

Chapter 9

Risk Communication and the Role of the Public: Towards Inclusive Environmental Governance of the Baltic Sea?

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Abstract This chapter focuses on forms of and challenges for risk communication within regional environmental governance, based on an analysis of five environmental risks in the Baltic Sea – marine oil transportation, chemicals, overfishing, eutrophication and alien species. We address questions about how risks are framed and communicated and also analyse the role of communication in the governance process. Our main focus is on risk communication with the public (e.g. existing institutional arrangements and procedures of risk communication), but we also relate this analysis to discussions on communication with a broad range of actors and issues of stakeholder participation and communication. In the study we have identified some examples of relatively well-working risk communication with parts of the organised public in the Baltic Sea region (BSR), such as in fisheries or eutrophication, but also a number of different barriers and obstacles. Our key result from this study is that BSR consists of many national institutions for risk communication, but that there are hardly any centralised institutions for risk communication activities relating to environmental governance in the region. Another key conclusion is that public risk communication in this array of cross-national environmental risks is restricted mainly to (one-way) information. Against this backdrop and from our

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empirical and theoretical knowledge of risk communication and the role of the public, we finally suggest some ways for improvement.

Keywords Stakeholder participation • Ecosystem approach to management • Public involvement • News media • Framing

9.1 Introduction and Background

9.1.1 Background

Trans-boundary environmental risks that affect us all over the globe have raised a need for new political spaces, political identities and the emergence of a global civil society (Castells 2008). This transformation of society has among other things made the concept of governance relevant for describing a new situation for dealing with environmental policies and risks, involving different actors at different levels. Despite several initiatives to counteract negative trends, it is clear that human activities still cause severe environmental problems and risks which means that structures and processes for environmental governance have to be improved (cf. Gilek et al. 2011). According to Renn (2008), risk governance consists of four phases: pre-assessment, appraisal, evaluation and management. Risk communication is in different ways included in all of these and therefore can be considered as a key component of risk governance. In this chapter, we focus on institutionalised forms of risk communication and especially on risk communication with and to the public with regard to environmental governance of the Baltic Sea.

The implementation of the ecosystem approach to management (EAM) has been identified as a key means for achieving a healthy marine environment. For example, in the Baltic Sea region (BSR), environmental risk governance strategies have so far not been designed to deliver the holistic appraisals and integrated management that would be required by this approach (Dreyer et al. 2011; Hassler et al. 2013; HELCOM 2010; McGlade 2010). The application of EAM in BSR has been a central pillar of HELCOM's Baltic Sea Action Plan (BSAP) from 2007 (HELCOM 2007). EAM is identified as a means to address major pressures affecting the Baltic Sea marine environment in a more integrated and effective manner (cf. Karlsson et al. 2011). The EU has also endorsed EAM in different directives (Dreyer et al. 2011), and previous research has shown that deliberation processes are also vital for the implementation of it (Dreyer et al. 2014).

In this chapter, we discuss forms, opportunities and challenges for risk communication and the role of the public in implementing EAM in environmental and regional governance, using BSR as a case. Besides being an ecologically and politically highly diverse and important region to study in itself, BSR is held forward as a pioneer for introducing new forms of environmental governance (cf. Joas et al.

2008). Environmental governance of the Baltic Sea is not only a case of regional governance but also linked to the area of marine governance (see, e.g. van Leeuwen and Kern 2013). Even if BSR is a particular case, the RISKGOV project (cf. Introduction in this book) has contributed knowledge relevant for the wider fields of regional, marine and environmental governance. We argue, accordingly, that results presented in this chapter are relevant for the understanding of (public) risk communication, within a cross-country governance context, in general.

Various actors (e.g. policy-makers, social scientists, etc.) agree that for societies to be able to manage and govern global risks, there is a need for improved transnational communication, more harmonised decision-making and multi-stakeholder participation as well as for the increased involvement of citizens through information and dialogue. In the policy-making context, this is described as ‘good governance’ (cf. Whiteside 2006). For example, the Aarhus Convention (1998) emphasises the role of public deliberation in environmental decision-making. So too do the EU directive on Environmental Impact Assessment (EIA), the EU Sixth Environmental Action Programme (European Commission 2001a)¹ and the European Commission’s White Paper on European Governance (European Commission 2001b). From a theoretical perspective, ‘good governance’ can also be defined as ‘reflexive governance’ and includes aspects like transparency, broad participation and self-scrutiny (see, e.g. Boström et al. 2016; Hassler et al. 2013; Voss and Kemp 2006).² According to Oran Young, ‘governance’ is a wider term than government, as it is ‘a social function centred on efforts to steer or guide societies toward collectively beneficial outcomes and away from outcomes that are collectively harmful’ (2009: 12). This function often includes governments playing a role but is much wider comprising other actors from other social spheres as well. Governance is, accordingly, not restricted to hierarchical and top-down relations but also involves citizens and stakeholders in network-like constellations. The communication model underpinning this mode of governance is ‘dialogue’ (e.g. Felt and Fochler 2010; Jentoft et al. 2007; Pierre and Peters 2000).

In a previous article about stakeholder participation and communication in relation to environmental issues in BSR, Dreyer and colleagues (2014) concluded that it is crucial to acknowledge the role of the public, enhance efforts to communicate EAM and raise public awareness of and interest in EAM, for a successful governance process and implementation of EAM. Increased public debate would also help to prepare the ground for ‘reflexive governance’ based on a deliberative ideal. At an aggregated level, the public and citizens are important counterparts to policy-makers as ‘public opinion’, voters and grassroots movements.

¹ There is now also a seventh action programme that however does not mention public deliberation among the main priorities, only ‘better information’ <http://ec.europa.eu/environment/newprg/index.htm>

² See Boström et al. (2016) for an analysis of BSR environmental governance using the theory of reflexive governance.

Dreyer and colleagues furthermore concluded that it is a huge challenge to organise such transnational citizen involvement in an effective and fair manner. As mentioned above, together with participation, increased transparency in decision-making processes is vital for reflexive governance. In practice however this transparency is seen in relation to well-organised stakeholders and representatives of different organisations and generally does not include the common citizen.

Our main argument in this chapter is that risk communication to the public (particularly in its dialogic form) is a necessary element in reflexive governance, which in turn is a key requirement for serious implementation of EAM and a move towards a more sustainable marine environment. We also argue that wide public acceptance of general risk policies and their underlying principles is a necessary condition in order to successfully implement such measures and that there is a need to focus on the role of the public. To better understand the forms and consequences of public involvement and risk communication, this chapter analytically focuses on institutional arrangements and arenas for public risk communication with a main focus on the news media given its ability to influence frames and agendas. These are some of the main factors that shape the relationship between the general public and policy-makers in the field of political communication (cf. Mazzoleni and Schulz 1999; Schulz 2004; Strömbäck 2008).

9.1.2 *Aim and Questions*

Against this background, the overarching *purpose* of this chapter is to describe and discuss conditions for risk communication in relation to the five main environmental risks in BSR, with a particular focus on communication with and to the larger public. We also suggest possible pathways to encourage aspects of risk communication that facilitate reflexive governance and implementation of EAM. We will empirically explore the following questions:

1. What are the existing institutional arrangements and procedures of risk communication at the regional (Baltic Sea) level? What forms of communication can we identify (linear vs. dialogue, formal vs. informal, etc.)?
2. What is the role of public risk communication in environmental risk governance of BSR, and how can this communication be understood and characterised?
3. What role can be ascribed to different kinds of news media? What is the role of framing, arenas and agendas?

The empirical data used for analysis in this chapter is drawn from five case studies, which were conducted in the RISKGOV project. The case studies analyse the governance of the marine environmental risks of eutrophication (Haahti et al. 2010), invasive alien species (IAS) (Lemke et al. 2010), overfishing (Sellke et al. 2010), oil discharges (Hassler et al. 2010) and chemical pollution (Udovyk et al. 2010) with respect to three governance dimensions, one of which is 'processes of stakeholder

communication'. A common analytical framework guided all five case studies ensuring the comparability of the cases, which were performed using similar research designs (cf. Gilek et al. 2011). All case studies employed an explorative-interpretative approach of qualitative social research, and their results have been derived from three main sources: document analysis, semi-structured qualitative interviews and a series of round-table events. This allows us to draw conclusions about communicative aspects of environmental governance of BSR, whereas we will also when possible use the case of BSR to discuss regional and marine environmental governance more generally.

In the next section, we will introduce our main theoretical perspectives that focus on risk communication in environmental governance, risk communication with and to the public and the role of the news media. We will then turn to our analysis of the empirical material and start with a discussion about existing institutional arrangements and procedures of risk communication and the forms of communication that can be identified. Thereafter we address the topic of risk communication with the public and how this communication can be understood and characterised with a special focus on arenas for communication and the role of the media. Finally, we conclude the chapter with a discussion on the role of public risk communication in (regional) environmental risk governance and possible ways forward.

9.2 Theoretical Perspectives

9.2.1 *Environmental Governance and Risk Communication*

We use the concept of risk communication as defined in the 1989 report on 'Improving Risk Communication', produced by the Committee on Risk Perception and Communications of the US National Research Council (NRC). The report argues that risk communication is:

[...] an interactive process of exchange of information and opinion among individuals, groups and institutions. It involves multiple messages about the nature of risk and other messages, not strictly about risk, that express concerns, opinions or reactions to risk messages or to legal and institutional arrangements for risk management. (US NRC 1989: 1)

Risk communication is a fundamental part of environmental risk governance (cf. Renn 2008), but can also be seen as part of the wider notion of environmental communication. Environmental communication by Cox is defined as 'the pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world; it is the symbolic medium that we use in constructing environmental problems and negotiating society's different response to them' (Cox 2010: 20). Contemporary risks are rarely a first-hand experience, but something communicated through different channels of information flows in today's modern society. Risk communication is a field of research that addresses communication between experts and the public, or as it has traditionally been, risk information

given to the public by experts. Renn (2008) identifies four different types of risk communication: documentation, information, dialogue and involvement.

Communication as it is used in this context thus includes on the one hand the provision of information (which in some respects also includes documentation) and on the other hand dialogue and involvement. These two forms are like two different models of communication (see, e.g. Fiske 1990). It is relevant to distinguish between them in analyses of governance activities even if there are obvious overlaps between the two.

In general, research in risk communication still rests on a traditional, and in some sense obsolete, notion of communication as a linear process, which might be successful but could also fail. This notion has its roots in the classical source-receiver model where a message is sent from a source to a transmitter who decodes it and sends it towards the receiver, the audience (Cox 2010; Fiske 1990). The model has been applied and somewhat amended to fit patterns of science and risk communication; where the *sources* consist of, for example, scientists, public agencies, interest groups and/or eye witnesses; where the *transmitters* are mass media, public institutions, interest groups and opinion leaders; and where the *receivers* include the general public, specific target audiences, group members or exposed individuals. Traditionally risk communication studies have had a focus on the means of transmission as well as on the composition of the message and the ability to persuade the audience in a particular way with the main aim of changing audience behaviour (Breakwell 2007). Traditionally the communication of risk messages thus has mainly been about experts ‘informing’ the public (e.g. with regard to the public’s ‘right-to-know’).

The view of seeing communication solely as a one-way endeavour (from ‘experts’ to ‘laymen’) has in many ways been abandoned on behalf of a more inclusive and process-oriented view of communication. Here, communication is seen as evolving through systems and networks over time and within deliberate decision-making about risks (Breakwell 2007; Renn 2008). This linear model has been criticised for ‘...its naive conception of the public. It views them as passive recipients of information, taking no account of how the information they receive will interact with their pre-existing knowledge and attitudes and ignoring any demands they may have for what they learn to be relevant to their individual situation’ (Gregory and Miller 2000: 97).

Public participation and its conceptualisation in risk policy have thus shifted from a technical one-way communication towards a more inclusive approach, in which there is a ‘two-way learning’ between science and society (Pidgeon et al. 2006). Here we see a parallel development in the field of science communication with a shift from the deficit model with its focus on *informing* the public for the purpose of increasing scientific knowledge among citizens and thus fostering more positive attitudes towards science to a more dialogical ideal, expressed in Bucchi’s ideas on avoiding the transfer paradigm and instead seeing communication as a ‘crosstalk’ and a ‘double helix’ with one strand representing scientific discourse and the other representing public discourse (Bucchi 2004).

9.2.2 *Why Involve the Public?*

From the perspective of the so-called civic science, citizens and the public have a stake in the science-politics interface, an interface that can no longer be viewed as an arena for scientific experts and policy-makers only (Bäckstrand 2003). So what do we mean by the ‘public’? In governance theory the public is generally framed as *concerned* publics, meaning those affected by decisions, or what Beck (1992:61) describes as ‘the voices of the side effects’. Models of deliberative democracy and the public sphere however refer to citizens in general and the notion of the public interest (Dahlgren 2005; Habermas 1989). Both these perspectives point to the difficulty of defining what is at stake for the public – i.e. what is ‘the public interest’ – and who represents the ‘general citizen’. Researchers working on the public/science/policy interface point, for example, to problems with participatory processes in relation to the question of whom the public actually represents and the type of people interested in participating (Janse and Konijnendijk 2007). In this chapter, we consider stakeholders as organised interest groups and the public as unorganised, representing the individual citizen.

Risk communication with the public implies taking into account the values, knowledge and experience of citizens. Such inclusion can improve governance and also make decisions more legitimate, robust and easier to implement (see, e.g. Stirling 2005; Whiteside 2006). Public involvement affects how problems and solutions are identified and defined since participants can have a great influence on how issues are framed. In the fields of science and risk communication, much attention has been directed towards the role of deliberative activities and processes for public participation and communication. Such activities include public hearings, conferences and advisory groups (see, e.g. Brake and Weitkamp 2009; Hagendijk and Irwin 2006; Lidskog et al. 2010).

A major incentive for activating public dialogue processes is to restore the public’s confidence in government authorities including risk regulators, although many argue that increased public communication and a democratised scientific process are also good things in themselves. Increased public involvement may reduce, for example, mutual distrust. However, certain drawbacks of public involvement may appear. Increased transparency and public debate regarding complex and uncertain risk issues may result in increasing worries and larger unpredictability of risk perception and behaviour (cf. Frewer 2003). This in turn could be problematic for an efficient governance process (cf. Irwin 2008).

According to Ortwin Renn, to communicate risk to the public is a difficult task (Renn 2008). Risk communication comprises several essential dimensions including education/enlightenment of the audience and risk training for involved parties to cope with the risks and to build up confidence in risk management as well as to help create confidence towards risk handling institutions, it also enhances cooperation and conflict resolution in risk-related decision-making processes. These specific functions of risk communication all require slightly different forms of communication, including documentation, information, mutual dialogue and involvement. In risk

communication the issue of credibility is of key importance and so too the ability to catch those who are potentially interested (Renn 2008).

9.2.3 Risk Communication and the Public Sphere

To acknowledge the role of the public in risk governance and communication is at least a twofold endeavour. On the one hand, it is about including the public as citizens (organised and individually) in governance processes via, for example, hearings. On the other hand, it is about raising awareness and making these issues a prominent part of the public discourse putting them on the public agenda. Political decisions are widely affected by the relationship between the agendas and frames of policy-makers, the public and the media (cf. Asp 1986). The news media and public debate are essential for communication between policy-makers and the public and for creating common agendas and framing risks. Over the last decade, so-called social media like Twitter and Facebook have also been a tool for policy-makers to communicate with and inform the general public.

The media is also an arena for public representation and for different forms of participation (such as submitting letters to editors or writing opinion pieces), not least when it comes to environmental risk issues (cf. Egan Sjölander and Jönsson 2012). Media and journalism studies have highlighted that the news media generally articulates an elitist discourse (see, e.g. Shoemaker and Reese 1996), something that is the case with regard to environmental news as well. Spokespersons from government and industry dictate the discourse of environmental news, while the views of ‘ordinary’ citizens or ‘side effects’ (cf. Beck 1992) are much more rare (cf. Cox 2010). Research also shows that those who appear in the news are able to influence on how a problem is framed in terms of causes and solutions (see, e.g. Entman 1993).

The concept of framing has roots in both psychology and sociology and in the work of sociologist Erving Goffman. Goffman discusses framing as an interpretive framework that helps individuals to process information (Goffman 1974; Pan and Kosicki 1993). In the field of policy-making theory and political sociology, the concept of framing is often used to analyse how actors are actively involved in debating, defining and setting a particular agenda and furthering its implementation (Rein and Schön 1993).

The concept of framing can be used in different kinds of analyses and has been applied in studies of stakeholder participation and communication within governance processes (see, e.g. De Marchi 2003; Dreyer et al. 2014; Jönsson 2011). Risks are inherently difficult to communicate as different interpretations and implications are bound to emerge. Framing is the work of defining and answering questions like: What is at stake? What is the risk? What is the cause and effect (Entman 1993; Schön and Rein 1994)?

Framing is an essential component in all phases of risk management (while perhaps particularly important in the pre-assessment stage; see Linke et al. 2011).

Framing denotes processes in which actors deal with social and ecological complexity. Stakeholders develop their arguments through frames, and these frames also help them find common ground for negotiations and compromises. Policy-making processes may stimulate rich debates and reflection both within and across frames, making stakeholders and the general public able to develop arguments, debate and reflect critically on policy statements. Used reflectively, frames such as the ecosystem approach, biodiversity, overfishing, precaution, sustainability and many others are useful for perceiving and understanding sets of problems in novel ways. The multilayered character of these frames may open up interpretative flexibility (cf. Klintman and Boström 2008). Such flexibility provides both barriers and bridges to communication.

Framing as such can also be viewed in light of communication and media texts. Robert Entman (1993: 52), doing exactly that, defines framing in the following manner: ‘To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, casual interpretation, moral evaluation, and/or treatment recommendation for the item described’. In this setting, frames can be said to define the problem, diagnose the causes, make moral statements and also suggest solutions to the problem at hand, even though a frame does not necessarily have to include all elements (Entman 1993). Media framing functions as a way to construct a specific environmental issue and elicit a response or conclusion from the media recipients (Hansen 2010).

In the next section, we will present our empirical findings and analyse risk communication in relation to our selected five environmental risk issues relevant to the Baltic Sea.

9.3 Results: Risk Communication in BSR

9.3.1 Institutionalised Risk Communication

The main finding from our cases is that there are few, if any, actual examples of systematic institutionalised public risk communication in BSR. There are also a lack of regional and transnational networks and communicative structures for information sharing with and involvement of the public. However, there are some exceptions as discussed below.

In many cases, HELCOM is the main actor in risk communication. Among other things, this organisation serves as a communicative platform and meeting place for different actors and interests (Hassler et al. 2013; Van Deever 2011). In the eutrophication case, HELCOM, with its Baltic Sea Action Plan, is seen as one of the main players (Hahti et al. 2010). The structure within HELCOM makes it possible for stakeholders such as NGOs to communicate and contribute knowledge. According to the case study report on chemical pollution, the EU and HELCOM are

platforms of communication for politicians and authorities, but not for independent single scientists or laboratories (Udovyk et al. 2010). The European Environmental Agency (EEA), the European Green Spider Network (consisting of communication officers from national environmental ministries and agencies in Europe and supported by the DG Environment of the European Commission) and IMPEL are other organisations or networks that aim to distribute and communicate information regarding environmental risks in, for example, the BSR.

There is of course also communication within and among the different organs of the EU. However, the complexity of the EU creates difficulties for communication inside the organisation. This is, for example, noted in the eutrophication case study where communication between authorities at the national level is less about institutionalised formal communication, but instead about informal communication and personal contacts and networks, created through a tight interplay between science and policy (Haahti et al. 2010; Linke et al. 2014). This reliance on informal communication and personal contacts is also noted in the case of hazardous chemicals, as illustrated in the following quote from an official from a Swedish state authority: 'It is important to know the right people and have a network of contacts. If you send a letter to the agency, you will never know where it will end up' (Udovyk et al. 2010: 48). These personal contacts are not often easily applied across the entire BSR (Udovyk et al. 2010).

The lack of communication and tools and platforms for successful communication is often identified as a barrier to risk management and implementation. An example of this is that of IAS. According to the case study report on IAS, cooperation and communication between the key stakeholders was highly unsatisfactory. The weak communication between the main players, together with the lack of public debate, was identified as the main reason for low public awareness on the IAS issue (Lemke et al. 2010).

Overfishing is the risk area with the most established forms of regional risk communication. The communication takes place through Regional Advisory Councils (RACs), like the one established for the Baltic Sea in 2006 (cf. Linke et al. 2011). RACs are advisory institutions set up by the EU Commission with representatives from the fishing industry and different environmental groups (NGOs) and are often put forward as an innovative example of regional stakeholder participation (Linke and Jentoft 2013; Sellke et al. 2010). If broad inclusion is the ideal for risk governance, it is necessary to not have a static idea of who stakeholders are. A static view of stakeholders presupposes what issues are at stake and who is to be seen as holding a stake in that issue. In fact, the very definition of who the legitimate stakeholders are is part of the framing process. Governance structures, including organisations and institutions, shape these framing processes.

Officials of the German Fisheries Association stressed during an interview that the BS RAC is a forum for 'entering into real dialogue with other stakeholders, scientists and Commission officials' (Sellke et al. 2010: 29). We found that the most advanced form of regionalisation among our five case studies was in the area of fishing with RACs as the main example of multi-stakeholder regionalised advice

procedures. There is however a critique directed towards the RAC system both from stakeholders themselves (environmental NGOs complain about the power asymmetries that benefit the fishing industry) and among scholars. Linke et al. (2011) suggest that a basic problem with RACs is a mismatch between the participation purpose (knowledge inclusion) and the stage in the governance process at which RACs are formally positioned (evaluation of management proposals). Their conclusion is that if the aim is to broaden the knowledge base of fisheries management, stakeholders need to be included earlier in the governance process (cf. Linke et al. 2011).

9.3.2 Forms and Platforms for Public Risk Communication

As mentioned above, Renn (2008) identifies four different forms or kinds of risk communication: documentation, information, dialogue and involvement. We find examples of all of these in our cases. In the cases of oil transportation, overfishing and eutrophication, communication can be characterised as one way from authorities to a wider public. It appears in the form of information such as statements, press releases and reports. Two-way communication and dialogue are sometimes established via different projects, which often include organised stakeholders as partners but not links to the general public. For example, in the case of eutrophication, research projects such as the Baltic COMPASS (Comprehensive Policy Actions and Investments in Sustainable Solutions in Agriculture in the Baltic Sea Region) and Baltic DEAL (Putting Best Practices in Agriculture into Work) involve farmers in BSR in the research process (see Haahti et al. 2010).

There are different media and tools for communication to and with the public, for example, eco-labels, documents, reports, articles, laws and regulation, meetings and seminars. Our results point to the preference for using digital media platforms and webpages. Different actors however use different forms of communication. Whereas scientists use reports and articles, NGOs focus more on the use of the Internet and the organisations' webpages to inform the public. Through these channels, NGOs provide information, discussion forums and ideas on what the individual citizen can do to prevent or mitigate Baltic Sea-related problems.

Awareness raising constitutes a key part of HELCOM's communication policy. Its website states that 'An essential objective is to raise general public awareness of the Baltic Sea and HELCOM actions' (quoted in Dreyer et al. 2011). HELCOM also uses its website to communicate to a wider audience. Through its website HELCOM provides a large amount of publicly accessible documentation and information on the five cases. The information formats used, for example, indicator fact sheets and thematic reports, are primarily produced for targeted users at national and Baltic-wide levels. The website mainly meets the information needs of those who already express an interest in marine environmental risk governance. This is also the case with RACs in the fisheries case and relates to the question of who is

framed and considered as a 'legitimate' stakeholder. However, HELCOM also uses other forms of communication that can better reach the interested citizen or consumer. These include information brochures, videos and television and radio series,³ all with the potential to raise the awareness of those who have as yet not taken an interest in the issues so far (Dreyer et al. 2011).

A significant amount of documentation and information related to environmental issues at national and EU levels is made available to the public through the websites of responsible authorities. Some websites also provide more specific information. Take for example actors dealing with chemicals like the Swedish Chemicals Agency (KEMI) that has an established and widely used website with a large number of databases and up-to-date information. In the area of fisheries, industry representatives have designed a website (www.portal-fischerei-portal.de) that aims to deliver information to the public. This is, according to the interviewees, mainly a response to the media framing of overfishing (Sellke et al. 2010). A wealth of information – from general to highly detailed, much of this related to risk assessment matters – is made available on the website of the International Council for the Exploration of the Sea (ICES). The case studies in our project do not provide examples of any websites of responsible authorities that attempt to respond to the particular concerns of the general citizen. This is different from risk communication related to, for example, food safety issues (cf. Dreyer et al. 2011).

WWF employs a traffic light system as a popularised way of informing the public (or in this case the consumers) about the sustainability practices related to particular fishes sold in the supermarket. Also green marketing, certification and labelling are used as tools for bringing simple and concise types of information to the public. A special form of communication, which is mainly used in business-to-business relations or business-to-authority relations used in the case of hazardous chemicals, is the so-called MSDS (Material Safety Data Sheets).

Actors such as industries and NGOs (with enough resources) also engage in lobbying activities in the EU and national forums for decision-making. NGOs can themselves work as communicative brokers between other actors. There are a number of research projects concerning governance of risks in BSR. To the extent that these projects include researchers and other stakeholders, they can be seen as communicative platforms for deliberation and a meeting point for different actors.⁴ However, these activities seldom include the ordinary citizen.

³ See, for example, the HELCOM radio series 'The Baltic – a sea of change' and the TV series 'The Baltic – sea of surprises', available at the HELCOM interactive webpage (<http://agripollute.nstl.gov.cn/MirrorResources/10221/index.html>).

⁴ The RISKGOV project, for example, organised three round tables where researchers met with policy-makers, NGO representatives and scientists (reports from these round tables can be found in the RISKGOV project homepage www.sh.se/riskgov).

9.3.3 *The Role(s) of the Public*

Our results clearly show that actors differ in their views on public risk communication. While some consider involvement of the public fundamental, others underline the importance of expert knowledge. These positions partly reflect different national cultures and thus most likely reflect different ideals of democracy and the role of the public in different countries. The role of the public is, for example, often underplayed by interviewees from Russia, who instead underline the importance of expert knowledge (Udovyk et al. 2010). It is mostly NGOs who highlight the importance of communication and public involvement, something that is particularly evident in the overfishing case (Sellke et al. 2010) and in the case of hazardous chemicals (Udovyk et al. 2010). It could be argued that NGOs, in general, build on the idea of public information and involvement.

From our case studies, it is also obvious that the public generally is not involved or addressed in the risk assessment phase but rather (if at all) in the risk management or implementation phase. Risk assessment generally does not include dialogue with the public, and the communication phase is mainly about informing the public. Take for example the overfishing case, which otherwise has the most advanced system for stakeholder interaction: ‘Overall, interviewees did not see a need for more specific public participation within the governance process. Communication with the public was mainly seen in terms of information providing’ (Sellke et al. 2010: 32). The importance of informing the public – often framed in terms of the public’s ‘right-to-know’ (RTK) – has received increased attention in risk governance processes of BSR. In the case of information provision regarding chemicals, the pollutant release and transfer registers can be seen as examples of legally binding implementation of RTK (Udovyk et al. 2010).

Risk assessment has become an important tool for informing risk managers and the general public about the different options for protecting public health and the environment (Udovyk et al. 2010). Some of the interviewees, for example, from DG Mare, saw the different national parliaments as representatives of the public, emphasising that there is no need for further public involvement in the governance process (cf. Sellke et al. 2010).

A main finding is that the public is mainly addressed and thought of in their role as consumers and less so as in their role of political citizens. For example, several actors in the chemical case, in the overfishing case and in the IAS case see the responsibility of citizens in terms of them being consumers. In the case of hazardous chemicals, consumers are often portrayed as responsible for speeding up the process of change (Udovyk et al. 2010). It appeared from our interviews that the topic of ‘sustainable consumption’ is gaining importance and becoming a central part of future risk communication. Today, the topic of ‘sustainable consumption’ seems to be of most importance in public risk communication in the overfishing case (Sellke et al. 2010). Food/eco-labels like MSC have become highly influential in the last decade.

The public as consumers are, however, thought of in different ways in the five cases. According to Agenda 21 that addresses education in BSR, it is important that the work towards a sustainable society equips citizens with education and training and raises public awareness (Baltic 21 2002). However, according to our knowledge, there are no Baltic Sea regional organisations that develop and carry out targeted educational campaigns in any of the five risk issues. We are not aware of any cases where it is either discussed or specified how public awareness should be raised and whose responsibility this is.

9.3.4 The Role of the News Media

There are different barriers to public participation and communication in environmental governance and decision-making. First, there are structural factors including lack of opportunities and resources to participate. The other main problem seems to be a lack of interest from the public (Zavestoski et al. 2006), something that at least in part could be explained by differences in agenda between scientists, policy-makers and citizens. Previous studies of communication in marine governance procedures underline the importance of common agendas. Experiences of stakeholder communication and participation reveal that it is difficult to recruit citizens to participate in deliberative procedures such as hearings (RISKGOV 2011). One possible reason is that the concerned issues are not part of the public's agenda.

We see a relationship between the amount of media reporting and action taken. In Sweden and Germany, national news media have, for example, widely acknowledged the issue of overfishing, and the extent and content of reporting has induced public authorities to take corrective action through highly targeted information provision. There is however less incentive for regional organisations like HELCOM to take such actions because of the lack of reporting and a common agenda at the regional (i.e. transnational) level (cf. Dreyer et al. 2011; Jönsson 2011). This lack of a regional public arena and agenda supported by the mass media makes it more difficult to raise awareness of regional environmental risk issues among the public of that region. The media can play an important role in the development of common agendas on a national level (cf. McCombs 2005; McCombs and Shaw 1972), which in turn is crucial for generating interest from citizens and consumers (cf. Dreyer et al. 2011). The reasons that common agendas are important are because they place a certain (risk) issue on the agenda that may consequently enhance (public) engagement and increase the possibility and quality of (public) participation, which will result in improved (risk) management and policy implementation. In this process, the media and its agenda-setting function (cf. McCombs and Shaw 1972) is of utmost importance. The basic logic behind the 'agenda-setting' concept is that there is a relationship between the amount of attention a certain issue receives in the news media and the extent to which the public consider this issue to be of special importance. This thus also means that in order to become part of the public agenda, news about environmental risks in relation to the Baltic Sea must be considered

newsworthy. In today's media society, with its many communication channels and platforms, it is a challenge to reach out with messages. While agenda-setting theory mainly focuses on issues that are reported, framing in the context of media studies is about how issues are presented.

Previous studies of how news media frame environmental risks in relation to the Baltic Sea show that eutrophication together with overfishing receives the most media attention. This situation could be explained at least partly by the fact that the media focuses on stories that the consumer can identify with best (Jönsson 2011). The issue of hazardous chemicals on the other hand receives relatively little attention in the news media and is not on top of the public agenda. According to interviewees, chemical risks are framed in the media in a very narrow health-centred way related to eating contaminated fish (Udovyk et al. 2010).

Clearly, the conditions to achieve cultural resonance – the 'success' of the 'problem' – relate to possibilities of visualising the problem and reaching out to the media. The difficulty of visualising chemical pollution and the lack of media reporting were issues that interviewees mentioned (Udovyk et al. 2010). There was also less reporting on oil spills during the studied period (Jönsson 2011). Yet, oil spills can be easily visualised by the media and framed as an 'immediate threat' or 'pending danger'. However, in the case of oil spills, what is generally disseminated to the public is mostly just one side of the coin. Big accidents are always reported, whereas the more common (routinised) intentional oil spills are not (Hassler et al. 2010). This is because the media prioritises the most acute and spectacular issues, consequently resulting in the marginalisation of small catastrophes that are seen as 'normal' and not 'newsworthy' (cf. Anderson 1997; Hannigan 2006; Hansen 2010; Shoemaker and Reese 1996). Few other risk issues give rise to such intense reactions as when birds or seals are portrayed as caught in black oil, fighting for their lives. This often comes with pictures of voluntary workers removing oil from beaches and seashores. This type of catastrophe or big event framing, together with the visualisation component, can affect the kinds of societal responses that are expected of the public (cf. Hassler et al. 2010). In contrast, intentional oil spills, similar to IAS, are not issues of high priority in framing and campaigning activities of environmental NGOs, which is partly because NGOs too are constrained by 'media logic'.

Of our selected five cases, the issue of IAS appears to receive the lowest degree of media and public attention, in particular in the post-Soviet countries (Jönsson 2011; Lemke et al. 2010). IAS, in comparison to the other issues, is still new in the public's imagination in BSR (cf. Hansen 2010). Neither are environmental NGOs in general engaged in framing efforts targeted towards pushing the issue of alien species onto the public agenda nor are they mobilising support for a more developed risk policy. They do not appear to consider it a prioritised problem (Lemke et al. 2010). All in all this will affect policy outcomes. 'Since public awareness is related to political involvement and support, low awareness associated with IAS is treated by policy-makers as a public consent to neglect the issue especially in the context of non-ratified legal acts'. (Lemke et al. 2010: 55). There is accordingly no significant

public pressure on, for example, HELCOM contracting parties to speed up the ratification process or consider more detailed and binding regulations.

9.3.5 The EAM and Public Risk Communication

Another general finding is that there is only very limited EAM-related risk communication targeted at the general public and that EAM has not (yet) become part of public discourse at national and transnational (BSR) levels. Public awareness of EAM is limited because there is a lack of news coverage at the regional level (Dreyer et al. 2011; Jönsson 2011). Also, the mass media seem rather unwilling to report on EAM. The reason for this is probably its low news value; it is not a thrilling or original story and in fact somewhat old-fashioned. Currently, public debate is not a likely source of pressure on stakeholders to become more engaged with EAM and its guiding principles (Dreyer et al. 2014). EAM is thus not yet, at least in BSR, part of either the public debate or agenda or part of public values and imagination. The ecological challenge is not yet a ‘hot topic’ for BSR as a whole. Having said that, there are differences between different risks and problem areas in terms of public attention given to them.

Although the EAM concept can potentially facilitate reflection and communication among at least some of the key actors in risk governance, it lacks essential characteristics that are necessary for it to become central to a new societal paradigm, which could push all different actors central to Baltic Sea environmental governance to jointly deliberate over and act upon it with regard to the five risk issues (Dreyer et al. 2011). Besides from being rather invisible in public discourse, EAM is used differently and of a different level of importance to the five risk cases. In, for example, the oil spill case, it was reported that some of the key actors interviewed had never encountered the term before (Hassler et al. 2010). While many or even most interviewees seem to welcome the EAM concept, it is certainly less clear if this frame helps in the development of mutual understandings of risk. An interesting finding was found in the case of overfishing, where NGO representatives claimed that communication actually could be improved by EAM since it creates a common agenda and discourse (Sellke et al. 2010). Of course, it is also necessary to define what EAM really is while framing the problem and whether or not it is a ‘utopian vision’, as some interviewees claim, or a fruitful way forward that alone can help achieve the goal of sustainable development, as claimed by some. All in all, the abstract and complex nature of EAM appears to be a barrier to its adoption and communication across various actor groups. Governance of environmental risks and implementation of EAM require balancing different and often conflicting interests and values. Shared frames and agendas would, for example, enhance the possibility for successful risk governance. Platforms targeted at developing and implementing a more integrated approach and discursive space to address risks related to EAM are essential. These platforms and discursive spaces are needed to facilitate communication and understanding between diverse stakeholders in relation to particular risk

issues and across the different sectors that are affected by these risks. Such platforms are missing in our risk cases (cf. Dreyer et al. 2011). It is also clear from our cases that risk communication in BSR today does not make much use of digital media platforms. In the digitalised network society we live in, there are a number of possibilities to ‘meet’ and communicate made available by different virtual platforms, even if in practice, these possibilities are not used to their full potential (cf. Jönsson 2012; Zavestoski 2006).

9.3.6 Bridges and Barriers for Public Risk Communication

It can be concluded that while the five environmental risks are all established as environmental policy issues at different political levels including that of BSR (mainly through HELCOM and the EU), they are generally poorly represented and to different degrees in public discourse in the region. A certain level of public awareness is required in order to move towards more effective regionalised environmental risk governance as aimed at by HELCOM in particular (Dreyer et al. 2011).

Governance of marine environments often involves particular challenges for participation and communication due to the fact that many marine environments include several different actors and states. In the case of BSR, some challenges for regional governance such as a lack of a historic regional identity have been identified as significant (cf. Dreyer et al. 2014). It is worth considering that the Baltic Sea is a rather heterogeneous area where countries display rather divergent historical and contemporary traits while also having different ideas about, for example, democracy and public participation (Vangas 2010).

As discussed above, risk communication can be a bridge for environmental governance and a step towards sustainability and EAM. At the same time, nonexistent or not-working risk communication can be a barrier. Common arenas and agendas for communication are of great importance for risk communication with the public, but it is also crucial that all parties involved share the same language and concepts (this is also important for frame sharing). The difference in use of frames in communication between experts and other actors has often been a barrier for (risk) communication. So has the tendency within risk governance processes to stick to a narrow scientific/technocratic framing. For example, in the case of hazardous chemicals, one expert said: ‘The information is really technical and it is really hard for common people to understand what we are doing’ (Udovyk et al. 2010: 50). The role of English creates a problem particularly for delegates from Russia and other eastern states. One Russian journalist says ‘everything that is in English is kind of “silent” for Russia’ (Udovyk et al. 2010: 48). In the area of risk communication, different laws and regulatory documents can be seen as tools for creating a common language if it establishes common objectives and a common terminology. In this context, language thus refers to both the use of, for example, English and the use and understanding of a common concept.

9.4 Conclusions and Ways Forward

That (risk) communication to the general public should be seen as an inherent element of environmental and sustainability governance forms part of the standard rhetoric of transnational and intergovernmental organisations as well as authorities at different political levels. The need for general public support for environmental information as part of environmental governance in the Baltic Sea region can therefore not be underestimated. Environmental information is seen as especially relevant when drastic measures of risk management (such as closing commercially important areas for fishing or imposing nutrient reductions to combat eutrophication) have to be implemented. Such measures normally result in protests and conflicts as well as public debate in and through the media. Wide public acceptance of overall risk policy and its underlying principles – such as those at the core of EAM – is a necessary condition to successfully implement such measures (cf. Dreyer et al. 2011).

We have identified some examples of relatively well-working risk communication with parts of the organised public in BSR, such as in fisheries or eutrophication, but also a number of different barriers and obstacles. Our analysis of five cases shows a far from ideal situation from the perspective of reflexive or good governance with regard to how risk communication is conducted. Risk communication activities are often not firmly anchored in the organisational structure of the institutions responsible for risk assessment and management and are not understood as integral components of the entire risk regulation/governance process. It is also clear that there is no real reflection on communication activities and whether the precise forms of communication and use of mediums for communication reflect the transnational nature of risks under consideration, their context and whether they arouse, or could arouse, societal concern. Our key result from this study is that BSR consists of many national institutions for risk communication, but that there are hardly any centralised institutions for risk communication activities relating to environmental governance in the region.

Another key conclusion is that public risk communication in this array of cross-national environmental risks is restricted mainly to (one-way) information. More dialogical approaches, for example, aimed at the particular needs of citizens and consumers do not play a significant role. The particular nature of the five risk issues is one reason for this lack of dialogue since they appear to provide only few opportunities for the public to contribute to risk management. We have, however, seen that in the cases of overfishing and eutrophication, the average citizen is more or less directly addressed in his/her role as consumer and encouraged to move towards sustainable consumption. These cases are, however, mainly initiatives of environmental NGOs and businesses (cf. Dreyer et al. 2011).

Against this backdrop and from our empirical and theoretical knowledge of risk communication and the role of the public, we suggest ways forward. We see several aspects that could be improved in risk communication with regard to the involvement of the general public in BSR:

1. First of all we argue that there is a need to more firmly *anchor* risk communication activities into the organisational structure of the institutions responsible for risk assessment and management. Risk communication should be understood as an integral component of the *entire* risk governance process; that is, risk communication needs to be an ongoing activity during all stages of risk assessment and risk management, from the framing of the issue to the monitoring of risk management practice, while the target group may vary from stage to stage.
2. There should be *enhanced efforts to communicate EAM to the general public* by using a more *proactive approach*. Currently, EAM is generally perceived of as a rather abstract and technical concept that is unlikely to become part of the wider public agenda. In the context of implementing BSAP, HELCOM (and also public authorities at national levels) increased their efforts to communicate the EAM concept to journalists and other disseminators through different modes of popularisation and use of illustrative examples of ecological risks and appropriate EAM-based solutions. This could be one way to attract more attention from the national media and thereby reach out to the general public. It could help make environmental issues more of a ‘hot topic’. It would also complement initiatives of environmental NGOs and the business sector that address the average citizen in his/her role as consumer (only) (through, for instance, organic consumption or sustainable choice of seafood). To be a responsible consumer is of course one of the most essential roles citizens can play. But more proactive risk communication should also invite and stimulate citizens to discuss, frame and campaign for a cleaner, healthier, more attractive, fair and sustainable Baltic Sea (cf. Dreyer et al. 2011).
3. We also would like to point to the fact that *social scientists* are not used to their full potential (or hardly used at all; cf. Linke and Jentoft 2014) and need to be part of all stages of risk governance. All environmental problems are fundamentally also social problems, whether we are talking about causes, understandings or solutions to problems. Involving social scientists in only select stages of the governance process is likely thus to reproduce a reductionist view and treatment. Social scientists are needed to broaden the perspective and highlight the social character of risk issues. Moreover, using social scientists as mediators in different deliberative processes and meetings could, for example, help by bringing in a common language. NGOs also could take on a greater responsibility for raising awareness on environmental risks in the Baltic Sea area so as to create a common agenda.
4. The precise *form of communication and use of mediums* for communication needs to reflect the transnational nature of risks under consideration, their context and whether they arouse, or could arouse, societal concern. It is important to note that some risks are related to more or less global flows (e.g. chemicals) that even more so accentuate the challenges. Since there is a need to raise the degree of political and public awareness about the five risks in the Baltic Sea region, national *news media* has to highlight cross-country issues. There is a need for common media and shared platforms for debating issues, including regional media stations in different regions (e.g. the Baltic Sea or Mediterranean area).

So far there is no influential transnational (e.g. European) media. Nor is there an international public sphere with a role in governance and political communication. Hence, on the one hand, we have a situation in BSR where an arena for environmental risk governance exists, including regional actors and networks like HELCOM and UBC (and also a request from the European Commission's White Paper on European Governance that a regional or international public should be involved and invited to participate in decision-making procedures). On the other hand, there are obvious obstacles for public deliberation and participation on risk issues in Europe and in different regions in Europe. Important parts of the public sphere are missing and there are no common agendas or arenas for public participation. Such a situation prevents positive development of future governance efforts.

5. Risk governance and communication could also make much more *use of digital media* platforms. Online media offer spaces and platforms where citizens may engage in dialogic communication. So far, ICTs (Internet, social media and the like) are an important source of information for NGOs and other stakeholders who already possess some adequate knowledge about these platforms, but not for the public, who often do not know what to look for and where. Finally, it is important to stress the importance of both multiple and common agendas.

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