legislation for crisis management towards organizing responses to transboundary crises, relevant for different countries. The analysis consisted of four steps. First, we extracted lessons from those parts

of the evaluation study that were relevant for transboundary and future crisis management (thus leaving out the parts on specific emergency services), which included analyses both of the relationship between law and practice, and directions for change to prepare for the future. Second, we interpreted these findings by reasoning further and aggregating to a higher level of abstraction. Third, using an inductive approach, we grouped and regrouped the information, establishing 10 key aspects, which we then categorized into five pillars. Fourth, we enriched the information with insights from the crisis-management literature. Based on this analysis, we were able to develop a generic model on what aspects could improve and streamline the relationship between crisis management legislation and practice for transboundary crises.

4 | EXPLORING HOW LEGISLATION COULD BE ADAPTED TO ORGANIZE TRANSBOUNDARY CRISIS MANAGEMENT

The model we developed (see Figure 2) includes key aspects that could help adapting legislation to transboundary crisis management. We distinguished 10 key aspects, categorized in five pillars: interconnectedness, network, power, competence, and feedback. In the following subsections, we will discuss the key aspects of each

pillar. First, we give a general assessment of each aspect relevant for the relationship between legislation and crisis management. Then, we provide a more specific assessment linked to the evaluation study's findings (relating to the status quo and the literature). Subsequently, for each key aspect, we then formulate some insights on how this relationship, in this particular domain, may be improved by finetuning the legislation (highlighted in *italics*).

4.1 | Interconnectedness

4.1.1 | Maintaining interconnectedness throughout the various phases of crisis management

Transboundary crises cross temporal boundaries: further, they do not evolve linearly over time, have a long incubation period, evolve incrementally or quickly change their form, and have a long recovery period. This makes the different phases of the crisis management cycle—mitigation, preparation, response, and recovery—more diffuse and intertwined than in a 'bounded' crisis. As Farber (2012) notes, the legal aspects of the different crisis management phases cannot be studied in isolation because they interact with each other. Wolbers et al. (2021) found that, in recent decades, the crisis response and preparation phases have gained disproportionate attention in both

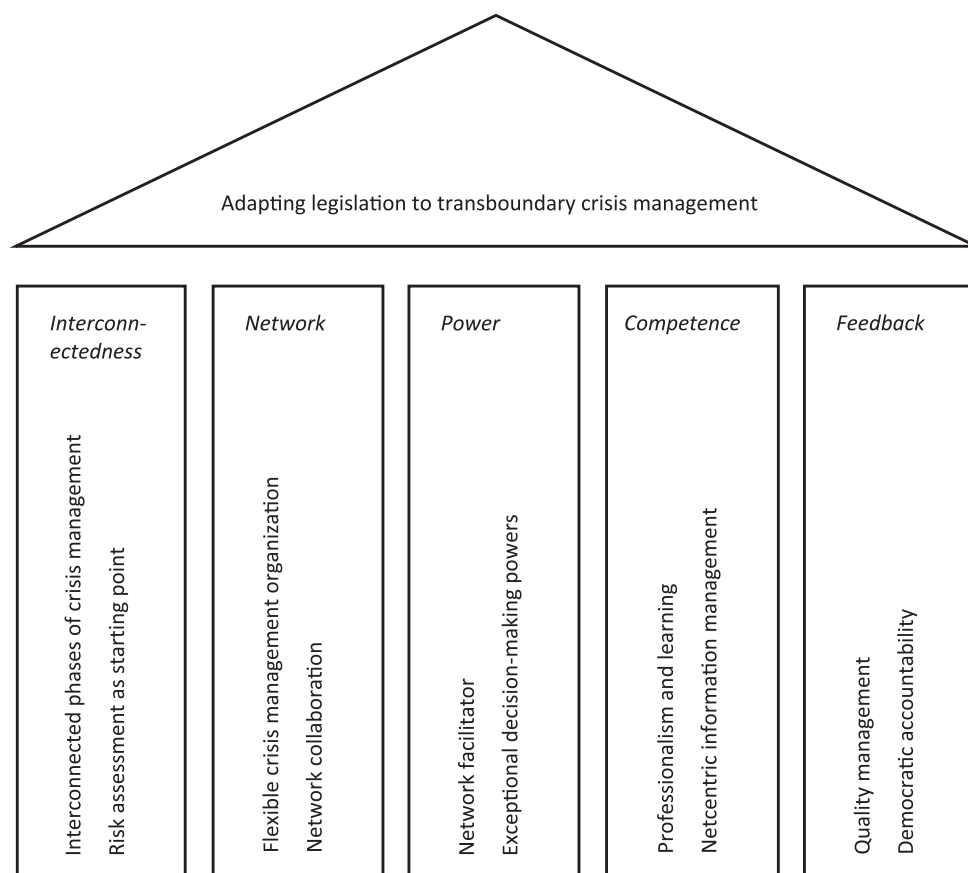


FIGURE 2 Model including five pillars for adapting legislation to transboundary crisis management.

research and practice. However, legislation could also play an important role in mitigation and recovery phases, such as in the coordination of after-care or achieving network learning.

The Safety Regions Act does create some connection between different crisis management phases, such as by dictating that each safety region should create three 4-yearly plans that build on one another: the Regional Risk Profile that assesses the present threats in a region, a Regional Policy Plan that sets the stage for operational performance, and a Regional Crisis Plan to formulate the crisis management organization and its responsibilities and powers (Wvr, art. 14–16). However, the evaluation committee concluded that the Safety Regions Act does not address all the crisis management phases to a similar extent, stating that “the Safety Regions Act is mostly aimed at preparation and response and hardly on risk-analysis and recovery. With that, the law is incomplete in describing the full crisis management cycle” (Ewvr, p. 12). The evaluation committee proposed to make contributing to the different crisis management phases mandatory and should be considered a collective responsibility of all the partners involved, not just the crisis management organization (Ewvr, pp. 85–86, 90–91).

Legislation adapted to transboundary crises sustains all the phases of the crisis management cycle – mitigation, preparation, response, and recovery – and creates interconnections between them. It enables the interconnectedness throughout the various phases, and therefore also of different crisis partners and different frameworks. It does not view crisis management as an isolated process, but instead sees it as a series of iterative steps that build on one another. These may in effect be at the same moment, across various boundaries, but are tied together through the same framework of legislation.

4.1.2 | Starting with a collaborative risk assessment

Risk analysis can serve as a starting point in shaping crisis management activities in each phase of the crisis management cycle. In a transboundary crisis, risk assessment is not a static but a continuous process. It can provide a basis for establishing mitigation and preparation activities, during a crisis to prepare for developing threats and for how to end a crisis, and after a crisis to be aware of a possible reactivation of the crisis (see Stark et al., 2014). Risk analysis could be viewed a joint responsibility of all crisis partners with tasks related to a specific threat or crisis, across disciplines, jurisdictions, and policy fields, and function as a basis for shaping joint crisis management activities.

The evaluation committee concluded that the Safety Regions Act “pays little attention to risk analysis as a basis for crisis management”. (Ewvr, p. 12). It advised making “collaborative risk analysis [is] the starting point for shaping crisis management” (Ewvr, p. 9). The evaluation committee therefore advised the government to adapt the Safety Regions Act to set out requirements for a joint risk analysis, shaped by a network of crisis partners that relate to specific threats. After risks are analysed and assessed, they need to be prioritized within the network, and followed up with corresponding decisions and steps as to what has to be done first.

Legislation adapted to transboundary crises ensures that risk analysis provides a basis shaping crisis management activities. In this, the crisis management organization and crisis partners, operating at different administrative levels – local/regional and at the national level – provide input, communicate, and adjust their risk analysis to one another. Legislation could moreover point the crisis partners to their specific responsibilities, and ensure the completion of a joint risk analysis and assessment. Public and private crisis partners could thus be directed to actively participate in networks surrounding a specific threat and to share their information.

4.2 | Network

4.2.1 | Creating a flexible crisis management organization related to the crisis or threat at hand

Since transboundary crises are complex and can change quickly in terms of their form, affected geographical area, affected policy domains, and crisis partners involved, managing transboundary crises requires flexibility at its core (Ansell et al., 2010). Then detailed legal prescriptions, especially relating to organizational configurations or input requirements, can be a burden. Even if requirements do not help in managing a crisis in a specific context, professionals might still feel compelled to meet them. If detailed requirements are included in plans and protocols, rather than in legislation, they are easier to adapt when needed to respond to a changing environment.

The evaluation committee concluded that “the Safety Regions Act describes a rigid structure for the coordination of the crisis response. The management of crises requires more flexibility” (Ewvr, p. 12). The evaluation committee recommended making the Safety Regions Act less detailed, by limiting detailed prescriptions of organizational configurations and only maintaining a focus on facilitating processes (Ewvr, p. 14). The Evaluation Committee advised basing the organization of transboundary crisis management on the nature and scale of a crisis, rather than rely on a given structure or administrative organizations that are mostly organized along territorial lines (rather than on topical, crisis-related lines) (Ewvr, pp. 87, 88). In other words, the risk assessment, preparation, response, and recovery, and the composition of a network of partners, should be tailored to the nature and scale of the specific crisis or threat at hand. Under the Safety Regions Act, the boards of the safety regions have primacy for crisis management in their region, which confines crisis management to within regional boundaries. The committee therefore advised that, during a crisis, one clear crisis-response structure should operate, rather than different ones in each region (Ewvr, p. 87).

Thus, legislation adapted to transboundary crises management ensures flexibility in organizing crisis management by focusing on key processes. The organization of crisis management is tailored to what is needed in a specific crisis or threat at hand. This means that crisis management is collaboratively organized with all the partners affected (public and private, local, regional, national, or even international). However, this does not disrupt the identification of core crisis

responsibilities and powers, and a general outline of the main crisis management bodies. As such, flexibility in organizing crisis management is only possible when key processes, responsibilities, and powers, and general organizational outlines, are clear.

4.2.2 | Encouraging network collaboration with a diversity of crisis partners

Transboundary crises can cross the borders of many policy domains. Therefore, to govern a transboundary crisis, the crisis management organization has to cooperate with large networks of crisis partners, in each phase of crisis management: mitigation, preparation, response, and recovery. Depending on the crisis or threat, various partners and expertise present within the network will be in play. Sometimes, partnerships may have not yet been established. Crisis partners can be diverse (see Broekema et al., 2018), such as in terms of their responsibilities and powers, operational capacity, the policy domain in which they operate, and in the public or private realm. Partners may include emergency services, such as the police or fire brigade; functional government agencies such as water authorities or public health institutes; organizations of civil society, such as the Red Cross; semi-public companies such as a railway network provider; private companies, such as telecom providers or energy companies; and international partners, such as the crisis management organization in a neighbouring country or multinationals. The composition of a crisis network may vary over time: partners can be brought into a network or excluded based on what is needed at a specific moment.

The evaluation study shows that, in a transboundary crisis, the responsibilities and powers of organizations and officials involved tend to overlap (Ewvr, p. 51). A typical question that arises from this is: 'whose crisis is it?'. The Safety Regions Act prescribes the standard composition of partners in a local/regional crisis response team,³ consisting of a number of 'traditional' crisis partners, such as police and health care services. However, the evaluation committee advised against prescribing specific crisis partners in law so as to be able to create a flexible crisis response team that conforms to 'what is needed' in a specific crisis. Further, partners that are not mentioned in the Safety Regions Act feel undervalued and less centrally involved in the crisis management network (Ewvr, pp. 42–46). The evaluation committee further advised "to shape crisis management in the form of network collaboration in which all crisis partners contribute to crisis management as much as possible from their own responsibilities and authorities" (Ewvr, p. 9). Crisis partners should have an own responsibility to contribute to crisis management, but are also joined in a collaborative responsibility in each phase of crisis management (Ewvr, p. 9). The evaluation committee also concluded that, increasingly, private organizations have assumed important responsibilities, powers, and expertise in vital societal interests (Ewvr, pp. 43–46, 123–124). Furthermore, it concluded that citizens have become a more central crisis partner through active citizen participation, such as support in cleaning up after a flood, and strengthened self-reliance (Ewvr, pp. 67–68).

Against this backdrop, legislation adapted to transboundary crises provides a foundation for collaboration in networks. It provides incentives to stimulate collaboration between crisis management organizations and the potential range of public and private crisis partners, operating in different territorial and policy areas, in all phases of crisis management. It could even include an 'effort obligation' to encourage crisis partners to contribute to managing a crisis, irrespective of the crisis management phase at hand (even in noncrisis time in risk assessment, mitigation, or joint simulation exercises).

4.3 | Power

4.3.1 | Allocating the role of facilitator

Transboundary crises affect multiple policy domains at the same time and tend to be highly complex. This means that the crisis management organization may not be the one that is formally in charge or have the required expertise. This can make the crisis management organization less central in the crisis management architecture of a country. Decision-making powers may be invested in functional organizations, bodies or even private partners that might have a specific task, expertise, or operational capacity. This could be the case, for example, in a complex cyber hack at a large software company. In transboundary crisis situations, authorities and expertise are typically shared in a network of partners that need to work together, but are not necessarily obliged to do so (see Provan & Kenis, 2008).

The evaluation committee concluded that, in essence, crisis management is a collaborative task of all the organizations that have responsibilities and know-how in the specific areas affected (Ewvr, p. 9). The crisis partners take decisions together as a network. The evaluation committee however concluded that safety regions could do a better job at collaboration: with crisis partners, with other safety regions, with the national government, and internationally (Ewvr, p. 3). In light of this, they recommended that the law clarifies the relationship between the national and lower-level crisis management organizations (Ewvr, pp. 39–43, 131–132). It also recommended assigning to the safety region the role of facilitator for establishing and coordinating Interorganizational collaboration in networks (Ewvr, pp. 14, 91).

Legislation adapted to transboundary crisis management could endow the crisis management organization with rights to facilitate crisis networks in all phases of crisis management. It may enable the crisis management organization to bring together crisis partners, facilitate information and knowledge exchange, organize network meetings and crisis exercises, and ensure that crisis plans and protocols are drawn up collectively. The crisis management organization could be tasked with initiating and maintaining partnerships with an array of crisis partners and creating 'contact points' that establish a direct channel of communication with all the crisis partners involved. This legislation could differentiate between a local/regional and a national crisis management organization.

4.3.2 | Explicitly securing exceptional decision-making powers

Transboundary crisis management is a responsibility shared by crisis partners. However, the essential collaboration and decision-making may not come about, or may not be accommodated, sufficiently quickly. In a transboundary crisis, clarity on who has the power to make which critical decisions is important (Boin, 2019). Since the temporal distinctions are blurred in transboundary crises, a lack of clarity on the distinct decision-making powers in different phases of a crisis may create a problem. For example, who can decide when and how emergency powers will be triggered?

Under the current Safety Regions Act, the mayor of an affected municipality and the chairman of an affected safety region (usually the mayor of the largest municipality in the region) have far-reaching decision-making power during a crisis (Ewvr, pp. 61–62; Wvr, art. 39). However, the evaluation committee concluded that the Safety Regions Act does not include binding provisions to encourage network collaboration and is somewhat non-committal and unspecific regarding the powers that are allocated in times of crisis (Ewvr, pp. 12, 13). The committee therefore recommended that, at both the regional and national levels, a public official should be explicitly invested with the power to activate and deactivate a crisis response team, address crisis partners, and mobilize public officials if required (Ewvr, p. 87). The evaluation committee recommended “to assign the lead role in crisis management to the mayors and chairmen of the safety region, and on national level to the minister of Justice and Security. [They] obtain the legal powers to intervene when collaboration is lacking or does not have the desired result” (Ewvr, p. 14). The evaluation committee explains that “due to increasing complexity, boundedness, and unpredictability, today also (looming) crises can justify that a mayor uses its emergency powers” (Ewvr, pp. 61–62).

Legislation adapted to transboundary crises delineates the question of decision-making power in line with the different phases of crisis management. A leading role for public officials is not only relevant for the response, but also for mitigation, preparation, and recovery. Legislation clarifies the matter of exceptional decision-making powers. Here, specific public officials could be appointed and endowed with the power to overrule other crisis partners. Exceptional decision-making power could, for example, apply to situations where crisis partners do not come to a timely agreement, fail to carry out their responsibilities, or do not actively contribute to a network. This power could be allocated at different levels: local/regional and national, and in a horizontal (territorial, sectoral) or vertical (hierarchical) direction. This may, for example, mean that a minister could take the lead in extreme situations over local/regional crisis partners.

4.4 | Competence

4.4.1 | Placing emphasis on professionalism: Continuous education, training, and learning

A flexible crisis response, able to adapt to complex and changing circumstances, requires professional and adaptive attitudes (e.g.,

Gilpin & Murphy, 2008). To this end, facilitating learning processes amongst and across network partners is pivotal for managing transboundary crises in all phases of the crisis management cycle, as they require continuous adaptation of actions to changing circumstances (see Broekema et al., 2017).

The Safety Regions Act sets requirements for professionals to be considered competent, but pays little attention to keeping them skilled and adapted to developments over time (Ewvr, pp. 72, 77). The evaluation committee stressed that a learning capacity is vital for organizations and networks to enable them to continuously adapt to changing environments, new knowledge, and insights. In a transboundary crisis, learning takes place in networks of crisis partners, which means that all partners have a joint responsibility to shape learning after a crisis (Ewvr, p. 91). The committee recognized that network learning was underdeveloped and therefore advised “to safeguard the learning capacity of the crisis management system in law, so that the desired quality of crisis management may be delivered continuously” (Ewvr, p. 96).

Legislation adapted to transboundary crises does not only focus on making crisis management professionals competent but also aim at maintaining their competence over time by incorporating new knowledge. Legislation could assign legal responsibilities to crisis partners to invest in education and training for their professionals. It could moreover make training in specific skills and crisis competences mandatory for specific functions. Further, it could also ensure that crisis simulations around specific threats are regularly organized within crisis networks. This legislation also stimulates network learning.

4.4.2 | Enabling netcentric knowledge development and information management

Transboundary crisis management requires a fast and effective exchange of information among partners in a dynamic network. Transboundary crises are characterized by large flows of often unreliable information, partly channelled through social media. In this context, important processes of collective sense-making and creating a common operational picture can be challenging (see Wolbers & Boersma, 2013). The complexity of such crises requires high levels of knowledge and expertise. Knowledge resides in a wide variety of organizations, including expert agencies and committees, such as a nuclear power agency, IT desks, police academies, public health bodies, and university departments. The crisis partners need direct access to state-of-the-art knowledge, and they need to be able to regularly share this knowledge within their network. A regional crisis management organization cannot have all the knowledge and expertise related to all types of crises available in their own organization.

The evaluation committee advised “to create a legal basis for joint information provision in all phases of crisis management” (Ewvr, p. 15). It indicated the need to maintain an unambiguous, up-to-date national and regional information and risk picture across all stages of crisis planning and management (Ewvr, p. 127). The evaluation committee also advised enshrining the responsibility for knowledge

development in the law (Ewvr, p. 15). It felt that creating a central independent and autonomous knowledge agency on crisis management should be laid down in legislation (Ewvr, p. 106). This knowledge agency could develop and maintain general crisis knowledge and function as a hub for exchanging knowledge within the network of crisis partners across administrative levels. It could work in close collaboration with expert agencies and research institutes in other policy domains, and could organize corresponding education and training programs.

Legislation adapted to transboundary crises facilitates and obliges or at least stimulates crisis partners to share important information and knowledge, both in responding to a crisis and in the preparation phase. A 'netcentric' system of information and knowledge exchange could be created. This legislation could also set some conditions for sharing data and maintaining legal restrictions regarding privacy. It could also include a responsibility for crisis communication, both within the network and to the wider society.

4.5 | Feedback

4.5.1 | Securing collaborative quality management and supervision

A quality framework for transboundary crises aims to stimulate the flexible accomplishment of *processes* rather than provide rigid prescriptions for crisis management organizations and response teams. Too detailed and minute requirements do not sit well with the complexity and layered nature of transboundary crisis management (Robert & Lajtha, 2002). By operating a quality management system (such as a Plan-Do-Check-Act cycle), vital processes in one's own organization can be monitored over time, and adapted as required.

The Safety Regions Act includes a legal obligation for the Safety Regions to apply a quality management system (Wvr, art.23), but requirements vary in their elaboration and are far too detailed (Ewvr, p. 8). The evaluation committee concluded that the Safety Regions Act "does not include a clear quality framework. Set requirements are unbalanced in form (organization vs. process), elaboration and level of detail" (Ewvr, p. 14). Therefore, each region is able to define quality assurance in its own way. Further, the evaluation committee also felt that the system for crisis management should draw up quality norms in a collaborative, equalizing way (Ewvr, p. 15). The evaluation committee also advised adapting supervision to match the collective responsibilities for crisis management that cross policy domains. It therefore highlighted the necessity for different inspectorates to work together in their supervisory tasks (Ewvr, p. 96). This supervision could specifically include network collaboration between partners.

Legislation adapted to transboundary crises sets quality standards for the vital crisis management processes in mitigation, preparation, response, and recovery. Legislation could set out the responsibility of the crisis management organization to operate a quality management system. Quality standards might include preconditions for effective

collaboration between crisis partners, such as on processes of interorganizational information exchange or the upscaling of crisis teams across different organizations.

4.5.2 | Enshrining democratic accountability in networks, and in a protracted crisis

Transboundary crises to some extent require the accountability process to be flexible and tailored to the specific form of the crisis. On the one hand, the profound societal impacts of decisions require post hoc explanation, motivation, and democratic control, especially if officials have used crisis decision-making powers to undertake far-reaching emergency measures (Boin et al., 2014). On the other hand, whilst the crisis is ongoing, officials need to give their full attention to responding and acting quickly, and do not always have time and focus for often lengthy parliamentary debates. From the viewpoint of legitimacy, exceptional crisis decision-making powers demand clear and strict start and end points. However, during transboundary crises, neither the crisis stages (beginning, ending) nor the authorities involved may be clearly distinguished. This conundrum pertains not only to network collaboration during a crisis, but also to preparation and mitigation efforts in the 'lukewarm' stage of a slow burning crisis. Against this backdrop, the role that private companies that carry out vital tasks in society clouds the lines of accountability even further. Can a company be obliged to report to municipal councils or to parliament?

The evaluation committee concluded that, in the law, "embedding of democratic legitimacy during a protracted crisis is missing" (Ewvr, p. 13). Here, the Safety Regions Act provides a procedure for democratic accountability but only after a crisis and on a regional scale. This procedure states that, after a crisis, the chairman of a safety region is required to account for their decisions made during the crisis to the elected municipal councils of the municipalities involved (Wvr, art. 40). This procedure was drafted with 'traditional' fast-burning crises with a relatively short time span, and a clear starting and ending point, in mind. Since it addresses accountability after a crisis, it has far less applicability in case of a protracted crisis. The evaluation committee therefore advised designing new guidance for maintaining democratic accountability processes during a protracted crisis (Ewvr, p. 119).

Legislation adapted to transboundary crises enshrines and upgrades the requirements for democratic accountability, not only as a vital part of long-term crisis management in a protracted crisis, but also as a way to ensure transparency and democratic decision-making at national, regional, and local levels. It could include a responsibility for networks, as a whole and across policy domains, to account for their actions.

5 | CONCLUSIONS AND DISCUSSION

Societies are increasingly confronted with transboundary crises—crises that erupt across territorial, functional/policy, and temporal boundaries. This requires a fundamental reconsideration of how crisis

management is organized with particular attention to the role of legislation as this can stimulate or limit the effectiveness of the organization of crisis management. How can legislation help to prepare for the 'crisis of the future'? We explored this question and developed a model that categorizes governance aspects that could be embedded in legislation to facilitate the organization of transboundary crisis management, building on the in-depth evaluation study (in which we participated) of the Dutch Safety Regions Act that was carried out in 2019–2020 and the literature.

This model consists of five pillars—interconnectedness, network, power, competence, and feedback—to be viewed as vectors for rethinking transboundary crisis management by means of adapting legislation. These five pillars contain 10 key aspects that may improve and streamline the relationship between transboundary crisis management legislation and practice, and we formulated these in an actionable manner that is geared to improving that relationship:

- *Maintain interconnectedness between the various phases of crisis management*
- *Start with a collaborative risk assessment;*
- *Create a flexible crisis management organization related to the crisis or threat at hand;*
- *Encourage network collaboration across a diversity of crisis partners;*
- *Allocate the role of facilitator;*
- *Explicitly secure exceptional decision-making power;*
- *Emphasize professionalism: continuous education, training, and learning;*
- *Enable netcentric knowledge development and information management;*
- *Secure collaborative quality management and supervision;*
- *Enshrine the democratic accountability of networks, including in a protracted crisis.*

We show that transboundary crises require much more than facilitating transnational collaboration: in fact, a coherent adaptation of the crisis management system in a country. The aspects identified are strongly interconnected: for example, establishing a network responsibility within crisis management will affect how democratic accountability and supervisory bodies can be organized. Moreover, a flexible crisis response system will only function when the education and training of crisis professionals is ensured.

With this model, we aim to challenge current thinking on the role that legislation can play in modern, transboundary, crisis management. The framework by no means provides a final, fixed, or finite list of legal requirements to manage transboundary crises. Neither is the model directly applicable in all legal systems. Nevertheless, it does provide a theoretical basis for studying legislation from a governance perspective. It moreover provides a point of departure for rethinking and adapting legal crisis arrangements in societies to prepare for future crises and for launching new research and debate on how to restructure our crisis management legislation. This can provide guidance for professionals and policymakers alike.

The vectors aimed at improving transboundary crisis management (interconnectedness, network, power, competence, and

feedback) can be adjusted to different legal systems and institutional structures in open, democratic countries. Although the legal systems and institutional arrangements differ widely between countries in Europe (Bossong & Hegemann, 2015; Kuipers et al., 2015; Lægreid & Rykkja, 2019), we believe that these vectors are formulated on an appropriate level of aggregation to be relevant across the open democratic countries of the West. In such open societies, legislation can help to strengthen inter-organization connections and unity between crisis partners, in particular by stimulating collaborative responsibilities, network meetings, preparations, simulations, and shared accountability.

Admittedly, the law is no panacea. We must remain vigilant that the law does not hinder practice, i.e. get in the way of good ad hoc solutions in a crisis. There are limits to what the law is able to do, especially in times of crisis. We recognize that friction between legislation and practice can never be fully removed (see Ewv Evaluatie wet Veiligheidsregio's, 2020: pp. 11, 23). Governing transboundary crises requires a fundamental cultural change in the ways of thinking and working in the comprehensive field of crisis management that cannot be achieved by legislation alone. Some core transboundary crisis management issues cannot be fully resolved by legislation.

Network collaboration will always create challenges (personal conflicts, hierarchical clashes, animosities, time lags in sharing data) that cannot easily be remedied by legislation. Problems related to suboptimal collaboration between crisis partners and network coordination are and will therefore persist (see Boersma et al., 2014; Boin et al., 2014). Moreover, as a transboundary crisis cuts right across institutionalized boundaries of domains of organizational tasks and responsibilities, political interests are magnified. During a transboundary crisis, the crisis management system becomes vulnerable to political rifts and rivalries. Interorganizational politics can be a major obstacle to network collaboration (Boersma et al., 2021). In short, infighting may break out over the question as to 'who's crisis is it?'. Crisis partners may experience difficulties in overcoming political obstacles to sharing information and proactively taking on responsibilities. They might also fear becoming embroiled in postcrisis accountability and blame games. Interorganizational and inter-personal trust between crisis partners with divergent backgrounds, organizational cultures and structures, activities and partner organizations cannot be enforced by law. Further, crisis professionals and public officials may be reluctant to exert their acquired legal powers and overrule colleagues out of fear this may undermine their collegial ties and administrative loyalty once the crisis is past. We would argue that these limitations are all the more reason to devote further research and debate to the thorny question of the role of law in a transboundary crisis. With this paper, we hope to have enriched and encouraged that debate.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analysed in this study.

ORCID

Wout Broekema  <http://orcid.org/0000-0002-9881-9764>

ENDNOTES

- ¹ De Graaf was a member of the evaluation committee, Broekema and Bron were researchers for the evaluation committee.
- ² In this article, we use the term 'crisis management organization' to refer to the government organization that is specifically tasked with crisis management responsibilities and has a coordinating role in crisis management.
- ³ We use the term 'crisis response team' to refer to the upscaled temporary public crisis management body.

REFERENCES

- Ansell, C., Boin, A., & Keller, A. (2010). Managing transboundary crises: Identifying the building blocks of an effective response system. *Journal of Contingencies and Crisis Management*, 18(4), 195–207.
- Baum, M. L. (2007). *When nature strikes: Weather disasters and the law*. Praeger Publishers.
- Birkland, T. A. (2006). *Lessons of disaster: Policy change after catastrophic events*. Georgetown University Press.
- Blondin, D., & Boin, A. (2020). Cooperation in the face of transboundary crisis: A framework for analysis. *Perspectives on Public Management and Governance*, 3(3), 197–209.
- Boersma, K., Groenewegen, P., Ferguson, J., & Wolbers, J. (2014). *Beyond the myth of control: Toward network switching in disaster management*. ISCRAM.
- Boersma, K., Ferguson, J., Groenewegen, P., & Wolbers, J. (2021). The dynamics of power in disaster response networks. *Risk, Hazards & Crisis in Public Policy*, 12, 418–433.
- Boin, A. (2019). The transboundary crisis: why we are unprepared and the road ahead. *Journal of Contingencies and Crisis Management*, 27(1), 94–99.
- Boin, A., Busuioc, M., & Groenleer, M. (2014). Building European Union capacity to manage transboundary crises: Network or lead-agency model? *Regulation & Governance*, 8(4), 418–436.
- Boin, A., Ekengren, M., & Rhinard, M. (2020). Hiding in plain sight: Conceptualizing the creeping crisis. *Risk, Hazards & Crisis in Public Policy*, 11(2), 116–138.
- Bosson, R., & Hegemann, H. (2015). *European civil security governance, Diversity and cooperation in crisis and disaster management*. Palgrave Macmillan.
- Brainich, E. T., Brouwer, J. G., Muller, E. R., & Schilder, A. E. (2019). *Tekst en commentaar openbare orde en veiligheid*. Wolters Kluwer.
- Broekema, W., Van Kleef, D., & Steen, T. (2017). What factors drive organizational learning from crisis? Insights from the Dutch food safety services' response to four veterinary crises. *Journal of Contingencies and Crisis Management*, 25(4), 326–340.
- Broekema, W., van Eijk, C., & Torenvlied, R. (2018). The role of external experts in crisis situations: A research synthesis of 114 post-crisis evaluation reports in the Netherlands. *International Journal of Disaster Risk Reduction*, 31, 20–29.
- Cohen, O., Feder-Bubis, P., Bar-Dayana, Y., & Adini, B. (2015). Promoting public health legal preparedness for emergencies: review of current trends and their relevance in light of the Ebola crisis. *Global Health Action*, 8, 28871.
- De Graaf, B. (2020). Taming pandemics in international relations. *Journal of Applied History*, 2(1–2), 36–61.
- Dutch Safety Board. (2011). *Treinbotsing nabij Barendrecht: 24 September 2009*. DSB.
- Evaluatie wet Veiligheidsregio's [Ewvr]. (2020). *Naar toekomstbestendige crisisbeheersing en brandweerzorg [Evaluation Safety Regions Act. Towards future-proof crisis management and fire services]*.
- Farber, D. (2012). Disaster law and emerging issues in Brazil. *Hermeneutica e Teoria do Direito*, 4(1), 2–15.
- Farber, D. (2018). Response and recovery after maria: Lessons for disaster law and policy. *Revista Juridica Universidad de Puerto Rico*, 87(3), 743.
- Farber, D. A., Chen, J., Verchick, R., & Sun, L. (2015). *Disaster law and policy* (3rd ed.). Aspen Publishers.
- Faure, M. G. (2016). In the aftermath of the disaster: Liability and compensation mechanisms as tools to reduce disaster risks. *Stanford Journal of International Law*, 52(1), 95–178.
- Furukawa, S. (2000). An institutional framework for Japanese crisis management. *Journal of Contingencies and Crisis Management*, 8(1), 3–14.
- Gaire, S., Delgado, R. C., & González, P. A. (2015). Disaster risk profile and existing legal framework of Nepal: flood and land slide. *Risk Management Healthcare Policy*, 8, 139–149.
- Gilpin, D. R., & Murphy, P. J. (2008). *Crisis management in a complex world*. Oxford University Press.
- Gross, O., & Nâi Aolâin, F. (2006). *Law in times of crisis: Emergency powers in theory and practice*. Cambridge University Press.
- Kapucu, N. (2006). Interagency communication networks during emergencies: Boundary spanners in multi-agencycoordination. *American Review of Public Administration*, 35, 2–20.
- Kuipers, S. L., Boin, A., Bosson, R., & Hegemann, H. (2015). Building joint crisis management capacity? Comparing civil security systems in 22 European countries. *Risk, Hazards & Crisis in Public Policy*, 6(1), 1–21.
- Lægheid, P., & Rykkja, L. (2019). *Societal security and crisis management, governance capacity and legitimacy*. Palgrave Macmillan.
- Lauta, K. C. (2015a). Legal scholarship and disasters, *Disaster research* (pp. 111–123). Routledge.
- Lauta, K. C. (2015b). *Disaster law*. Routledge.
- Lyster, R., & Verchick, R. M. (2018). *Research handbook on climate disaster law: Barriers and opportunities* (pp. 117–132). Edward Elgar.
- Malloy, R. P. (2009). *Law and recovery from disaster: Hurricane Katrina*. Ashgate.
- Manyena, S. B., Mavhura, E., Muzenda, C., & Mabaso, E. (2013). Disaster risk reduction legislations: Is there a move from events to processes? *Global Environmental Change*, 23, 1786–1794.
- Moynihan, D. P. (2009). The network governance of crisis response: Case studies of incident command systems. *Journal of Public Administration Research and Theory*, 19(4), 895–915.
- Pescaroli, G., & Alexander, D. (2016). Critical infrastructure, panarchies and the vulnerability paths of cascading disasters. *Natural Hazards*, 82, 175–192.
- Pot, W., Scherpenisse, J., & Hart, P. 't (2022). Robust governance for the long term and the heat of the moment: Temporal strategies for coping with dual crises. *Public Administration*, 101(1), 1–15.
- Provan, K. G., & Kenis, P. (2008). Modes of network governance: Structure, management, and effectiveness. *JPART*, 18, 229–252.
- Quarantelli, E. L. (1985). What is disaster? The need for clarification in definition and conceptualization in research. In B. J. Sowder (Ed.),

- Disasters and mental health: Selected contemporary perspectives* (pp. 41–73). National Institute of Mental Health.
- Raikes, J., & McBean, G. (2016). Responsibility and liability in emergency management to natural disasters: A Canadian example. *International Journal of Disaster Risk Reduction*, 16, 12–18.
- Robert, B., & Lajtha, C. (2002). A new approach to crisis management. *Journal of Contingencies and Crisis Management*, 10(4), 181–191.
- Rosenthal, U., Boin, A., & Comfort, L. (2001). *Managing crises: Threats, dilemmas, opportunities*. Charles C Thomas.
- Stark, A., McConnell, A., & Drennan, L. T. (2014). *Risk and crisis management in the public sector*. Routledge.
- Toonen, T. A. J. (1987). The Netherlands: A decentralised unitary state in a welfare society. *West European Politics*, 10(4), 108–129.
- WettenBank. (2024). Wet veiligheidsregio's [Wvvr] [Safety Regions Act]. BWBR0027466.
- Wilson, L. R., & McCreight, R. (2012). Public emergency laws & regulations: Understanding constraints & opportunities. *Journal of Homeland Security and Emergency Management*, 9(2), 1–16.
- Wolbers, J., & Boersma, K. (2013). The common operational picture as collective sensemaking. *Journal of Contingencies and Crisis Management*, 21(4), 186–199.
- Wolbers, J., Kuipers, S., & Boin, A. (2021). A systematic review of 20 years of crisis and disaster research: Trends and progress. *Risk, Hazards & Crisis in Public Policy*, 12(4), 374–392.
- Zhang, X., Yi, L., & Zhao, D. (2013). Community-based disaster management: A review of progress in China. *Natural Hazards*, 65, 2215–2239.

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