

# Caring for Water

## Public Participation and Possibilities for Care in Swedish Water Management

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Abstract:

The aim of this study is to investigate how technocratic water management is affecting the possibilities of the public to participate in decision-making and care for their local waters. This was investigated during the consultation process regarding the draft River Basin Management Plan and Program of Measures for the years 2021-2027 in the Bothnian Sea Water District in Sweden. The analytical framework consists of hydro-social research, a critical examination of the technocratic management of nature (including its historical origin, its connection to ecological modernization, and its view of public participation), and decolonial and ecofeminist theory. The methods used are participant observation, conversational interview, and document analysis. The results show that the forms of participation offered during the consultation process favoured professionals and actors of resource-strong organizations. Those who lacked informational advantages and those who did not speak the same technical language as the Water Authority were excluded from decision-making. Technocratic water management made it difficult for people to care for their local waters. Ecological modernization, which technocratic water management is a part of favours continued capitalist economic growth instead of sustainability and care. Relational care is proposed as an alternative to technocratic management to enable justice, democracy, care, and more-than-human flourishing.

Key words: Technocratic management, ecological modernization, public participation, water, care

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*Everywhere, feminists and ecological activists are obliged to think and talk and dress like technocratic men. Without doubt, this totalisation is 'the main enemy' for all women and men who care.*

(Salleh, 2017, p. xxi)

# 1 Introduction

In autumn 2020, I did an internship at the Water Authority of the Bothnian Sea Water District in Sweden. My time at the Water Authority coincided with the consultation regarding the draft River Basin Management Plan and Program of Measures for the years 2021-2027. This is the process when the public is invited to influence decisions about how the water will be managed during the next six years. My task was to investigate how to increase inclusion and public participation during the consultation process. To my help I had representatives from local water councils. Water councils are voluntary associations that gather stakeholders within a catchment area to discuss how to use the shared water resources. One of the water councils was relatively new and its representatives told me that one of their biggest challenges was to reach out to people. They said that the kind of knowledge needed to understand water management issues, and the complexity of the water management system in general, constituted an obstacle for those who wanted to participate and get involved in water management. They described it as exclusionary. I asked myself how to increase inclusion and public participation during the consultation process when the water management system already was made exclusionary from the start.

The Water Authority of the Bothnian Sea Water District is one of five Water Authorities in Sweden with the mission to implement the EU Water Framework Directive (2000/60/EC, hereafter referred to as the WFD). The WFD came into force in the year of 2000 with the goal to achieve good water status in all waters in Europe. It is an ambitious piece of legislation (Valinia, et al., 2012) that offers an integrated approach to water management (Hedelin 2008; Linton & Budds, 2014) with river basins as the administrative unit for management, greater public involvement, and the application of extensive economic analyses (Hedelin 2008; Messner, 2006).

The WFD promotes technocratic management. It has a managerial approach to water and it relies on technical expert knowledge. This is not unique for the WFD nor for water management in general. Rather, technocratic management has become the main strategy for knowing about – and being with – nature in modern society. It has become institutionalized and normalized in both education and policy practices to “the way things are” (Escobar, 2016; Luke, 2009). However, this way of knowing and being is not neutral and it is not

without political consequences (Escobar, 2016; Merchant, 1980). Therefore, I want to investigate the consequences of technocratic water management for those who care about water and want to do something about it. As will be shown, it is a matter of democracy but also of sustainability.

## 1.1 Aim and Research Questions

The aim of this study is to investigate how technocratic water management is affecting the possibilities of the public to participate in decision-making and care for their local waters.

This was investigated during the consultation process regarding the draft River Basin Management Plan and Program of Measures for the years 2021-2027, occurring from November 2020 to April 2021, in the Bothnian Sea Water District in Sweden. The consultation process was chosen as the case of investigation since it is “the prime example of an administrative procedure designed to enable stakeholder involvement in water management... in Sweden” (Lundmark & Jonsson, 2014, p. 167).

The aim will be fulfilled by answering to the following research questions:

1. What forms of public participation were offered during the consultation process?
2. How did the forms of participation enable or hinder different actors from participating in decision-making?
3. What are the implications for care?

## 1.2 Positionality

Before moving on to the rest of the thesis, it is time that I position myself as a researcher and writer of this document. We are often taught that “impersonal, neutral detachment is an important criterion for good research” (England, 1994, p. 81), but there is no objective research (Lund, 2014). The researcher is an integral part of and influences all phases of the research process including what questions are asked in the beginning, the collection of data, and the writing of the text (England, 1994; Davis, 2007). Acknowledging my positionality is about abandoning the search for objectivity and being clear about where I come from and where I stand. It is a recognition that knowledge does not come from nowhere or simplicity: it comes from a body, always complex and contradictory, situated in time and place

(Haraway, 1988). The joining together of a plurality of these embodied, partial, and *situated knowledges* (Ibid.) creates a multi-subjectivity (Hemmati, 2002) also known as feminist objectivity (Haraway, 1988).

As a white, female academic, I blended in at the Water Authority. Growing up in Northern Sweden and familiar with the area, I was an insider in many ways. However, one's positionality is ever changing depending on context and there is a "messiness and fluidity" of being both an insider and an outsider at the same time (Kohl & McCutcheon, 2015, p. 752; see also Sultana, 2007; DeLyser, 2001). The fact that I was an intern who only stayed a short time, and not an employee, made me a distinct outsider. I experienced that my critical perspectives as a human ecology student further established my position as an outsider at the Water Authority. Water council representatives did not see me as an employee at the Water Authority either, which resulted in what I experienced as a certain trust and honesty from their side. They told me about challenges they were facing, hoping that my research project could shed light on their problems. With them I was an insider in some ways because some of us were relatively new to Swedish water management and we had a common interest to increase public participation during the consultation process and in water management more generally.

With this thesis, I intend to situate technocratic water management. Just like any other knowledge, this knowledge system was developed by certain bodies at a certain time in history (Haraway, 1988; Merchant, 1980). I will provide a historical background of the technocratic management of nature, examine the knowledge system that underlies it, and investigate its political consequences in relation to participation and care. I will also present other knowledge systems – other epistemologies – that represent other ways of knowing and being. Having studied political ecology and decolonial and ecofeminist theory, I believe there are "better, less coercive, less exploitative, and more sustainable ways of doing things" (cf. Robbins, 2012, p. 20). It is time that we go to the roots of the current ecological and social crisis. It is time that we ask the same question as Salleh (2017, p. 283): "which way of knowing is most helpful in a time that cries out for affirmation for life?"



## 1.3 Structure of the Thesis

The thesis is structured as follows. First, I will present the WFD focusing on its epistemology; its emphasis on economic analysis; and its call for public participation. Next, I will go through previous research about public participation in Swedish water management highlighting the need for more critical studies. The analytical framework of the thesis is presented in chapter 3. Hydro-social research is introduced as an overarching framework because of its recognition of the political nature of water management. Then, I will explain what technocratic management is, its historical origin, its connection to ecological modernization, and its view of public participation. Arnstein's (1969) ladder of citizen participation is presented because of its useful illustration of the different degrees of participation that exist. The final components of the analytical framework consist of decolonial and ecofeminist theory. Other ways of knowing are recognized and how they result in other ways of being and shaping the world. Finally, ecofeminism and relational care is presented as an alternative to the technocratic management of nature. Chapter 4 contains the research design and methods used in the study. Research questions 1 and 2 are answered in chapter 5, and the third research question about implications for care is discussed in chapter 6. Finally, chapter 7 contains the conclusions of the study.

## 2 Background

### 2.1 The EU Water Framework Directive: Epistemology, Economics and Participation

Hedelin (2008) has identified an epistemological imbalance in the WFD. She argues that an integrated approach to water management should include the integration of different forms of knowledge. However, in the WFD, there is weak legal support for the use of knowledges beyond the natural sciences except economics required for the economic analysis of water use in Article 5. The dominant neoclassical school of economics share the same positivist view of knowledge as the natural sciences, claiming that knowledge can be objective and value-free. Different views of knowledge are not handled by the WFD and Hedelin (Ibid.) warns that important issues will be overlooked due to the framework.

According to Annex III, the economic analysis shall “make judgements about the most cost-effective combination of measures in respect of water uses... based on estimates of the potential costs of such measures.” Economics was not explicitly considered in the selection of water management measures in the past (Messner, 2006). Therefore, the search for efficiency could be seen as a progressive component of the WFD due to the resulting lower costs, but there are limitations to the method. Efficiency is the sole criterion of cost-benefit analysis and other values like equity and sustainability are neglected (Ibid.).

In the preamble (14) it is stated that the success of the WFD relies on information, consultation, and involvement of the public. These concepts (information, consultation, and involvement) represent three forms of public participation with varying degrees of active involvement. According to the WFD, member states are obliged to ensure information and consultation, while the form of participation that requires the most active involvement is encouraged (European Commission, 2003). Article 14 states that “Member States shall encourage the active involvement of all interested parties... in particular in the production, review and updating of the river basin management plans.” Draft copies of the river basin management plan shall be made available for comments to the public and information and background documents shall be given on request (Ibid.).

The WFD contains detailed information about how to characterize, classify and monitor water bodies, but there is very little information about how the participatory parts of the directive should be carried out (Hedelin, 2008). More is said in the CIS Guidance Document no 8 (European Commission, 2003). The Guidance Document is part of a common implementation strategy with the aim “to allow a coherent and harmonious implementation” of the WFD in the member states (Ibid., p. ii). It is an advisory and non-binding document. Here, public participation is defined as “allowing people to influence the outcome of plans and working processes. It is a means of improving decision-making, to create awareness of environmental issues and to help increase acceptance and commitment towards intended plans” (Ibid., p. iv).

Several factors are highlighted in the Guidance Document (European Commission, 2003) that are considered beneficial to the public participation process. One of them is developing a learning approach to participation. This includes creating opportunities for learning between stakeholders that “goes beyond simply presenting information... which tends to be one-way

rather than two-way communication” (Ibid., pp. 57-58). Applying a non-dominating attitude that appreciates perspectives of other stakeholders is considered helpful. It is important to value different forms of knowledge and to recognize that both expert and non-expert knowledges can contribute to a better understanding of a problem (Ibid.).

## 2.2 Previous Research about Public Participation in Swedish Water Management

A lot of research has been done on public participation in Swedish water management after the implementation of the WFD (see for example (Prutzer & Soneryd, 2016; Franzén, et al., 2015; Valinia, et al., 2012). Studies of consultation processes and water councils – the two main arenas for public involvement – show that one of the remaining challenges is to involve the general public and not just a small number of stakeholders from professional organizations (Matti, et al., 2017; Lundmark & Jonsson, 2014; Eckerberg, et. al., 2012). Although water councils are open for all to participate in, Matti, et al. (2017) have found that certain actors and interests are more frequently represented than others. Industry and municipalities were represented in all water councils studied, whereas interest-based organizations, such as environmental organizations, lacked representation in half of them. Lundmark and Jonsson (2014) point out that it is resource intensive to participate in water management and that non-profit organizations do not have the same resources as for example a company. The professionalization of the water councils has been identified as the biggest obstacle to reaching a wider public (Matti, et al., 2017) and Eckerberg, et al. (2012) have reported how water councils fail to involve their larger networks.

One of the main conclusions of a summary of the existing knowledge about public participation in Swedish water management was that authorities responsible for encouraging public participation sometimes had a limited understanding of participatory processes (Prutzer & Soneryd, 2016). Hedelin and Lindh (2008) found that officials did not seem to perceive water management as political. They were not interested in making the participatory processes democratic and there were no plans for dealing with problems of power imbalances. Power imbalances were reported in water councils studied by Eckerberg, et al. (2012), where Sami villages and local people had less influence than other actors. Women, young people, and people with different ethnicities were underrepresented in the participatory

processes studied by Nolbrant (2020). Other challenges related to public participation come from contradictions between the participants' expectations of what can be done and the limitations of the participatory process that determine what actually can be done. Nolbrant (Ibid.) brings up the contradiction in that the WFD has a top-down perspective with goals already set in advance, but that it also calls for a bottom-up perspective and public involvement. If people are invited to participate in developing visions but it turns out that they have no influence, participation becomes an empty shell and trust disappears (Ibid.). Valinia, et al. (2012) explore how the often separated goals of good ecological status and public participation in the WFD can be linked together. They argue that the separation of public participation from goal setting comes from the failure to recognize the existence of multiple descriptions of what could be an undisturbed state, to which good ecological status refers. They recognize that there is no objective definition and that it will vary depending on the values, knowledge, and perceptions of different actors. Their study shows, contrary to what is applied in Swedish water management, that the public can participate and broaden the understanding of good ecological status and reference conditions in local waters before decisions are made (Ibid).

Some articles point at the emphasis on scientific (technical, expert) knowledge in Swedish water management at the expense of other (experience based, local, indigenous, traditional) forms of knowledge and how this hinders both participation and learning between stakeholders (Lundmark & Jonsson, 2014; Matti, et al., 2017). Despite its general participatory aims, the WFD is an expert-driven process (Jonsson, et al., 2011). "WFD indicators... are formulated in terms of ecological, biological, hydro-morphological and chemical parameters, based on scientific language and concepts that make them abstract and obscure to laypeople... [and] complex and ambiguous even to experts" (Ibid., p. 929-930). In a study of the consultation process from March-September 2009 in the Bothnian Bay Water District, Lundmark and Jonsson (2014) found that representatives from the general public seldom contribute to on-going water management with their experiences and understandings. Only 17 out of 136 consultation responses came from single individuals, study circles or village representatives. The volume of the consultation material and the knowledge needed to understand the texts were mentioned as possible explanations to this. One of their respondents pointed out that in order to reach people with experience-based knowledge, one has to communicate in non-bureaucratic ways. Communication during the consultation

process was one-way and information-based, and the public was primarily expected to participate by agreeing or disagreeing with water classifications already carried out by the Water Authority (Ibid.).

Although there is criticism of the overemphasis of technical knowledge in the WFD and Swedish water management, few studies question technocratic management as a strategy for caring for water or its connection to ecological modernization. I will write more about this in the analytical framework, but in short ecological modernization is a political project and a discourse that acknowledges the need to care for the environment but not at the expense of capitalist economic growth (Adams, 2009; Hultman & Pulé, 2018). Instead of assuming the current water management system to be objective or neutral, I call for more critical studies. The first step is to acknowledge the political nature of water management and the knowledge system that underlies it.

### 3 Analytical Framework

Aware that all knowledge is situated knowledge (Haraway, 1988), this analytical framework will help me detect the situatedness of technocratic water management. When the situatedness of a knowledge system is made as explicit as possible, it is easier to identify its political effects (Zwarteveen & Boelens, 2014). This is needed to be able to analyse how technocratic water management affects public participation and care. To contrast the current water management system, and show alternative ways of doing things, I will present another strategy for caring for water. This is done in the last section of the analytical framework and consists of ecofeminism and relational care. This is a strategy rooted in another epistemology and with other political effects.

#### 3.1 Hydro-Social Research: Recognizing the Political Nature of Water Management

Hydro-social research recognizes the social and political dimensions of water (Swyngedouw, 2009; Linton & Budds, 2014; Zwarteveen & Boelens, 2014; Boelens, et al., 2016). It seeks to transcend the modernist separation between nature and society (Swyngedouw, 2009) and opposes the idea that water problems and their solutions are “natural” and “politically

neutral... which can be ‘objectively’ solved according to technical knowledge” (Boelens, et al., 2016, p. 2). Hydro-social research explores how the use, management, and socio-political organization of water creates distinct forms of hydro-social circulation. Special attention is given to the arguments, knowledge systems and naturalizing discourses underlying these operations (Boelens, et al., 2016; Swyngedouw, 2009). Naturalizing discourses “aim to convincingly explain (as if it were ‘natural’) how socionatural reality needs to be understood and experienced” (Boelens, et al., 2016, p. 11), thereby discrediting other ways of thinking, talking, and acting in relation to water. This is done both consciously and unconsciously and helps to sustain specific political orders (Boelens, et al., 2016; Zwartveen & Boelens, 2014). In this thesis I will explore the unconscious way in which certain discourses and ideas about water are held over others and how this affects participation and care for water. This perspective is less about the intentional or strategic use of these ideas and more about understanding the process by which the ideas – translated into certain water management practices – became naturalized and their situatedness forgotten (Zwartveen & Boelens, 2014; Robbins, 2012).

Hydro-social research show that water management is more than just deciding how the water will be used. It also contains “struggles over meaning, norms, knowledge, decision-making authority, and discourses” (Boelens, et al., 2016, p. 8). Zwartveen & Boelens (2014) have identified four layers of contestation over water: (1) contestation over water as a resource; (2) contestation over the contents of the rules, norms and laws that determine water distribution; (3) contestation over authority and decision-making power; (4) and contestation over discourses including “the accepted languages and practices for framing and shaping water laws, and... the preferred ways of conceptualizing water problems” (Ibid., p. 150). These four layers are interrelated and affect each other. Zwartveen & Boelens (Ibid.) explain how. “A particular discourse will also entail a particular way of organizing decision-making, and work to legitimize some forms of authority over others; it will also favour some rules and priorities for resource management... [which] fosters the ways in which available resources are being distributed and used – privileging some groups over others” (Ibid.). Knowledge about these interrelated layers of water management will be helpful in analysing how technocratic water management is affecting the possibilities of the public to participate in decision-making and care for their local waters.

## 3.2 Technocratic Management of Nature

Technocratic water management is part of a larger trend described here as the technocratic management of nature. I will present its historical origin, its connection to ecological modernization, and its view of public participation. This will contribute to a better understanding of the situatedness of technocratic water management and its political effects.

### 3.2.1 Historical Origin

Ecofeminist and environmental historian Carolyn Merchant (1980) has given a historical account of the scientific revolution and what she calls the death of nature. She describes a shift in world views that occurred during the sixteenth and seventeenth centuries in Europe when “the image of an organic cosmos with a living female earth at its centre gave way to a mechanistic world view in which nature was reconstructed as dead and passive, to be dominated and controlled by humans” (p. xvi). The image of a nurturing living earth caused constraints in what type of behaviour that was morally and socially accepted to carry out against her, whereas the new images of domination and control sanctioned a behaviour necessary for the continued process of industrialization and capitalist expansion. Merchant (Ibid.) describes how science, technology and the subjugation of women were central components in this process. It was said that “nature’s womb harboured secrets that through technology could be wrested from her grasp for use in the improvement of the human condition” (p. 169). Technological innovations developed gradually over time and so did the accompanying environmental degradation. Machines altered the physical landscape and “people’s experience of an increasingly manipulated nature undermined the organic model and made way for the mechanistic model” (Ibid., p. 43). The technocratic management of nature was developed to fit the mechanic ideal of progress in an expanding market society. Growth and trade should not be halted due to depletion of resources. Instead, the ecosystems were modelled and manipulated, with the logic of rational, modern science and long-term planning and analysis, to maximize energy production and economic yields (Ibid.). This way of managing nature is still dominant in the world today – not least within the ecological modernization project.

### 3.2.2 Technocratic Management and Ecological Modernization

Ecological modernization is “an efficiency-oriented approach to the environment” (Hajer, 1995, p. 101). It “uses the language of business and conceptualizes environmental pollution as a matter of inefficiency, while operating within the boundaries of cost-effectiveness and administrative efficiency” (Ibid., p. 31), thereby avoiding any structural change. It holds the view that “industrialization, technological development, economic growth, and capitalism are not only potentially compatible with ecological sustainability but also may be key drivers of environmental reform” (York & Rosa, 2003, p. 274). It believes in “continued capitalist economic growth, within careful, in many cases technologically regulated, boundaries” (Adams, 2009, p. 138).

Hajer (1995) and Fisher (2017) describe how ecological modernization became the dominant discourse in environmental policymaking and practice. “Although the environmental movement started in the 1960s with street protests by concerned citizens,” the focus soon shifted to “an emphasis on science and technical information accompanied by more technocratic approaches to policymaking” (Ibid., p. 45). “Complex biological and physical sciences began to define the environmental challenge... [and] as a consequence, a technocratic environmentalism moved prominently to the fore” (Ibid., p. 46). By the 1980s ecological modernization was seen “as the most legitimate way of conceptualizing and discussing the environment” (Hajer, 1995, p. 101). “The environmental movement started to argue its case in terms set by the government. Its aim was to be seen as... realistic, responsible, and professional” (Ibid., p. 102). As the technical language of environmental management became dominant, it became increasingly hard to define the environmental challenge in any other way (Ibid.).

Just like during the scientific revolution, there is a strong belief in the possibility of mastery and control of nature (Hajer, 1995). Nature is turned into “stock,” “service” and “system” – conceptualizations that allow experts to manage “Earth’s capacious, but still limited, carrying capacity” (Luke, 2009, p. 130). The discourse is reproduced in modern university programs where students get equipped with managerial solutions to the environmental crisis (Luke, 1999). Tools regarded as “‘objective’, ‘valid’, or ‘useful’” (Ibid., p. 107) serve liberal governments and capitalist enterprises in an ecologically modernized economy and “blur the central role of capitalist economic growth in causing the environmental crisis” (Ibid., p. 104).



The ecological modernization discourse that reduces the environmental crisis to a matter of (in)efficiency is dominant within water management as well. The Dublin Statement on Water and Sustainable Development, resulting from the International Conference on Water and the Environment held in Dublin, Ireland, in 1992, recognizes water as an economic good. It states that “past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource.” And further: “Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources” (The Dublin Statement on Water and Sustainable Development, 1992). Calls for effective legislation and cost-effective measures show that this approach is inherent in the WFD as well.

### 3.2.3 Technocratic Management and Public Participation

Technocratic management of nature has a technocratic approach to decision-making which relies on rational, analytical, and scientific methods rather than democratic processes (Fisher, 2017). Whereas democracy “follows the logic of open, inclusive discussion,” technocratic management “privileges the possession of expert knowledge, rejecting ordinary opinion” (Ibid., p. 51). “Implicit is an understanding that the problems are too complicated for lay citizens to deal with” (Ibid., p. 63) and many professional experts think there is no point in engaging them (Ibid.).

In her historical account of the scientific and cultural shifts that resulted in the death of nature, Merchant (1980) examines Francis Bacon’s utopia. Bacon is “a celebrated ‘father of modern science,’ [who] transformed tendencies already extant in his own society into a total program advocating the control of nature for human benefit” (p. 164). In his utopia, written in 1624, politics was replaced by scientific administration. Hierarchy and patriarchy formed the foundation of his ideal state where a small group of male scientists obtained the highest status in society. They decided “which secrets were to be revealed to the state as a whole and which were to remain the private property of the [scientific] institute” (Ibid., p. 181). The development of the hydrologic sciences tells a similar story. When the concept of the hydrologic cycle was introduced in the 1930s, its purpose was “not simply to describe hydrologic processes, but also to constitute a separate field of scientific enquiry and a community of technical experts known as hydrologists... [which] helped legitimize a certain technical authority over water” (Linton & Budds, 2014, p. 171).

The same patterns remain today. “Critics of science today argue that scientists have become guardians of a body of scientific knowledge, shrouded in the mysteries of highly technical language that can be fully understood only by those who have a dozen years of training” (Merchant, 1980, pp. 181-182). Fisher (2017, p. 50) points out that “access to such technical knowledge and skill... helps to sustain the power of top-level political and economic elites. And, conversely, it is the lack of such access that hinders the possibility of an active and meaningful political engagement in the decision processes for a large segment of the public.” Laird (1990, p. 53) describes how “the casting of political issues in highly technical terms” makes it difficult for ordinary (non-expert) citizens to engage with the issues. “Citizens who are not technical specialists simply have nothing to contribute, even if they have a strong interest in the issue. The debate will be dominated by institutions that can afford such expertise; government, industry and, in some cases, public interest groups” (Ibid.). The technocratic approach to decision-making further favours business interests because “business can deal with costs and benefits; they are basic to the business way of thinking” (Fisher, 2017, p. 47).

Despite technocrats’ limited faith in public involvement, studies show that citizens can participate meaningfully in complex decision-making processes (Fisher, 2000; Jonsson, et al., 2011; Valinia, et al., 2012). Zwarteveen and Boelens (2014) recognize that water management involve often contradictory and complex problems. Developing ever more sophisticated expert devices to deal with the problems “may work to strengthen the faith in the possibility of objectively ‘knowing’ and rationally managing water problems” (Ibid., p. 150). They point out that “knowledge about water will always and necessarily be uncertain and provisional” and “relaxing the search for the one most accurate and reliable account of water problems and realities usefully opens the door to accepting diverse and plural knowledges” (Ibid., pp. 150-151).

### 3.3 The Ladder of Citizen Participation

I will use Arnstein’s (1969) ladder of citizen participation as a tool to analyse participation during the consultation process. There are significant degrees of participation and the eight steps of the ladder symbolize to what extent citizens have got power to determine the

outcome of a process (see Figure 1). The two bottom steps (1) manipulation and (2) therapy describe levels of “non-participation”. Their real objective is not to enable people to participate in planning, but to enable power holders to “educate” or “cure” the participants. Step 3, 4 and 5 refers to levels of tokenism, which means that power holders only make a symbolic effort towards inclusion. (3) Informing and (4) consultation allow the participants to hear and to be heard, but there is only a one-way direction of influence and there is no assurance that the powerful will take

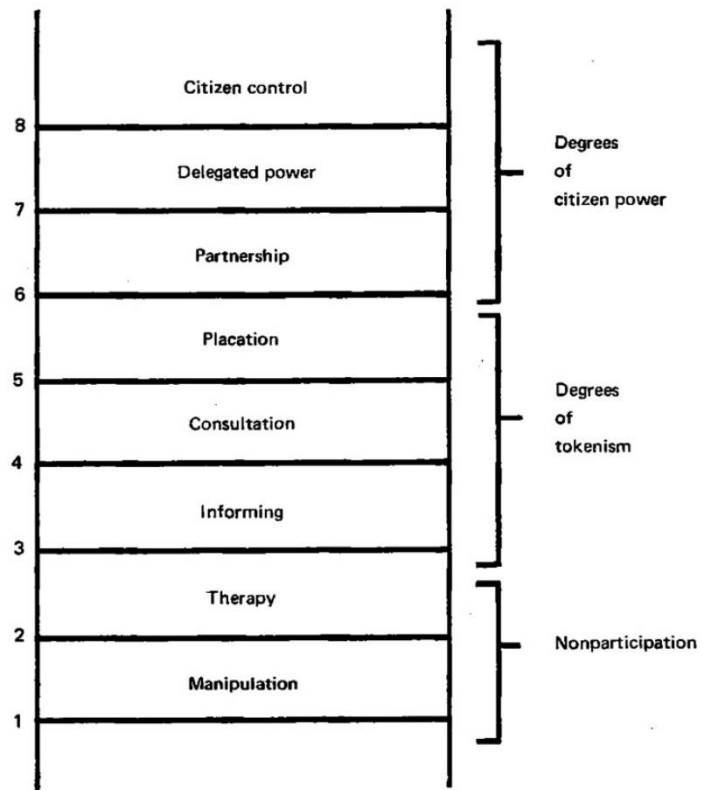


Figure 1. Arnstein's ladder of citizen participation (Arnstein, 1969, p. 217)

their opinions into consideration. (5) Placation, which means to appease or pacify, allow participants to give advice, but the right to decide is still exclusive for the power holders. The last three steps of the ladder include levels with increasing degrees of citizen power. Step number 6 implies that citizens enter partnership with traditional power holders where they can negotiate and engage in trade-offs. (7) Delegated power means that citizens are given most of the decision-making power, while (8) citizen control means full decision-making power.

### 3.4 Decolonial Theory: Recognizing Other Ways of Knowing and Being

Due to its assumed “objectivity,” modern science claims supremacy over all other knowledge systems. Since colonization, all other epistemologies have been regarded as abnormal, inferior, and therefore invalid (Santos, et al., 2007; Quijano, 2007). Quijano (2007, p. 169) explains that “colonialism was a product of a systemic repression... [that] fell, above all, over the modes of knowing.” During colonization, the knowledge of the colonizers gave access to

power while other knowledge systems – and people informed by that knowledge – were suppressed (Quijano, 2007; Santos, et al., 2007). Even though “the political dimension of colonial intervention has been widely criticized,” colonial epistemology “is still accepted nowadays as a symbol of development and modernity” (Santos, et al., 2007, p. xxxiii). Shiva (1988, pp. 19-20) describes how complex pluralistic traditions of knowledge have been transformed into one “gender-based, class-based thought... to be superimposed on all classes, genders, and cultures.”

Decolonial theory help us see these power structures and the connection between power and knowledge (Foucault, 1980). This has been referred to as the coloniality (and patriarchy, see Pérez Neira & Soler Montiel, 2013 and next section about ecofeminism) of power (Quijano, 2000) and knowledge (Santos, 2018). One example is how the environmental movement has been split “between experts speaking the language of technocratic power and a bottom rung of unregistered grassroots activists representing the voices of everyday life” and how the “properly political” dialogues, where the decisions are made, are carried out in Eurocentric masculinist terms among mainly men in suits (Salleh, 2017, p. 200).

Decolonization is about removing the privilege of modern science and recognizing other ways of knowing. It is not about abandoning science altogether but seeing it as one of many other epistemologies and treat it as such (Santos, et al., 2007). Nothing is less rational, Quijano (2007) argues, than thinking that the world view of one culture should be considered universal rationality. Rather, all knowledge systems are complementary to one another. It is about acknowledging the heterogeneity of reality (Ibid.) because “the understanding of the world is much broader than the western understanding of the world” (Escobar, 2016, p. 16).

Finally, different knowledges (epistemologies) create different worlds (ontologies) (Escobar, 2016). Or put differently: different ways of knowing lead to different ways of being in the world. This is the reason why questions of epistemology also are questions of sustainability. It leads us back to the question stated by Salleh (2017, p. 283) in the beginning of the thesis: “Which way of knowing is most helpful in a time that cries out for affirmation for life?” Santos, et al. (2007, p. xxxvi) explain how “nature, turned into a resource, has no logic but that of being exploited to its exhaustion. Once nature is separated from human beings and from society, there is no way of conceiving of how they feed back into each other.”

Therefore, one may say that the current environmental crisis is the crisis of a particular “set

of world-making practices” (Escobar, 2016, p. 15). That is, how “we imagine the world to be a certain way and construct it accordingly” (Ibid., p. 22). However, there are epistemologies that, instead of relying on the human-nature separation, have “a deeply relational understanding of life” (Ibid.) that result in “relational ways of being” (Ibid., p. 15). Escobar (Ibid., p. 27) explains how “we, moderns, have lost our integral relation with the universe” and that “reflection on relationality re-situates the human within the ceaseless flow of life in which everything is inevitably immersed” (Ibid., p. 29). The political consequences, and world-making practices, this way of knowing may result in will be explored further in the next section where I will add an ecofeminist perspective and ethics of care.

### 3.5 Ecofeminism and Relational Care

Modern dualism that separates human from nature, mind from body, and reason from emotion has been inherently gendered from the start, where the masculine (associated with human, mind, and reason) has been the norm (Mathews, 2017). To be “genuinely human” has therefore meant to be rational, disembodied, and sharply differentiated from women, nature, and colonial others (Phillips, 2016). Ecofeminist thinkers recognize that patriarchy coexists with colonialism and that colonialism itself, just like modern thinking and epistemology, are patriarchal products (Pérez Neira & Soler Montiel, 2013 – this is why they also talk about the patriarchy of power and knowledge). The masculine norm has long been regarded as neutral and “non-gendered” (Hultman & Pulé, 2018). Today, the masculine norm is “to valorise data, to approach problems with logic responses and driven intentions to fix them, [and] to trust that economic rationalism and technology will save the day” (Ibid., p. 9).

Hultman (2016) and Hultman and Pulé (2018) have shown how different masculinities are inherent in both industrial modernity (the development of large-scale technology and exploitation of nature for human benefit) and ecological modernization. The ecomodern masculinity, inherent in ecological modernization, combines the determination and harshness from industrial modernity with elements of compassion, but the suggested solutions to solve the environmental crisis are not sufficient. As an alternative to the destructive and insufficient industrial and ecomodern masculinities, Hultman and Pulé (Ibid.) explore the possibility of ecological masculinities and relational care. The term “ecological” refers to the relationships – human and non-human – that we are part of (Ibid.) Drawing on the work of ecofeminists

such as Phillips (2016), Hultman and Pulé (2018) write about care as both a set of values and a set of practices. They make the distinction between caring about, as an emotion, and caring for as an action (Ibid.).

Opposite to care is self-interest, and self-interest is central to economic growth (Ibid.). It is this focus on individualism, “where the needs of other living beings are disregarded,” that ecofeminist ethics of care seek to counter (Phillips, 2016, p. 473). Grounded in a relational ontology (Escobar, 2016), where the world consists of a web of relationships, ecofeminism has developed more caring ways of being (Phillips, 2016). Matthews (2017, p. 61) writes how “relationality dissolves dualism and reinstates an ethical relationship between self and its world.” Water is particularly helpful for thinking in relations since “water materially connects the tiniest microbe with human bodies, with ecosystems and with world hydrological systems, composing the relationships between them” (Strang, 2014, p. 134). These ethical relationships serve as “a social, political and moral resource” (Phillips, 2016, p. 469) that motivates action and “empower us to imagine and act on alternatives” (Ibid., p. 468). Relational care must therefore be understood as part of a broader political agenda for transformative change and “radical restructuring of social and political institutions focused on more-than-human flourishing” (Ibid., p. 470).

### 3.6 Summary

This analytical framework has given information about the political nature of technocratic water management. We now know that it is based on modern science and a mechanistic world view that justifies domination and control over nature for human benefit. It is part of the ecological modernization discourse that treats the environmental crisis as a matter of inefficiency that can be solved by expert knowledge. The language, tools, and practices used are technical and scientific in character which make them difficult for non-expert citizens to understand. It does not call for any structural changes but promotes continued capitalist economic growth, thereby keeping existing power relations in place.

Revealing the situatedness of certain water knowledges and practices makes them appear as less neutral or natural (Zwarteveen & Boelens, 2014). This opens for other possible ways of thinking and acting (knowing and being) in relation to water. One of those other ways is based on relationality and care instead of separation and domination. Based on an

epistemology and ontology that does not privilege modern science, relational care encourages caring relationships with human and non-human beings alike (see Table 1).

Table 1. Comparison of two water management/caring strategies.

Technocratic water management	Relational care for water
<ul style="list-style-type: none"> <li>• Nature as dead/mechanic/separated from human/a resource for human use</li> <li>• Privilege of modern science</li> <li>• Elitism, lack of democracy (exclusion from decision-making)</li> <li>• Ecological modernization</li> </ul>	<ul style="list-style-type: none"> <li>• Nature as a web of relationships; human as part of nature</li> <li>• Recognizing other ways of knowing</li> <li>• Democracy (inclusion)</li> <li>• Sustainable futures enabling more-than-human flourishing</li> </ul>

## 4 Methodology

### 4.1 Case Study Research Design

To fulfil the aim and answer the research questions, I conducted a case study (Yin, 2009). The case is the consultation process regarding the draft River Basin Management Plan and Program of Measures for the years 2021-2027, occurring from November 2020 to April 2021. It is an instrumental case study (Stake, 1995), where the case is used as an instrument to understand how technocratic water management is affecting public participation and care. It is also a representative or typical case because it is an example of many other similar processes (Yin, 2009). Consultation regarding a new river basin management plan occurs every six years before a new water management cycle begins and is considered “the prime example of an administrative procedure designed to enable stakeholder involvement in water management... in Sweden” (Lundmark & Jonsson, 2014, p. 167). The consultation process took place in all five water districts in Sweden simultaneously and the work was coordinated on a national level. To limit the study, I chose to study the consultation process in the Bothnian Sea Water District. The district was chosen because of the special access I had as a master student doing an internship at the Bothnian Sea Water Authority at the time.

Yin (2009) defines a case study as “an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (p. 18). This study is designed as an

embedded single-case study, which means that it has more than one unit of analysis (type 2 of Yin's basic types of designs for case studies. See Yin, 2009, p. 46, and Figure 2 on next page). The case unit of analysis is the consultation process and the dotted line between the case and its context symbolizes the difficulty in drawing a clear line between the two (Ibid.). The Bothnian Sea Water District is part of the context. The map in Figure 2 shows the administrative boundaries of the five water districts in Sweden where the Bothnian Sea Water District is marked with a darker shade of blue. It is located in the middle of Sweden and covers about one third of Sweden's surface. It is also located within the indigenous territory of Sápmi. It is a sparsely populated area with no larger cities. The majority of the district's roughly 900 000 inhabitants live along the coast, close to the Great Lake (Storsjön) in Jämtland county, or in the river valleys. Hydropower and forestry are two main industries in the area. Outdoor activities such as hiking, fishing, skiing, and tourism are also important in the area (Vattenmyndigheterna, n.d. a-c). The WFD, which forms the legal framework for the consultation process and Swedish water management in general is also part of the context of the case.

I identified three subunits embedded in the case that I studied more closely (see Figure 2. The data used to study each unit of analysis is written as bullet points). The first subunit is a public hearing about water in agriculture and forestry. Three hearings were held in the Bothnian Sea Water District during the consultation process which were open to the public. (Four meetings were directed towards municipality and County Administrative Board officials.) The first hearing was an introductory meeting with general information about the consultation and the other two were focused on thematic issues. The form and content of the public hearing about agriculture and forestry were developed together with water council representatives and officials from the County Administrative Boards in the water district. Many private persons own land and forest in the district and therefore this thematic public hearing was specifically chosen as an attempt to try to increase public participation in the consultation process. (The second theme was hydropower. This meeting was arranged differently and was held together with the Bothnian Bay Water District and was therefore not included in the analysis.) Data used to analyse subunit 1 include notes from a planning workshop, notes from the public hearing, the visual presentations used at the hearing, a copy of the public chat where participants were encouraged to write questions and comments during the hearing, the invitation list, and the list of registered participants.



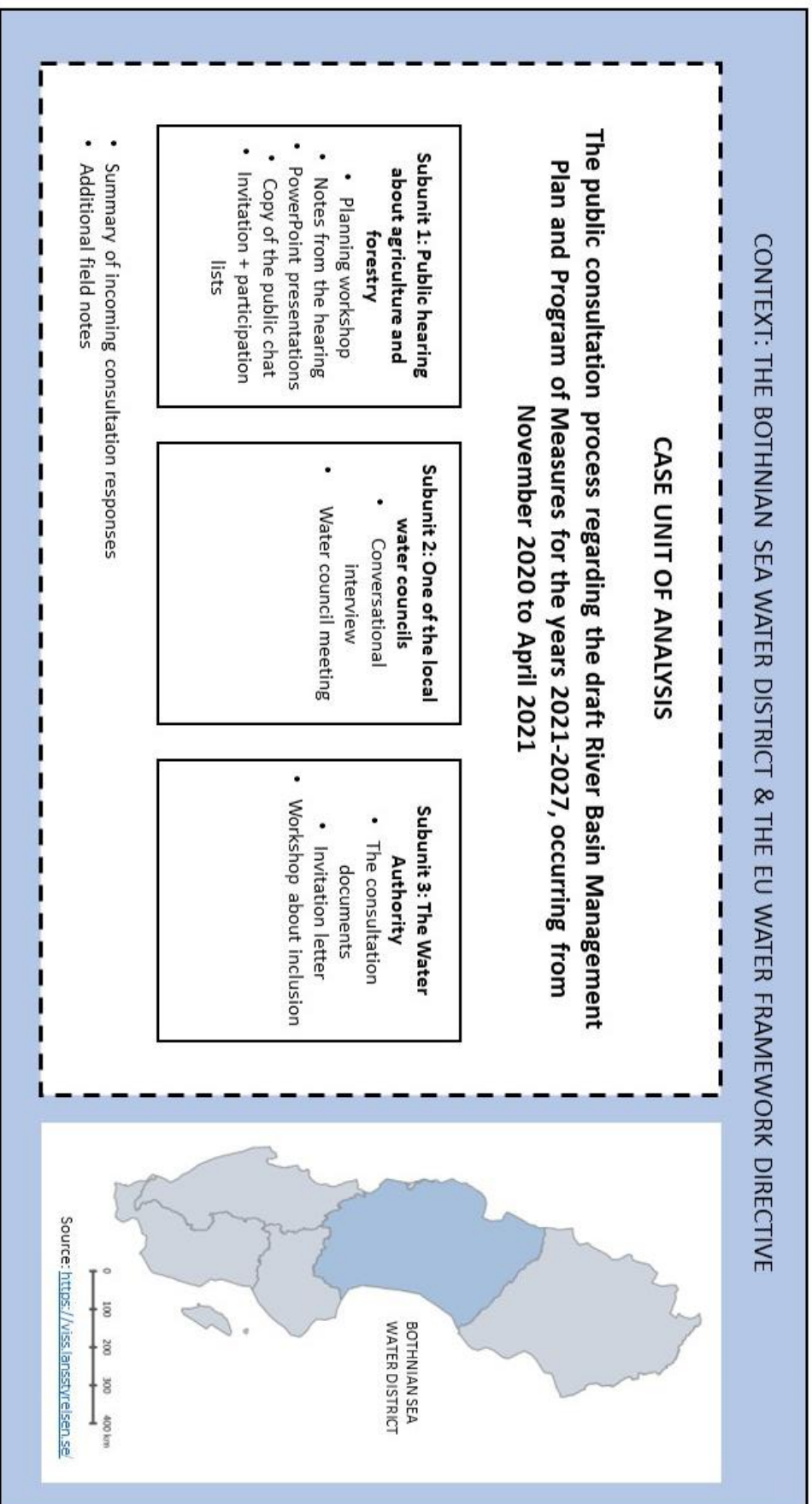


Figure 2. The research design including the case and its subunits, context, and data.

The second subunit of analysis is one of the local water councils involved in the work of increasing public participation during the consultation process. Data for this subunit includes a conversational interview with two representatives of the water council and notes from a member meeting where the members of the water council discussed if they were to write a joint consultation response. The third subunit is the Water Authority as the responsible authority for implementing the WFD in Sweden and carrying out the consultation process. The Water Authority is the author of the consultation documents and the actor who communicates water management to the public. In addition to documents written by the Water Authority, data for this subunit of analysis also include notes from a workshop about inclusion and exclusion held for the Water Authority officials. Additional data on the case level of analysis are the incoming consultation responses and field notes taken during my time as an intern at the Water Authority. I will write more about the research methods I used to collect the data in the next section.

## 4.2 Research Methods

The research methods used in this study are participant observation, conversational interview, and document analysis. I used multiple sources of evidence to ensure data saturation and triangulation (Yin, 2009; Lund, 2014).

Due to the Covid-19 pandemic, all meetings and interviews were carried out online.

### 4.2.1 Participant Observation

Participant observation is “a method which involves living and/or working within particular communities in order to understand how they work ‘from the inside’” (Cook, 2005, p. 167). It involves moving between participating in and observing a community while documenting the observations through field notes (Ibid.). Apart from everyday observations and field notes taken during my time as an intern at the Water Authority, there were four main events that I studied more closely. These are the planning workshop prior to the public hearing; the public hearing about agriculture and forestry; the water council member meeting; and a workshop about inclusion and exclusion with the Water Authority officials shortly after the end of the consultation period (see Table 2). As a participant observer one can participate to varying degrees in the research community being studied, ranging from “complete observer” to

“complete participant” (Kearns cited in DeLyser, 2001, p. 451). At the planning workshop, I would place myself closer to the end of complete participant. I was organizing and facilitating that meeting and was not able to concentrate as much on the observation part. Therefore, I asked for approval to record the meeting so that I would be able to go back and listen to the conversations afterwards. Unfortunately, the recording was lost before I got the chance to hear it. The data I had left were copies of the digital mind maps produced at the workshop and a few memory notes. At the other events, my role was more towards the complete observer, and I had time to listen and take extensive field notes during the meetings. See Table 2 for more information about the different events and my role in each of them.

Table 2. Participant observation events.

Event & date	Aim of event	Participants	My role
Planning workshop 2021-02-09	Plan the form and content of the public hearing about agriculture and forestry	2 water council representatives; 2 Water Authority officials; 6 County Administrative Board officials	I was organizing and facilitating the meeting. Active participant
Public hearing about agriculture and forestry 2021-03-03	Raise awareness; inform about the Water Authority & water management; clarify what the consultation is about and how to submit responses; answer questions from the public; inspire to action	91 participants from various stakeholder groups who had registered for the meeting; a group of Water Authority and County Administrative Board officials who organized the meeting	I was part of the organizing group but had no active role at the meeting. Passive observer
Water council meeting 2021-04-06	Continue the discussion of the consultation locally; discuss whether they would submit a joint consultation response	10 water council members from various stakeholder groups; 2 County Administrative Board officials who were there to inform about water management	I was invited to listen to the meeting. Passive observer
Workshop about inclusion 2021-05-26	Talk about inclusion and exclusion in the Water Authority’s communication with external actors (the consultation process)	10 Water Authority officials; 1 external consultant who held the meeting	I initiated the meeting and invited the consultant but had no active role. Passive observer

DeLyser (2001) and Cook (2005) describe the ethical dilemmas and overlapping roles one might have as a participant observer. I was always open about my role as a student doing a research project during the consultation process and I asked for the participants’ informed

consent where possible. When that was not possible (for example at the public hearing), I took precautions to ensure anonymity. However, England (1994, p. 85) writes that “exploitation and possibly betrayal are endemic to fieldwork.” Therefore, I want to take this opportunity to make clear that my intention with this thesis is to study patterns and not individuals. The Water Authority is an authority operating within a legal framework, based on a knowledge system and naturalizing discourses that determine how one can think and act in relation to water. These discourses, ideas, and practices are reproduced – unconsciously – within technocratic water management (Zwarteveen & Boelens, 2014). Through immediate observations I am looking for general patterns (Lund, 2014) to understand how technocratic water management affects the possibilities for public participation and care. This thesis is not about what individual actors have said or done, but the possibilities and limitations inherent in the current water management system.

#### 4.2.2 Conversational Interview

I did a conversational interview with two representatives – the chairperson and the secretary – of one of the water councils on January 27, 2021. It was an introductory meeting where we got to know each other. I told them about my research project; they told me about their work in the council since the start 1,5-2 years earlier; and we started to discuss how to approach the joint task to increase public participation during the consultation process. The introductory meeting turned out to an over 1,5-hour long conversation about their motivation to care for better water and challenges they were facing while trying to find their role in the water management system. The interview was semi- to unstructured (Valentine, 2005). I had prepared a few questions to learn more about the water council (how it started, what they do, who is involved) and their expectations of the consultation process. Otherwise, the interview took the form of a fluid conversation, thereby allowing the “interviewees to construct their own accounts of their experiences by describing and explaining their lives in their own words” (Ibid., p. 111). Valentine (Ibid.) writes that it is important to follow the conversational flow of the interviewees. Therefore, I did not interrupt to ask if I could start the recording when the meeting turned out to a conversational interview. Instead, I took notes during the conversation and wrote down a summary straight afterwards when I still had everything fresh in mind. I used natural pauses in the conversation to write down a few quotes. I asked for their consent to use the interview in my research and asked if I could return if I had further

questions. After comparing and triangulating it with my other data, I decided that no more questions were needed.

Choosing who to interview is a theoretically motivated decision (Valentine, 2005). The aim is not to choose a representative sample but rather an illustrative one (Ibid.). As volunteers involved in Swedish water management, driven by a motivation of care for better water, the two representatives make an illustrative sample for the aim of this study. (A representative of another water council was also involved in the work of increasing public participation during the consultation process, but this person was doing it in his professional role and was therefore not chosen as an interviewee.)

#### 4.2.3 Document Analysis

Documents were added to complement the participant observation and interview data. The documents analysed in this study are the covering letter of the official invitation to the consultation process in the Bothnian Sea Water District; the consultation documents; the visual presentations used at the public hearing; the invitation and participation lists of the public hearing; the public chat; a summary of the incoming consultation responses and how they have been handled published by the Water Authority; and a document with the number of consultation responses received in the Bothnian Sea Water District. The document analysis included analysis of both quantitative and qualitative data.

The summary of the consultation responses was compiled by all five Water Authorities together. Adaptation and additions specific to the Bothnian Sea Water District was highlighted in the document, but otherwise it contained consultation responses from all five water districts. I focused on consultation responses regarding the consultation material, the consultation process itself, and chapter 9 in the draft River Basin Management Plan about participation in water management.

Bryman (2012, p. 555) points out that documents often are written to make an impression “that will be favourable to the authors and those whom they represent.” Given the massive amount of data (the Bothnian Sea Water Authority received 219 written consultation responses from 190 instances, see Bothnian Sea Water Authority, 2022), and the time it would take to read through and categorize the consultation responses, I chose to use the summary made by the Water Authorities. Together with data about the context in which the

document was produced, gathered from participant observation, the document will still be useful in the analysis (see Bryman, 2012, p. 555).

### 4.3 Limitations of the Study

A limitation of this study is that it is a single-case and not a multiple-case study. Multiple-case studies are often regarded as being more robust (Yin, 2009). The consultation process regarding a new river basin management plan occurs every six years. One way to include more than one case in the analysis would have been to study the consultation process as it turned out in more than one water district, but due to limited resources that was not possible. Yin (Ibid., p. 53) points out that conducting “a multiple-case study can require extensive resources and time beyond the means of a single student” and therefore I chose to do a single case. (The summary of the incoming consultation responses does however include data from all five water districts.) Important to note here is that theory is the level at which generalization occurs when doing a case study (known as analytic generalization, see Yin, 2009). Unlike statistical generalization, analytic generalization is when “a previously developed theory is used as a template with which to compare the empirical results of the case study” (Ibid., p. 38). This is applicable to both single-case and multiple-case studies (Ibid.).

Another limitation of this study is related to the chosen research methods. Because I did not want to interrupt the conversational flow of the interview, this resulted in me having a less accurate and less detailed version of the conversation than if it had been recorded, and I could not go back and listen to it again (Valentine, 2005). Choosing participant observation as one of my main research methods also meant that I had to rely heavily on my own memory and experience of the consultation process. Participating in the research setting being studied comes with certain challenges. For example, there is a risk of “too much participation at the expense of observation” (Evans cited in DeLyser, 2001, p. 442). This was compensated by adding documents to the analysis, which gave me access to multiple sources of evidence (Yin, 2009). However, since all knowledge is situated knowledge (Haraway, 1988), it is important to note that the results of this study are based on the situated knowledge from my position as an intern involved in the work of increasing public participation during the consultation process.

## 5 Public Participation during the Consultation Process

In this chapter I will answer research questions 1 and 2 about the forms of participation offered during the consultation process and how they enabled or hindered different actors from participating in decision-making.

### 5.1 Forms of Participation

The consultation was regarding a number of consultation documents: the draft River Basin Management Plan; Program of Measures; Environmental Quality Standards; and a Sub-Management Plan with Measures Against Water Shortage and Drought. (All consultation documents including appendices are listed in Table 3.) The River Basin Management Plan describes in broad terms the impact, status, and risk of the waters in the water district, and how the waters are monitored and managed. The Environmental Quality Standards tell what status the waters should have at a certain time and are the basis for the measures in the Program of Measures. The Program of Measures contains administrative measures, aimed at authorities and municipalities, that result in guidelines, regulations, priorities, and physical measures that lead to better water.

The consultation was announced in around 30 newspapers in the Bothnian Sea Water District in the last week of October 2020. An official invitation letter was sent to courts, national central authorities, County Administrative Boards, municipalities, Norwegian authorities, universities and schools of higher education, water organizations and water councils, companies, and different interest organizations (including industry, farming, fishery, nature conservation, etc.) to announce the beginning of the consultation. Information about the consultation process was published at the Water Authorities' website together with the consultation documents in PDF format. The consultation documents were available as paper copies at all municipalities and County Administrative Boards in the district. The consultation documents of the Bothnian Sea Water District consisted of 528 pages (735 pages including appendices, see Table 3).

Opinions on the consultation documents had to be in writing and submitted to the Water Authority before April 30, 2021, to be counted as a response to the consultation. Consultation responses could be submitted online via a form at the Water Authorities' website, via e-mail

or regular mail. It was also possible to submit responses linked to individual water bodies (their classifications, environmental quality standards, and suggested physical measures) via an online database called VISS.

*Table 3. Consultation documents and appendices.*

<b>Document</b>	<b>Appendices</b>
River Basin Management Plan (226 pages)	<ul style="list-style-type: none"> <li>• Appendix 1 (8 pages)</li> <li>• Appendix 2 (2 pages)</li> <li>• Appendix 3 (1 page)</li> <li>• Appendix 4 (4 pages)</li> <li>• Appendix 5b (10 pages)</li> <li>• Appendix 6b (12 pages)</li> <li>• Appendix 7b (10 pages)</li> <li>• Appendix 8b (29 pages)</li> <li>• Appendix 9b (11 pages)</li> </ul>
Program of Measures including Economic Impact Assessment (213 pages)	<ul style="list-style-type: none"> <li>• Appendix 1 (50 pages)</li> </ul>
Environmental Quality Standards (14 pages)	<ul style="list-style-type: none"> <li>• Appendix 1-3 (3 pages)</li> <li>• Appendix 4 (2 pages)</li> </ul>
Environmental Quality Standards for Waters Affected by Hydropower (30 pages)	<ul style="list-style-type: none"> <li>• Appendix A (13 pages)</li> <li>• Appendix B (16 pages)</li> <li>• Appendix D (36 pages)</li> </ul>
Sub-Management Plan with Measures Against Water Shortage and Drought (45 pages)	
Total number of pages: 528	
Total number of pages including appendices: 735	

The consultation process resulted in 219 written responses from 190 actors in the Bothnian Sea Water District. (Some actors submitted more than one consultation response.) The majority was submitted via e-mail. 56 responses were submitted via the form at the Water Authorities' website and 35 were submitted via the online database (see Table 4). Most of the consultation responses were handled jointly by all five Water Authorities. Opinions linked to individual water bodies were handled by the Water Authority or the responsible County Administrative Board depending on the issue. Some opinions led to revisions of the consultation documents. Many opinions dealt with general questions about water management that were not directly linked to the content of the consultation documents. Some of these were taken into account in the Water Authority's future work. Opinions that were outside the Water Authority's area of responsibility were taken to further dialogue with relevant authorities and other actors.



Table 4. Number of consultation responses based on submission method.

E-mail	Submission form at the Water Authorities' website	The online database VISS (Water Information System Sweden)
128	56	35
Total number of consultation responses: 219		

The Water Authority of the Bothnian Sea Water District offered seven consultation meetings during the consultation process. The first one was an information meeting about the content and form of the consultation. Four meetings were devoted to the Program of Measures and were addressed to municipality and County Administrative Board officials. Two thematic meetings were held to cover two of the biggest water management challenges in the district: agriculture and forestry as one theme, and hydropower. These were addressed to anyone interested and was part of an attempt to include the wider public. However, all meetings, including the thematic ones, were held during daytime, which made it difficult for individuals with jobs not related to water management to participate. It was discussed whether it would be possible to combine the digital meetings with in-person gatherings locally, but due to national Covid-19 restrictions (and limited resources) it was only possible to participate online via Skype. A link to the meeting was sent to the participants upon registration at the Water Authorities' website. Hence, a certain technological capacity as well as internet access was required to participate. It also required that one had received information about the consultation meeting and found the registration link on the website. Beierle and Konisky (2000) found that the wider public often is unaware of participatory processes, and this is likely to be the case for this process as well. Those who were not on the invitation list had to look up the information themselves, which requires a genuine interest. This suggests that there was a high threshold that prevented many people from participating in the consultation meetings. Efforts were made to identify target groups within the general public and send them special invitations to the public hearing about agriculture and forestry. This started discussions about inclusion and exclusion at the Water Authority and resulted in a workshop with an external consultant when the consultation was over.

The water councils were invited early in the planning of the consultation process. Due to their role as local actors in the water management system, they were asked to contribute with their perspectives to make the consultation as relevant and meaningful as possible to the

participants. They were asked to participate in the planning and performance of the public hearing about agriculture and forestry and spread the invitation in their broader networks.

The public hearing about agriculture and forestry was mainly information based with a few interactive sessions. The participants were muted during the meeting but were encouraged to write questions and comments in the chat. One session was devoted to reading and answering some of the questions and another session was used to discuss the main water management challenges in agriculture and forestry based on inputs from the chat. Again, this shows that to participate in the conversations one had to have a certain technological capacity and understanding of Skype.

The forms of participation offered during the consultation process were mainly information and consultation. Both are low (step 3 and 4) on the ladder of citizen participation and are only symbolic efforts of inclusion (Arnstein, 1969). In addition to the interactive sessions at the public hearing, there was another participatory event during the consultation process where participants were offered active involvement (which is the third form of public participation encouraged by the WFD). One of the water councils invited its members to a meeting to continue the discussion of the consultation locally that was initiated at the public hearing. This was only offered in one water council in the district, and it was made possible thanks to a committed chairperson who did this voluntarily.

## 5.2 Water: A Professional Matter

The forms of participation (commenting on the consultation documents and attending online Skype meetings) favoured professional actors. At the workshop in May 2021, one month after the consultation ended, the Water Authority officials had the opportunity to reflect on who had been included and excluded during the process. The consultation is the main event when the Water Authority meets external actors, and the workshop was used as part of improving the upcoming work as they entered a new water management cycle. The Water Authority officials gave a unified picture that those who were included in the consultation process were those with an informational advantage. That is, those who already are familiar with water management in their professional jobs or those who are part of an economically strong organization that has the time and resources needed to familiarize themselves with the

consultation material. Single individuals and single landowners/forest owners who lacked informational advantages and were not part of resource strong organisations were excluded.

At the planning workshop, it was discussed whether the public hearing should be held in the day or evening. It was agreed that the best option would have been to do both, but due to limited resources at the Water Authority, it was only possible to hold the public hearing once. It was agreed that the next best option was in the day. Even though this would exclude large parts of the general public, it was said that it was more important that those involved in water management in their professional jobs could participate. It was also said that it was good to hold the public hearing during working hours as it showed that the matters dealt with were of professional character. Underlying this motivation is a notion that water is best managed by professionals and not ordinary citizens (cf. Nightingale, 2005, how professionals were considered the only legitimate forest managers in Nepal). This notion is exclusionary and could be intimidating to people. As a result of the chosen strategy, most participants at the public hearing came from municipalities and County Administrative Boards. Only five participants were private persons (see Table 5). The interest organizations represented at the public hearing were the Rural Economy and Agricultural Societies (1 person); the Federation of Swedish Farmers (5 persons); the Swedish Society for Nature Conservation (4 persons); and Norrland’s Hydropower Association (1 person).

*Table 5. Number of registered participants at the public hearing.*

MUNICIPALITY	36
COUNTY ADMINISTRATIVE BOARD	16
INTEREST ORGANIZATION	11
COMPANY	6
RESEARCH AND EDUCATION	5
WATER ORGANIZATION	5
PRIVATE PERSON	5
NORWEGIAN AUTHORITY	4
CENTRAL AUTHORITY	2
SAMI VILLAGE	1
Total number of registered participants:	91

The participants attending the public hearing are also a reflection of those invited (see Table 6). Authorities (including municipalities, County Administrative Boards, regions, Norwegian authorities, a Swedish central authority, and courts) made up half of the 156 actors who were

invited to the public hearing by the Water Authority. (Actors invited by the water councils are not included in the table.)

*Table 6. Number of actors who were invited to the public hearing.*

MUNICIPALITY	52
WATER ORGANIZATION	19
INTEREST ORGANIZATION	18
SAMI VILLAGE	15
COMPANY	14
RESEARCH AND EDUCATION	12
NORWEGIAN AUTHORITY	8
COUNTY ADMINISTRATIVE BOARD	7
REGION	7
COURT	3
CENTRAL AUTHORITY	1
Total number of actors who were invited to the public hearing:	156

One consequence of the professionalization of the consultation process, discussed by the Water Authority officials at the workshop in May, was homogenization of consultation responses. Many consultation responses looked the same because they were formulated by professional experts centrally at the interest organizations. Consequently, local opinions that might have differed from that of the central organization were lost.

The 190 actors who submitted consultation responses in the Bothnian Sea Water District are listed in Table 7. The interest organizations include both professional and non-professional organizations, ranging from local fisheries conservation areas to national organizations representing the interests of large-scale industries. (20 of the interest organizations were groups from the Federation of Swedish Farmers.) 24 of the 190 actors who submitted consultation responses were private persons. The results are similar to the study made by Lundmark and Jonsson (2014) of the consultation process in the Bothnian Bay Water District in 2009, where 17 out of 136 consultation responses came from non-professional actors (single individuals, study circles and village representatives).

The results of this study confirm what has been found in previous research about public participation in Swedish water management. Namely that participating in water management is resource intensive and that it is dominated by professional actors (Matti, et al., 2017; Lundmark & Jonsson, 2014; Eckerberg, et. al., 2012). The professionalization of Swedish water management is part of a larger trend described in this thesis as the technocratic

management of nature where nature is increasingly managed by professional experts (Luke, 1999; Nightingale, 2005).

*Table 7. Number of actors who submitted consultation responses.*

INTEREST ORGANIZATION	57
MUNICIPALITY	37
COMPANY	25
PRIVATE PERSON	24
CENTRAL AUTHORITY	21
RESEARCH AND EDUCATION	11
COUNTY ADMINISTRATIVE BOARD	6
COURT	4
WATER ORGANIZATION	2
OTHERS	2
REGION	1
Total number of actors who submitted consultation responses:	190

### 5.3 Ideas of Complexity

A recurring theme during my time at the Water Authority was the idea of the complexity of water management. I was told that one of the Water Authority’s most important tasks was to educate people so that as many as possible would understand how vast and complex the subject is. Linked to the idea of complexity was that a certain kind of technical expert knowledge, defined by the Water Authority, was needed to understand.

At the workshop where the Water Authority officials talked about inclusion and exclusion, it was said that the complex nature of water management made inclusion difficult. Many of the incoming consultation responses were about the scope, accessibility, and form of the consultation documents. Many people thought that the documents were extensive, that they were time consuming to read, and that the language was difficult to understand with complicated formulations and technical terms. The Water Authorities handled these opinions by pointing out the difficulty in creating documents that are relevant and accessible to everyone and still meet the formal requirements of the WFD.

The results show how water management has become “shrouded in the mysteries of highly technical language” (cf. Merchant, 1980, p. 182). Water related issues are not complicated per se. As a water council representative pointed out: “People are not interested in reading documents that are several hundred pages long. If you boil it down, it will be about a number

of down-to-earth things” (interview respondent, 2021-01-27). However, framing it in a technical language and a bureaucratic management system makes it inaccessible to those who do not speak the same technical language as the Water Authority. One of the water council representatives told me how difficult it had been for him to learn the bureaucratically complicated water management system. It had taken him more than a year and a half, and he still had a hard time explaining it to others. He was grateful that the other volunteer had a background as a Water Authority official, but still water management raised more questions than it answered.

At a debriefing session right after the public hearing about agriculture and forestry, one of the organizers of the meeting expressed joy because the questions and comments from the participants had been on such an advanced level of understanding. The way the participants’ “advanced level of understanding” was praised is an example of how technical knowledge and modern science still is seen as a measure of progress (cf. Santos, et al., 2007). It was considered good that the participants were adapting to the epistemology preferred by the Water Authority and not a warning sign that other perspectives risk being lost. The way in which the Water Authority privileges technical knowledge has led to a technical authority over water (cf. Linton & Budds, 2014), excluding those whose knowledge is based on other epistemologies.

## 5.4 Participation in Decision-making

It is everyone’s water. This is stated in the beginning of the draft River Basin Management Plan. The Water Authority said that everybody concerned should have the opportunity to leave their opinions. The public hearing about agriculture and forestry began with the Water Authority pointing out how important participation is within water management, that it is a joint work for the whole society and not just for a few actors to decide. However, the results of this study show that public participation in decision-making is limited.

Decision-making during the consultation process was linked to the consultation documents. This raises two questions: First, reviewing and commenting already written proposals relies heavily on administrative rule making and do not require the Water Authority to give up its decision-making authority (Konisky & Beierle, 2001). There is no guarantee that the participants’ opinions will be taken into consideration (Arnstein, 1969). Second, many

consultation responses were outside the scope of what was decided during the consultation. These opinions were noted by the Water Authorities but were not taken into further consideration.

In the summary of the incoming consultation responses, the Water Authorities recognized that many local organizations and individuals found the consultation documents difficult to understand. However, this was not considered a problem that needed to be addressed. What mattered was that authorities and municipalities found the consultation documents relatively easy to read and to navigate, since they are the ones directly affected by them. The Program of Measures is addressed to authorities and municipalities, and these actors are therefore prioritized by the Water Authorities. Other actors who are not directly affected by the Program of Measures were referred to the water councils for participation in Swedish water management. This suggests that the Water Authorities are dismissive of the capacity of local organizations and individuals to participate in decision-making, even though previous research suggests otherwise (cf. Valinia, et al., 2012). The content of the consultation documents was explained at the consultation meetings, but these meetings were difficult for non-professional actors to attend due to the time they were held.

Another important point is the difference between the legally binding administrative measures in the Program of Measures and the non-legally binding suggested physical measures listed in the online database VISS. This shows how the “properly political” dialogues (cf. Salleh, 2017) were carried out in technocratic and bureaucratic terms through administrative policy making. This also shows that inherent in Swedish water management is the ecologically modernist view that current water challenges can be solved by administrative efficiency (cf. Hajer, 1995).

In chapter 9 of the draft River Basin Management Plan, it is stated that the participation of actors who are not directly affected by the Program of Measures is important for water management. They are important for acceptance; for contributing with their local knowledge; and for carrying out physical measures for better water. These forms of participation are at the very lowest steps of the ladder citizen participation (Arnstein, 1969). In fact, they are examples of “non-participation” where the purpose is to try to get participants to act in a certain way (Ibid.). This view of participation is found in the definition used in the CIS Guidance Document no 8 (European Commission, 2003). Here, public participation is

defined as a means “to help increase acceptance and commitment towards intended plans” (Ibid., p. iv). The CIS Guidance Documents were made to help implement the WFD in national policies and practice, and consequently, this view of participation has been implemented in Swedish water management. When choosing the theme of the public hearing, it was said that landowners were needed to ensure local initiatives for better water. It was said that it is important that they contribute. In this context, “contribute” specifically meant carrying out the physical measures proposed by the Water Authority. In the draft River Basin Management Plan, the Water Authority makes it clear that it is their agenda that is decisive. Ultimately, all participation in Swedish water management should lead to the administrative measures in the Program of Measures decided for each new water management cycle being as good as possible.

The general public is rarely part of the actual decision-making. Rather, their participation has been limited to the operational water management work that is ongoing throughout the whole water management cycle and which goals are defined by the Water Authority and the WFD. A particular discourse including ideas of complexity and the need for expert knowledge, as well as trust in administrative efficiency, have worked to legitimize certain forms of decision-making authority over others (cf. Zwarteveen & Boelens, 2014). A water council representative told me that he thought that they – the people who live and work in the area – should be the ones to decide on their local waters. However, as decision-making during the consultation process was linked to administrative measures, it favoured professional experts and those speaking the same technical and bureaucratic language as the Water Authority.

## 6 Implications for Care

What stood in contrast to the technocratic approach to water during my time at the Water Authority was one of the water council representatives involved in the work of increasing public participation during the consultation process. He is an example of a person who cared about water and decided to do something about it. Motivated to restore his local river for the sake of his grandchildren, he had started a water council. He told me that the goals of his commitment were that in 100 years from now, there would be healthy fish populations in the river; it would be possible to eat the fish from Swedish waters without restrictions and without the risk of ingesting toxic substances; and the seas would be healthy – the place



where everything ends up eventually. He showed evidence of relational care towards future generations, other people, other species, and the sea. He saw the water council as a potential amateur lawyer for the people, but being an amateur lawyer was time consuming and difficult. He explained how it took him long to get into his role and learn where the water council was fitted in the water management system. Before he knew that, it was hard to put the work in motion.

Another challenge that the water council representative had encountered since the start of the water council was conflicting interests. One example he mentioned was the National Food Agency's recommendations that pregnant women should not eat fish from Swedish lakes more than two or three times a year due to high mercury levels (Livsmedelsverket, 2022). He talked about the impact Swedish forestry has on increasing mercury levels in surface waters (see Eklöf, et al., 2016), but explained that the forest industry would oppose measures to improve the situation because it meant reduced profits for them, and consequently nothing happened. He said that people lost hope when they felt like there was nothing they could do. I identified a similar sense of frustration among some of the participants at the public hearing. Many people wrote in the chat that the environmental measures were insufficient and that not enough was being done to improve the conditions of the waters. Some people wrote that they did not want to be trapped in a water management they did not believe in, and that water management had been "kidnapped" by politics and the hydropower companies. At the local water council meeting, the members discussed whether they should submit a joint consultation response in the name of the water council. Two representatives from water regulation and hydropower companies were against it because their respective organizations would submit their own consultation responses. It was decided that other members who had opinions about the consultation should submit them individually. A landowner at the meeting said that he had joined the water council because he wanted it to be a strong people's voice. He was disappointed when this was prevented by the two industry representatives. Above are examples of individuals who care about water and want to do something about it but feel limited by a water management system that favours business interests over other values. Whenever there were conflicting interests, efforts for sustainability and care had to give way to business interests.

This study shows that people who care about water (as an emotion) get hindered to care for water (as an action) within the current water management system. They get hindered for two reasons: it is difficult to understand how the water management system works and how to influence it if you lack the technical knowledge needed; and even if you learn all that it is still difficult to influence a system that promotes ecological modernization and continued capitalist economic growth. Research shows that water flows towards money (Swyngedouw, 2009; Linton & Budds, 2014) and that there are “no civil society actors who have anything near the kind of political leverage that the corporate world possesses” (Fisher, 2017, p. 123).

When care was mentioned in the draft River Basin Management Plan, it was stated that it is good to care for water because it is profitable for society. Measures for better water were motivated because they often give back more in return than what they cost. When I talked to the two water council representatives, they told me that the goals were not reached – not within water management, nor the Swedish environmental goals – and that implementation failed. I would argue that this is not a coincidence but a consequence of the ecological modernization project. Fisher (2017) writes how environmental policies are likely to be rejected or watered down if they do not meet the requirements of economic growth. The possibilities for care are limited within ecological modernization and we need to move beyond that discourse to enable a “broader, deeper and wider (a.k.a. relational) care,” to use the words of Hultman and Pulé (2018, p. 238).

Another point I want to make is that the water management system was created and that it has not always been this way. The fact that the Bothnian Sea Water District lies within indigenous colonized territory suggests that there has been, and still are, other ways of relating to water. A suggestion for future research is to investigate other forms of hydro-social organization, historical and present, in the area.

The privileging of technical knowledge during the consultation process has come at the expense of other perspectives, interests, norms, and values. Recognizing that there are other ways of knowing about and being with water – that goes beyond the technocratic water management strategy – would both increase inclusion as more people would be able to participate without feeling excluded because of lack of a certain knowledge, and it would increase the possibilities for care as it would allow for a wider range of perspectives.

While other studies show that many local resource users “actively challenge and respond to the norms, knowledge, distribution patterns, governance forms, and identities that are imposed on them” (Boelens, et al., 2016, p. 10), in this case, we see examples of how local actors adapt to the technocratic water management system. The dominance of ecological modernization in environmental policy and practice has made it difficult to talk and act in any other way if you want to be taken seriously and not be seen as a romanticist dreamer (Hajer, 1995). As technical expert knowledge is considered the only valid way of knowing about water problems and solutions, caring individuals are turned into technocrats (cf. Salleh, 2017) when they get involved in Swedish water management. When caring individuals adapt to the technocratic discourse, they get equipped with the technocratic definitions and solutions to the problems. Water management becomes a matter of administrative efficiency and the possibilities for real transformative change based on an ethics of care – the reason they got involved in the first place – are limited.

According to ecofeminist and decolonial thinkers, the environmental crisis is not a managerial or efficiency issue; it is about ethics and world views. It is an ethical crisis following an ontology based on human separation from, and mastery and control, over nature. Exploitation is the logic consequence and world-making practice of this world view (Merchant, 1980; Santos, et al., 2007; Escobar, 2016). As Phillips (2016, p. 473) points out, “particularly in the Global North, humans have become emotionally and physically distanced from the ways in which our actions impact on nature, on ourselves and on other humans.” One way to overcome this is “an acceptance of the organic materiality of human bodies, as beings who are part of the natural world (Ibid., p. 476). In this way, we may reimmerge ourselves in the relational stream of life, recognize the relationships that we are part of and begin to care in action.

## 7 Conclusions

The forms of public participation offered during the consultation process were reviewing and commenting on the consultation documents and participating in consultation meetings. Decision-making was linked to the content of the consultation documents and in particular the administrative measures. The forms of participation favoured professionals and actors of resource-strong organizations and hindered those who lacked informational advantages and

those who did not speak the same technical language as the Water Authority. Non-professional actors, local organisations and individuals were excluded.

Apart from excluding people from decision-making, the results show that technocratic water management makes it difficult for people to care for their local waters. It is difficult to care for water both because of the time and technical knowledge needed to understand how the water management system works, but also because the current technocratic water management strategy favours ecological modernization and continued capitalist economic growth instead of sustainability and care.

The contribution of this study has been to make visible the possibilities and limitations inherent in a system that has become so naturalized that it is regarded the only valid way of knowing water problems and solutions. However, despite what the Water Authority or other actors might say, technocratic water management is not inevitable. Results from this study show that it is both undemocratic and unsustainable. This realization may help to recognize other strategies for caring for water, not based on separation from other people and from nature. The recognition of other ways of knowing and being will both increase inclusion in decision-making and the possibilities for care.

This study has been about a consultation process in Swedish water management. However, as pointed out in the introduction of the thesis, technocratic management has become the dominant strategy for knowing about and being with nature in modern society. Technocratic management has political consequences in the world. In this study, I propose relational care as an alternative to technocratic management to enable just and sustainable futures, democracy, care, and more-than-human flourishing.

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