

# Rising Seas and Rising Tensions

Exploring the Failure to Implement Flooding Regulations in a  
Swedish Municipality

Måns Berger

# Abstract

Rising sea levels and continuous coastal development increase vulnerability to flooding in southern Sweden. National regulations try to increase local consideration of flooding in urban planning, but so far implementation is limited. The aim of this thesis is to understand the lack of implementation and explore how and why implementation failed in a Swedish municipality. In order to study the case previous literature on barriers to implementation have been synthesised into a framework that structured the data collection process and the analysis. To gather data on how implementation failed, planning documents was analysed and to explain why implementation failed actors involved in the planning process, mainly department officials and local politicians, were interviewed to obtain data on what barriers prevent implementation. The result identifies that implementation failed because local politicians failed to act upon the risk of flooding. Two main aspects were identified that explain the behaviour of the local politicians. An interdependency with local land owners, that were critical of the regulation, and tensions with the County Administrative Board. The main contribution of this thesis is to understand the implementation failure as a product of the interorganisational context.

*Key words:* Adaptation, Flooding, Urban Planning, Barriers, Implementation.

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# Table of Contents

<b>1</b>	<b>Introduction.....</b>	<b>4</b>
1.1	Aim and Research Questions .....	6
<b>2</b>	<b>Background .....</b>	<b>8</b>
2.1	The Structure of Urban Planning.....	8
2.1.1	The Planning Process .....	9
2.1.2	Defining Implementation Failure.....	11
2.2	Flooding Regulations in Urban Planning.....	12
<b>3</b>	<b>Literature Review.....</b>	<b>14</b>
3.1	Literature on Implementation.....	14
3.2	Barriers to Implement Flooding Regulations.....	16
3.2.1	Conflicting Interests .....	17
3.2.2	Uncertainty and Lack of Political Support .....	17
3.2.3	Lack of Capacity .....	18
3.2.4	Lack of Legitimacy and Efficiency.....	19
<b>4</b>	<b>Theoretical Framework and Operationalisation.....</b>	<b>20</b>
4.1	The Theoretical Framework.....	20
4.2	Operationalisation of Framework.....	22
<b>5</b>	<b>Methodology .....</b>	<b>26</b>
5.1	Case Selection .....	26
5.2	Principles of Good Fieldwork .....	27
5.3	Qualitative Content Analysis .....	28
5.4	Interviews.....	30
5.4.1	Selecting Interviewees.....	31
5.4.2	Positionality & Ethical considerations .....	31
<b>6</b>	<b>Result .....</b>	<b>33</b>
6.1	How did Implementation Fail?.....	33
6.2	What Barriers Where Present? .....	35
6.2.1	Barriers Present During Consultation.....	36
6.2.2	Barriers Present During Review .....	39
6.2.3	Barriers Present During Approval.....	42

6.3	Summary of Result .....	43
<b>7</b>	<b>Analysis and Limitations.....</b>	<b>45</b>
7.1	Analysis.....	45
7.2	Limitations .....	47
7.2.1	Validity and Reliability .....	47
7.2.2	Generalisation .....	48
<b>8</b>	<b>Conclusions.....</b>	<b>49</b>
8.1	Answering the Research Question.....	49
8.2	Implications of Result.....	50
8.2.1	Theoretical Implications .....	50
8.2.2	Societal Implications .....	51
8.3	Suggestions for Future Research.....	52
<b>9</b>	<b>References.....</b>	<b>53</b>
	<b>Appendix 1. Coding Guide .....</b>	<b>57</b>
	<b>Appendix 2. Interview Guide .....</b>	<b>60</b>

# Abbreviations

<b>CAB:</b>	County Administrative Board
<b>DDP:</b>	Detailed development plan
<b>MCP:</b>	Municipal comprehensive plan
<b>PBA:</b>	The Swedish Planning and Building Act
<b>IPCC:</b>	Intergovernmental Panel on Climate Change

# 1 Introduction

Flooding is becoming an increasing problem in the region of Scania in Sweden. It is estimated that 23 000 houses and approximately 6% of the population live in areas vulnerable to future flooding as a consequence of climate change (Ehrnstén, Foltýn, & Persson, 2014, p. 6). Predictions forecast that climate change may increase the average precipitation in Sweden by 40%, and the average sea level could increase by one meter at the end of the current century. This would dramatically increase the risk of large-scale flooding with severe implications to vulnerable settlements (IPCC, 2014b; SMHI, 2014). Already with the settlements of today, the cost to adapt to the climate in 2100 is roughly 150-200 billion Swedish krona (Prop 2017/18:163, p. 46).

The Swedish public authorities are acknowledging this as a growing issue, and have updated the policy instruments to improve the handling the risk of flooding. The main way of doing this is through integrating flood risk considerations into urban planning practices. In order to address the risk of flooding through urban planning the Swedish Planning and Building Act (PBA) was updated in 2008, making it mandatory for municipalities to consider the risk of flooding when producing a new detailed development plan (DDP). The DDP is the key component of the Swedish urban planning process, and is thus a key policy tool in order to address flooding since it is how municipalities control where and how new settlements can be built. When developing settlements, a DDP is required, the DDPs shall mainly do two things. Test whether the designated area is suitable for development and regulate this development. Since it is both difficult and expensive to protect existing buildings and infrastructure, urban planning is important as it is crucial to prevent the construction of additional vulnerable facilities. Preventing the construction of vulnerable facilities can be done in two ways: either prevent the development of settlements in vulnerable areas; or regulate new constructions in a way that make it less sensitive to flooding, like banning basements.

Still, a recent government report concludes that only few actual measures to prevent flooding have been implemented, like the construction of embankments or the establishment of early warning systems. Also, despite the efforts described above, urban planning continues to result in the development of new settlements in vulnerable coastal areas (SCB, 2011; SOU 2017:42; The Swedish Environmental Protection Agency, 2019, p. 260). In a survey from 2019, 50% of all municipalities have not identified how they will be affected by climate change, 60% have not started to produce a plan for how to adapt to climate change and 40% have not implemented a single measure to adapt to climate change (Matschke Ekholm & Nilsson, 2019). The increasing risk of flooding has been identified as one of the greatest challenges connected to climate change in two different government reports (SOU 2007:60, 2007; SOU 2017:42, 2017), and still Swedish municipalities

have failed to implement sufficient flooding regulations. Considering the dramatic consequences of flooding and the lack of implementation, more knowledge is required to understand why implementation of the flooding regulation fail.

There is existing literature on barriers to implementation, but these barriers often have a top-down approach, focusing on the construction of the national regulations, or the distribution of responsibility amongst the national agencies and less on the challenges faced when actually implementing the regulations on the ground (SOU 2017:42, 2017; Storbjörk & Ugglå, 2015, p. 1134). Previous research that do employ a more bottom-up approach have often identified barriers to implementation through counterfactual reasoning prior to actual implementation (Storbjörk & Ugglå, 2015, p. 1134). There is a lack of research that study cases where implementation has failed from a bottom up approach, this is identified as a gap in the literature. In this thesis the concept of barrier refers to any obstacle that prevents or limits the implementation of a given policy.

This thesis seeks to understand the failure to implement the flooding regulation in Swedish municipalities. It will contribute to the existing literature by studying a case where implementation have actually failed through a bottom-up approach. This has, as far as we know, not been done before. Studying an actual implementation failure enables an in-depth study of the causes of implementation failure. A bottom-up approach to implementation means the implementation failure will be explored by studying the actors that are supposed to implement the policy at the end of the policy chain. In the end it is the behaviour of these actors that determine how the policy is actually carried out, so their perception and reality are therefor of great importance (Lipsky, 2010).

Urban planning is mainly the responsibility of the municipalities and is normally managed by a politically appointed building committee whom are the decision-makers for all major decisions regarding urban planning. Supporting the building committee is a building department that consist of civil servants responsible for preparing all new plans and issuing recommendations for appropriate actions. The department and committee are the two actors that are responsible for the implementation of the policy and their behaviour are the focus of this thesis. Negligence on their part can result in a failure to implement the flooding regulation.

Two additional stakeholders are of relevance to this thesis. It is the private developers, interested in developing new settlements and the County Administrative Board (CAB), the regional authority tasked with monitoring municipal compliance to the PBA. The CAB also have the authority to repeal plans that fail to consider the risk of flooding. These two actors are also selected since they are crucial to the planning process.

Implementation failure is defined as the DDPs that was approved by the municipality but then repealed by the CAB because they fail to consider the risk of flooding. The CABs decision to repeal the plan is the very last stage of the policy process, and the fact that the CAB repeal a DDP shows that the committee and/or department has been negligent of the risk of flooding. Since the CAB only have limited jurisdiction and capacity it is important to understand why municipalities neglect to implement flooding regulations. Because if flooding regulations are not

implemented in urban planning it means Sweden's future vulnerability to flooding would increase, risking both settlements, and possibly, lives (Barnett & O'Neill, 2010; SOU 2007:60, 2007).

This thesis will study the detailed development plan Shorebyplan (a fictive name is used to ensure anonymity) that was repealed by the CAB since it failed to consider the risk of flooding. The plan was developed in Shoreby (a fictive name is used to ensure anonymity), a coastal municipality in the region of Scania that has suffered from flooding at multiple times in history, and is today seen as a frontrunner when it comes to implementing measures to prevent flooding.

## 1.1 Aim and Research Questions

The aim of this thesis is: (1) to increase knowledge of the failure to implementation flooding regulations in detailed development plans, (2) to understand how implementation failed in the case of Shorebyplan and (3), to understand why implementation failed in the case of Shorebyplan.

More knowledge relating to the implementation is required to pave the way to future more extensive research and to inform the debate concerning the adequacy of the current regulations. To understand the failure the department and committee is central, since a negligence on their part can lead to implementation failure.

The first step of this thesis was to determine how implementation failed. Implementation failure either happen because the department failed to identify flooding as a risk, or the risk is identified but not acted upon by either the department and/or committee.

Next step was to explore what aspects that has influenced the behaviour of the committee and department and can explain the failure. These aspects are referred to as barriers in the literature. In order to identify relevant barriers that could explain why implementation failed, a review of current research on implementation was conducted, the different barriers identified was then grouped into the following themes: lack of political support, referring to the committee not being supportive of the regulation, lack of capacity, mainly referring to the capacity of the department, conflicting interests, meaning the regulation is in conflict with other interests, and uncertainty on how to interpret the regulation. During the field work it became clear that a perceived lack of efficiency and legitimacy related to the policy, where also important aspects that required attention, these barriers where then added to the theoretical framework. The barriers will be described more extensively in the literature review (See chapter 3). The following research question will guide this thesis:

*(1) How can we understand the role of the department and committee in the failure to sufficiently implement flooding regulations in Shorebyplan?*

The question is specified even further in the following two sub-questions.



- (1.1) *How can the failure be understood, as either a failure to identify the risk, or as a failure to act upon the risk?*
- (1.2) *Which factors, referred to as barriers in the literature, explain why the department or committee failed to implement flooding regulations?*

Data on how implementation failed will be obtained through a content analysis of planning documents. Once the failure has been identified this thesis will proceed to identify barriers to implementation that can explain the actions of the committee and department. The barriers will be identified through semi-structured interviews with civil servant from the department and politicians from the committee. A developer and a CAB official will also be interviewed in order to get additional perspectives and to enable triangulation of previous observations.

## 2 Background

In order to understand how implementation of flooding regulations can fail, the following chapter will describe the four stages of the planning process: the planning decision, the consultation, the review and the approval. The role of the department, the committee, the CAB and the developer will also be introduced. Then a working definition for implementation failure will be constructed finally this chapter will describe how flooding is regulated in national legislation.

### 2.1 The Structure of Urban Planning

This section will describe how urban planning is organised, how flooding is regulated and the role of the CAB. In Sweden urban planning is the responsibility of the municipality. The Swedish municipality has extensive jurisdiction in almost all issues related to urban planning, this is referred to as the municipal planning monopoly. Urban planning is organised through detailed development plans (DDPs) and municipal comprehensive plans (MCPs) and it is regulated through the Building and Planning Act (PBA).

MCPs specify long-term goals for how all municipal land and water shall be used. How different interests should be balanced and how the municipality will consider the risk of flooding, amongst many things (PBA 2010:900, chap. 3). MCP need to be decided every fourth year and is not legally binding (SOU 2017:42, p. 125).

The DDPs are in contrast to MCPs, detailed, concrete, concern a demarcated area and are often more project oriented. DDPs shall mainly do two things. Test whether the designated area is suitable for development and regulate this development, whether it is new roads, houses, industries or other facilities. The DDPs are legally binding and has a big influence over the development of the designated area (PBA 2010:900, chap. 4), therefore this thesis has decided to focus on the regulation of the DDPs and not the MCPs. Even though MCPs should guide the DDPs, it is the DDPs that in the end determine the development of an area, and previous research has shown that the interplay between the MCPs and DDPs is rather weak (Storbjörk & Ugglå, 2015, p. 1136). Also MCPs are often describing the development in very general terms, making it easy to mask conflicting interests, and it is first in the DDPs that the different interests really need to be weighed against each other (Nilsson, Gerger Swartling, & Eckerberg, 2012, p. 758; S. Storbjörk, Isaksson, Hjerpe, Antonson, & Hrelja, 2017, p. 16)

In chapter 2 §4 of the PBA it is regulated that a municipality is only allowed to use land for development if it is suitable. What suitable means is specified in chapter 2 §5 in PBA. One of the aspects that determine whether an area is suitable or not is the risk of accidents, flooding and erosion (PBA 2010:900, chap. 2). If municipalities still develop new settlements on unsuitable land they risk being sued by affected citizens and need to pay for the damages. This rarely happens, as it tends to be rather hard to prove that the municipality knew of the risk, if they never investigated it. The plan can also be repealed by the CAB. The CAB is a regional government authority that function as a link between the county and the national parliament and government. Generally, the responsibility of the CAB is to monitor the situation in the county and report back to the Swedish government, to support the implementation of national decisions and to coordinate government activities in the county. (SFS 2007:825).

One responsibility is to ensure that municipalities are acting in accordance to the PBA on behalf of the Swedish government. This means municipalities need to consult the CAB when producing a new DDP. The CAB can also stop a DDP if it does not consider issues of national interests or if new settlements are planned in locations that are not suitable considering the health and safety of the citizens. Chapter 11, 10-11§ in the PBA describe the five circumstances when the CAB is allowed to repeal a DDP, where the last circumstance refers to flooding:

1. When the plan is not considering the national interests as defined in chapter three and four in the environmental code.
  2. When questions regarding usage of land that concerns multiple municipalities is not properly coordinated.
  3. If the plan is infringing on the environmental quality standards as defined in the fifth chapter in the environmental code.
  4. If the plan is infringing on shoreline protection as defined in chapter seven in the environmental code.
  5. If the location of new settlements is not sufficient with regard to health, safety and risk of accidents, flooding and erosion to its inhabitants.
- (PBA 2010:900, chapter 11, 10-11§§).

This rarely happens, in 2019 about two percent of all DDPS where repealed by the CAB. But the number of plans repealed because of flooding or erosion has grown rapidly and is now the most common reason (National Board of Housing Building and Planning, 2019b).

### 2.1.1 The Planning Process

This section will describe the process to produce a detailed development plan, and the role of the four main actors in the process: the department, the committee, the CAB and the developer (See Table 1). The planning process is regulated in the PBA, depending on an initial assessment the planning process can involve different

procedures, where a normal procedure is the most common and the extended procedure is the second most common. There are additional procedures but they are less common and will not be touched upon here as they are not of relevance to this thesis. No matter if it is an extensive or normal procedure, there are four main decision point in the planning process: the planning decision, the consultation, the review and approval of the plan.

Table 1. The Planning Process

	<b>Planning Decision</b> Decision whether to start the planning process	<b>Consultation</b> Obtain comments from stakeholders and public	<b>Review</b> Obtain comments from relevant stakeholders	<b>Approval</b> Approve or reject plan
<b>Developer</b>	Submit application	May submit comment	May submit comment	-
<b>Department</b>	Prepare application	Prepare planning proposal & adjust proposal to comments	Prepare planning proposal & adjust proposal to comments	Prepare final planning documents
<b>Committee</b>	Grant planning decision yes/no	Send for consultation yes/no	Send for review yes/no	Approve plan yes/no
<b>CAB</b>	-	Comment on plan	Comment on plan	Repeal yes/no

It is only the committee that can decide if a plan shall be developed and it is always the municipality that is responsible for drawing up a new plan. The plan can be initiated by the municipality but often the initiative comes from a private developer that want to develop new settlements, this could be a private land owner or a large construction company, and everything in between. The developer then gets in contact with a local planning department, normally it is the planners at the planning department that produce the plans. If the local politicians in the building committee agree with the intention of the developer, for example amount of buildings, apartments and height of buildings, the developer is granted a planning decision, that means the municipality agree to start the planning process. Importantly, this does not mean there is any formal obligation on behalf of the municipality to approve the plan in the end

If the planning decision is approved, the department draw up a planning proposal. A planning proposal must consist of one or more map of the area, planning specifications and a property list. The planning specification explains the purpose of the plan, how it shall be implemented and the consequences of the plan.

Then the committee decide if they want to proceed with the planning proposal and if they do, they send it for public consultation. Consultation means that information and opinions is gathered from specific stakeholders, including the CAB, but the consultation is also open to the public. The department then adjust the proposal based on the comments submitted during the consultation and then the committee decide whether to proceed with the process and send it for review. When the plan is sent for review the municipality shall give all those affected, including the county administrative board, the opportunity to review the finished proposal. After two weeks the review ends and all comments from both the consultation and review is compiled in a review report together with answers from the municipality on whether the comments will be considered or not. After the review, only minor

changes off the plan are allowed, otherwise a new review process is required. Then it is time to decide if the plan shall be approved. After the plan has been approved the county administrative board may review the plan, and if they consider the plan to not comply to the PBA, in any of the circumstances described in previous section, the CAB can repeal the plan. If there are no objections during the decision gains legal force and the implementation of the plan can begin (National Board of Housing Bulding and Planning, 2015). Important to note is that the developer can also decide to terminate the process at any time if they are unhappy with the direction of the planning process.

The extended procedure is similar to the normal one with two exceptions, it require a public announcement that a planning process begins and the comments from the consultation shall be compiled in a consultation report, together with answers from the municipality on whether the comments will be considered (National Board of Housing Bulding and Planning, 2015). Every plan has an implementation period that determines the period within which a DDP intends to be implemented. Once the plan has gained legal force, the developer needs to apply for a building permit in order to build new settlements. The developer cannot apply for a building permit prior to the start of the implementation period, and once the period has expired, the plan can once again be changed. As long as the settlements are in line with the DDP the municipality must grant the building permit (National Board of Housing Bulding and Planning, 2020).

The planning process is characterized by being a reflexive and deliberative process in which the department and sometimes also committee negotiate and coordinate with different stakeholders and try to balance multiple interests in an environment where there is a great deal of uncertainty and changing knowledge (Lundqvist, 2016, p. 3; Storbjörk & Ugglå, 2015). Therefore DDPs are often prone to political compromise (Nilsson et al., 2012).

### 2.1.2 Defining Implementation Failure

This subsection will develop a working definition of implementation failure, the definition is used to select a relevant case and to identify the implementation failures in the planning process.

To determine whether flooding regulations are successfully implemented is complex. The outcome of the implementation can in reality only be measured once a flooding has occurred. Since the regulations is rather new, from 2008, and the planning process is long, finding new DDPs relating to an area that have been affected recently by flooding is unlikely. Therefor this thesis will instead study the output of the implementation, meaning how the DDPs consider flooding. Even studying output is complex, to assess implementation of flooding regulations are very technical and complex and require a high degree of expert knowledge. In order to assess output this thesis will use what should be considered a minimum definition, that is to fulfil the legal requirements in the PBA with regard to flooding. The CAB is the authority responsible for reviewing municipalities compliance to

PBA, including if a DDP has considered flooding sufficiently. This thesis will use the CABs assessment to define implementation failure. That means a municipal failure to implement flooding regulations is defined as a DDPs that has been repealed by the CAB because it fails to consider the risk of flooding.

Importantly, that does not mean that all DDPs that pass the legal requirements will be successful. Also, different DDPs have different legal requirements, where the CAB lack jurisdiction to repeal old DDPs with regard to flooding. Using the legal requirements gives a clear-cut definition that is useful when identifying municipal negligence. These cases should be understood as a the tip of the iceberg, where the big problem is not these plans specifically, but a general trajectory where urban planning leads to increased vulnerability, since exposed and sensitive settlements are still developed (Nilsson et al., 2012; SCB, 2011; S. Storbjork, 2006; Swedish Environmental Protection Agency, 2019). In sum, using the legal requirements as our working definition enables this thesis to determine what DDPs that have obviously failed, not who is successful.

## 2.2 Flooding Regulations in Urban Planning

In order to understand the implementation failure this section will describe the development of flooding regulation in Sweden. Flooding in relation to climate change is part of as a larger set of policy issues labelled adaptation. Climate change policy is generally divided into either issues of mitigation, meaning decreasing greenhouse gas emissions, or adaptation, meaning adjusting to the effects of climate change (IPCC, 2014a, p. 118).

In Sweden, the national debate on adaptation, including flooding, took off with the Commission of Climate and Vulnerability in 2006. The Commission was appointed after the storm Gudrun in January 2005. The storm killed seventeen people destroyed large areas of forest and left more than 600 000 people with no access to electricity in the middle of the winter. The commission was tasked to assess Sweden's vulnerability to climate change and the regional and local consequences (SOU 2007:60).

As a consequence of the work by the Commission of Climate and Vulnerability the need to consider flooding in new DDPs was included when the PBA was updated in 2008. The CAB was also given the authority to repeal plans if they did not sufficiently consider the risk of flooding (Prop 2006/07:122, p. 33). In 2009 the CAB was also given the responsibility to coordinate regional adaptation measures (Prop 2017/18:163, p. 72). There were never any clear national guidelines developed on what was required to sufficiently consider the risk of flooding. Instead the CABs produced regional guidelines and recommendations, as well as regional action plans (SOU 2017:42, , p. 127).

The next extensive government inquiry was launched in 2017, called the adaptation inquiry, targeting adaptation of settlements and the distribution of responsibility. The adaptation report concluded that the municipalities are

responsible to ensure that all new settlements are constructed on land that is suitable with regard to flooding, that few actual measures to decrease the vulnerability to climate change has been implemented, and that some municipalities refrain from fully investigating the lands suitability. They further concluded that no public entity has a clear responsibility to protect existing settlements and that the responsibility falls on the owners of the property, the inquiry considered the current distribution of responsibility to be unreasonable. The inquiry also identified that municipalities cannot reject building permits if they were related to old DDPs where development in vulnerable areas were planned. The inquiry suggested that the municipality should be able to assess building permits with regard to flooding just like new DDPs, but this recommendation never passed parliament.

There are a number of flooding regulations that could be studied. This thesis will focus on the change in the PBA that occurred in 2008 when it became mandatory to consider the risk of flooding in DDPs (Prop 2006/07:122). The next major regulation was in 2018 where the consideration of flooding also became mandatory in the MCPs as a consequence of the adaptation inquiry (Prop 2017/18:163). Since the DDPs are legally binding and the MCPs are not, this regulation is considered the most important and will be the focus of this thesis.

## 3 Literature Review

This chapter will give a brief introduction to implementation theory, and then describe barriers to implementation identified in previous literature. The implementation literature is used to identify relevant actors and will be used in the final analysis of the result. The barriers to implementation will be used to understand the behaviour of the committee and department, with regard to the implementation failure. Previous literature on barriers to implementation often discuss the broader theme of how to implement adaptation. Since flooding regulations are one of the most common adaptation policy's in Swedish municipalities this literature is relevant to this thesis (Wamsler & Brink, 2014, p. 1374).

### 3.1 Literature on Implementation

Implementation research is part of the field of public policy research. Implementation research study the content, causes, and consequences of how public regulations are enforced and how public policy is delivered (Winter, 2003a, p. 205). One way to describe the implementation process is the Integrated Implementation Model (See Figure 1), the model describe some of the most important aspects in implementation (Winter, 2003a).

The first aspect in the model is the policy formulation. The success of implementation is dependent upon how the policy is formulated, how the problem is defined, what the proposed solution is and what the goals are, if there is inconsistency at the stage of policy formulation, it can create problems later in the implementation system. In this case, the problem is formulated as flooding caused by climate change and the solution is to integrate the flood risk into urban planning.

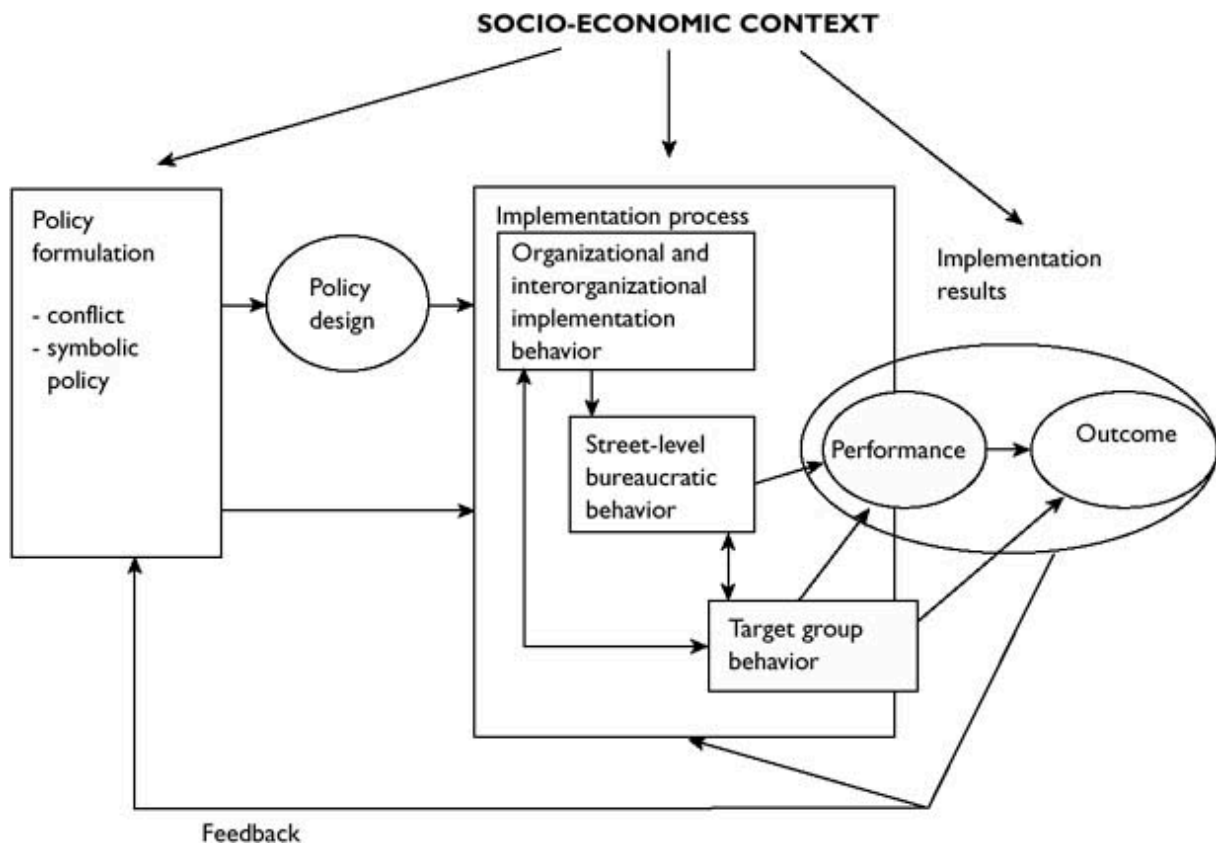
Another important aspect is policy design. Policy design relate to how the policy is constructed and the different components of the policy, referred to as policy instruments. The basic idea is that the policy needs to be carefully designed to ensure successful implementation. There are a number of different aspects that should be considered in the design, such as goal clarity and the complexity of the implementation context, meaning that implementation include multiple actors and multiple veto points. There are at least five different veto points in the planning process, the committee can veto the process when deciding whether to grant a planning decision, whether to send it for consultation and review and when deciding



whether to approve the plan. On top of that can the CAB veto the plan after it has been approved in the municipality.

Other policy instruments, aim to affect the intermediaries, those that are supposed to carry out the policy. These instruments can be categorised as capacity-building instruments, commitment-building instruments and instruments that help to signal desired course of action, including oversight mechanisms (May, 2003, p. 225). In this case, key policy instruments refer to the changes in the PBA and the role of the CAB responsible with monitoring municipal compliance.

*Figure 1. The Integrated Implementation Model*



All of these aspects are preconditions that affect the implementation process but are not part of the process itself. The implementation process is constituted by the organizational and interorganizational behaviour, the behaviour of the public officials, referred to as street-level bureaucrats and the target group. As this thesis will focus on the implementation process, these aspects will be central to this thesis.

An important aspect to the implementation process is the interorganisational relations. It is much more complicated to implement policies that require cooperation or coordination of multiple actors. The interorganisational relations can be horizontal, or vertical, and can involve both public and private actors. There are generally three reasons for organizations to cooperate, one organisation has authority over the other, the organisations share common interests, or there is a mutual exchange between the organisations. Another important aspect is whether

the organisations are interdependent, and the character of the interdependency (O'Toole, 2003).

The public officials that carry out the policies are also of great importance and they are often able to affect the implementation of policies. The task they carry out are often of great complexity and impossible to specify in predefined guidelines these officials are therefore often granted a high degree of discretion and a relative autonomy from organizational authority which give them an influence on how the public policy is delivered. The behaviour of the target group is also of great importance to the implementation process (Meyers & Vorsanger, 2003), in this case are the private developers the target group.

The concept of street level bureaucrats refer to a theory developed by Michael Lipsky (Lipsky, 2010). The theory has mainly been used to describe bureaucrats with a high degree of client contact, often vulnerable clients (Maynard-Moody & Portillo, 2010). Compared to them, the planners have less room for discretionary decisions and act in an area where there is a rather high degree of organizational control, since the committee are responsible for all major decisions. Therefore, the theory of street level bureaucracy does not fit the planning context very well. This thesis will therefore focus both the behaviour of the committee and the department. Still this thesis is also using a bottom up approach to implementation and thus share a similar understanding of the policy process: as a process where decisions by local actors, the routines they establish, and the devices they invent to handle uncertainty and pressures, effectively become the policies they carry out (Lipsky, 2010, p. xiii).

The implementation literature identifies four actors that is considered to be the key stakeholders in the implementation process. The committee and the department are the main focus of this thesis, they are responsible for delivering the policy and are the once whose actions might cause an implementation failure. The target group, the developers are also highlighted in the model as important. Finally, the CAB will also be studied since the CAB has veto power, which is identified as important in the implementation literature.

The last point of the model is that the result of the implementation can be measured in different ways, as performance in relation to predefined goals, as output or as outcome (Winter, 2003b, p. 219). As previously mentioned it is not feasible to study outcome and the policy does not include any specific targets, therefor this thesis will study the output of the implementation. The socio-economic context will be touched upon in the analysis, but is not the focus of this thesis.

## 3.2 Barriers to Implement Flooding Regulations

In order to understand what aspects that could explain the behaviour of the committee and the department, a review of current research on barriers to implementation of adaptation was conducted, the different barriers identified was then grouped into the following themes: *conflicting interests*, *uncertainty*, *lack of political* and a *lack of capacity*. Since all potential barriers cannot be studied at

once, the barriers that had most relevance to urban planning was chosen, and only barriers that was mentioned in more than one case study. During the field work the barriers *lack of efficiency* and *lack of legitimacy* where also added.

### 3.2.1 Conflicting Interests

Coping with a multiplicity of conflicting interest is one of the main challenges in urban planning (Dymén & Langlais, 2013, p. 113). There are conflicts between different interests, and sometimes different interests supported by different stakeholders. When adaptation policies are implemented, they often end up in conflict with short-term economic interests. For example, there might be a conflict between the need to construct more housing at the same time as certain areas are not fit for additional settlements, another example is how building regulations increase the cost of construction, making housing more expensive. Also municipalities do to some extent compete to attract wealthier tax-payers, which motivate municipalities to proceed with waterfront development which is popular but increase the vulnerability to flooding (Dymén & Langlais, 2013, p. 113f).

Sometimes these conflicts are also between different actors (Granberg & Elander, 2007; Storbjörk, 2007; Wamsler & Brink, 2014). It could be between different municipal departments where one department is responsible for supporting the development of new businesses and might have a different view on the importance of a new DDP than the planning department. There could also be conflicting interests between the private developers that are more interested in short term profit and less in long term risk management. There are also a number of empirical cases that shows how developers are able to dominate the planning process on behalf of other interests (Flyvbjerg, 1998; McGuirk, 1995). This is done by circumventing the formal process by using informal strategies (Hillier, 2000; McGuirk, 1995).

Conflicting interest are a key characteristic of urban planning and it can cause implementation failure if the flooding regulations are neglected on behalf of another interest. A potential challenge is the temporal aspect where the risk of flooding caused by climate change is a very long term risk in contrast to more short term pay-offs from for example additional waterfront housing (Storbjörk, 2006).

### 3.2.2 Uncertainty and Lack of Political Support

Two types of uncertainty have been identified, uncertainty in knowledge and uncertainty in responsibility. *Uncertainty in knowledge* refers to issues like what year shall be used for reference when planning for future increases in sea levels or what climate scenarios shall be used (SOU 2017:42, 2017; Storbjörk, 2007; Wamsler & Brink, 2014). *Uncertainty in responsibility* refers to a lack of clarity regarding who is responsible for preventing flooding at what situation (Prop 2017/18:163; Storbjörk, 2007). Uncertainty especially becomes a problem when

there is conflicts of interests, if there is uncertainty flooding regulations are less likely to take priority over for example economic interests (Carlsson-Kanyama, Carlsen, & Dreborg, 2013, p. 114).

Another identified barrier is *lack of local political support*. There are three aspects that relate to lack of political support. The general direction of planning politics, and whether it is in conflict with the flooding regulation, to what extent the committee has ensured the availability of funding to address flooding and whether flooding regulations are prioritised in decision-making. A lack of political support can explain why the committee fail to act upon a known risk. A lack of political support can also influence the department and make them hesitant to propose ambitious recommendations (Storbjörk, 2007; Wamsler & Brink, 2014).

### 3.2.3 Lack of Capacity

Another barrier is a lack of local capacity and competence to deal with adaptation, this barrier is mainly relevant to the department, because in order for the committee to be able to act, the department need to have capacity to identify the risk. Adaptive capacity refer to: “The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences” (IPCC, 2014a, p. 118). Improving adaptive capacity has been one of the main strategies to address flood risk (Bassett & Fogelman, 2013).

There are different ways to study adaptive capacity, common is to study the institutional capacity that is required to implement adaptation (Storbjörk & Hedrén, 2011). There are five aspects of institutional capacity-building that are important in order to strengthen institutions ability to integrate adaptation into planning and decision making.

1. Skills and performance of individual actors
2. Organisational management capacity
3. Networking capacity
4. Regulatory framework
5. Social norms and values

(Willems Stephane & Baumert Kevin, 2003)

In this case, the first aspect refers to sufficient experience and knowledge of flooding by the planning department to identify relevant risk and propose sufficient recommendations. Organizational management capacity refers to availability of resources, and support from management. Networking capacity can be divided into horizontal and vertical networking capacity. Where horizontal networking capacity refers to the ability to cooperate with other municipal department or other relevant local actors like businesses interest groups or other municipalities. Vertical networking refers to ability to cooperate between institutional levels, in this case to cooperate with the CAB or other relevant government agencies. The capacity of the institutions are also dependent upon a wider context of national and local regulations, this forms the regulatory framework.

The last aspect that affect the institutional capacity is societal norms and values. Public institutions are part of a broader cultural environment that might either support or challenge the implementation of flooding regulations. For example, the general understanding of climate change is going to affect to what extent the implementation of flooding regulations is prioritised (Willems Stephane & Baumert Kevin, 2003, p. 11ff). The last aspect is relevant for both the department and committee and could relate to a failure to act.

### 3.2.4 Lack of Legitimacy and Efficiency

During the field work it became clear that a perceived lack of efficiency and legitimacy of the policy plays an important role in the case and they were therefore added to this section. The importance of efficiency and legitimacy when implementing adaption policies in urban planning have previously been described by Lennart J. Lundqvist (2016).

The uncertainty and complexity of climate change make it harder to ensure support from different stakeholders, especially since flooding regulations often mean some kind of restriction. Therefor it is important that stakeholders perceive the regulations as legitimate, and related to that, efficient, otherwise they might resist implementation.

There are three aspects of *legitimacy* related to planning: The planning aspect concerns the choice of policy instruments and implementation arrangement. In this case an important aspect is the role of the CAB as responsible for monitoring municipal compliance. The network aspect of legitimacy means to what extent affected stakeholders can participate in the planning process. This can both increase the stakeholders understanding of the process, improve the decisions and increase the legitimacy of the plan. The legal aspect, means the legal principles and procedural requirements that underline the flooding regulation, since this thesis is utilising a bottom-up approach this is not considered (Lundqvist, 2016, p. 3).

Efficiency can be understood as both efficiency in output and efficiency in outcome. In this case, efficiency in output is understood as the extent to which the DDP has integrated a consideration to flood risk. Efficiency in outcome refer to whether the regulations are able to protect settlements from future flooding (Lundqvist, 2016, p. 3).

# 4 Theoretical Framework and Operationalisation

This chapter will first present the theoretical framework of this thesis (see Table 2) and then describe how the theoretical framework is operationalised (see Table 3). The purpose of the theoretical framework is to identify how implementation failed and what aspects influenced the behaviour of the committee and the department. The theoretical framework will structure the data collection process and the analysis.

## 4.1 The Theoretical Framework

This section will describe the theoretical framework. The framework is based on previous literature on barriers to implementation and has been adjusted to fit the planning context described in the background chapter.

The theoretical framework is described in Table 2. The table shows how implementation could fail and what barriers might explain each failure. This analysis needs to be carried out at each of the four major decision points described in the background (see chapter 2), these are: whether to grant a planning decision, to send the planning proposal for consultation, to send it for review and whether to approve the plan or not (National Board of Housing Building and Planning, 2019a). That means the analysis described in the theoretical framework shall be carried out four times.

Each decision point needs to be analysed to determine if one or more implementation failure occurred. The definition of implementation failure this thesis use is a DDPs that was repealed by the CAB because it failed to consider the risk of flooding. To identify the implementation failure means to identify when the risk of flooding should have been considered but was not. There are two ways implementation can fail, either it fails because the risk was never identified and therefore the risk where not considered, or the risk is known but not acted upon, at least not sufficiently. To identify the risk is the responsibility of the department. Even though the politicians are the once that take the decision in the end, they rely on the expertise of the department. If the department never identify flooding as a threat it is not reasonable to believe the politicians are able to. If the implementation failed because the risk was never considered the failure is the responsibility of the department.

If the risk is identified it is also the responsibility of the department to provide recommendations on appropriate measures, but as long as the risk is sufficiently described, the committee also have a responsibility to act. Therefore, if the department describe the risk sufficiently but provide insufficient recommendations that are approved by the committee, both the committee and the department have failed to act, and they are both responsible.

Even though the department have identified the risk and provided adequate recommendations, implementation might fail if the committee reject the recommendations, then implementation fail because the committee failed to act. More than one implementation failure might occur in one planning process.

Determining how implementation failed is important when the barriers shall be identified, because different implementation failures could be caused by different barriers. Also, since the barriers are identified through interviews with key stakeholders, one need to know at what time in the planning process implementation failed and who caused the failure in order to interview the right actor.

**Table 2. Theoretical Framework**

Potential Failures	Potential Barriers
Fail to identify risk (Department)	<ul style="list-style-type: none"> <li>• Lack of Capacity</li> <li>• Uncertainty</li> </ul>
Fail to act (Department)	<ul style="list-style-type: none"> <li>• *Lack of Capacity</li> <li>• Lack of Political support</li> <li>• Uncertainty</li> </ul>
Fail to act (Committee)	<ul style="list-style-type: none"> <li>• Conflicting interests</li> <li>• Lack of Legitimacy</li> <li>• Lack of Efficiency</li> </ul>

\*Only the last aspect of lack of capacity, social norms and values, relate to the committee.

Next step is to identify what barriers to implementation that where present. Different implementation failures can be explained by the presence of different barriers because the barriers have different meaning to different actors in different situations.

The department might *fail to identify the risk* because they lack capacity to identify the risk, or there might be uncertainty regarding responsibility that explains why the risk is not described. *The department might fail to act* because they lack capacity, the department do not know how to address the issue, or the issue is not considered to be important. The department might also refrain from providing sufficient recommendations because they perceive a lack of political support from the committee or they do not perceive the regulation to be legitimate or efficient or in conflict with other aspects that are perceived as more prioritised. They may also fail to provide relevant recommendations because there is uncertainty regarding

how to understand the CAB recommendations and the responsibility of the municipality.

The *committee might fail to act* because they consider the recommendations to be in conflict with issues of greater priority, or they perceive the regulations to lack legitimacy or efficiency. The committee might also fail to act because there is uncertainty regarding how to understand the CAB recommendations, or the regulation is not in line with the general political strategy or they lack capacity. In this case the lack of capacity refers to social norms and values in conflict with the regulation, for example how one understands climate change may affect once actions.

## 4.2 Operationalisation of Framework

This section will describe how the theoretical framework is operationalised (see Table 3). That means how to define the data that would identify a concept. This is called an operational indicator (Esaiasson, Gilljam, Oscarsson, & Wängnerud, 2007, p. 55). In this case, a concept refers to either the presence of a barrier or an implementation failure. There are some overlaps between the concepts, that means certain concepts might share the same indicator and sometimes there are more than one indicator per concept.

The implementation failures are mainly operationalised through information of the planning process. The implementation failure is identified through a content analysis of planning documents. The operationalisation of the barriers is constructed from information of the planning process described in the background chapter and information of the barriers described in the literature review. The barriers are mainly identified through interviews with the key stakeholders: the developer, the committee, the department and the CAB.

The failure to identify a risk is operationalised as the department fail to describe an obvious risk in the planning documents. An obvious risk, is a risk that is not in line with either municipal strategies nor CAB recommendations, (see Appendix 1. Coding Guide for additional information on how data will be interpreted).

The failure to act is determined by comparing department recommendations and the measures approved by committee with the comments by the CAB. If the recommendations, or approved measures, are in line with the CABs comments, they are considered sufficient, if they are criticised by the CAB, they are considered insufficient, and an evidence of implementation failure. This assessment needs to be done at each major decision point (see Table 2).

There are two types of *uncertainty*. Uncertainty in knowledge is operationalised as the departments or/and committees' perception of the scientific basis that inform the flooding regulation. If the recommendations from the CAB is questioned by either department or committee based on the knowledge that inform the policy, uncertainty of knowledge is identified. Uncertainty in responsibility is



operationalised as a whether perceived clarity of flooding regulation regarding the distribution of responsibility.

There are a number of different possible *conflicts of interest*, and it is impossible to name them all. A conflict of interest is operationalised as the department or committee motivate a failure to act based on the importance of other interests.

*Lack of political support* refers to three aspects: lack of priority, lack of funding and general political strategy in conflict with flooding regulations. There are two operational indicators for lack of priority, the committee fail to act on a known risk and department perception of political support from committee regarding flooding regulations. The perception of the department is important, because it is their perception that will determine their action, not the actual political support. The first operational indicator overlaps with the indicator that define a failure to act by the committee. That means if the committee has failed to act, it would also be an indication there is a lack of political support. Lack of funding is operationalised as department perception of resources to address flooding. It is not practically feasible to make an independent assessment of whether the department has sufficient funding, it would be very time consuming and require in depth knowledge that is not possible to acquire in the time span that this thesis is written. Still it is important to be aware that it might be in the departments interest to communicate that they need more resources, that means this aspect need to be interpreted cautiously, and the observation need to be confirmed through triangulation to allow for any interpretation. Whether the general political strategy is in conflict with the flooding regulation is operationalised as MCPs correspondence to CAB recommendations. The MCP is the most important document that specify long-term goals for how all municipal land and water shall be used and is therefore relevant as an operational indicator.

*Lack of capacity* include five aspects: lack of skills and performance of individual actors, lack of organisational management capacity, lack of networking capacity, insufficient regulatory framework and contradictory social norms and values (Willems Stephane & Baumert Kevin, 2003). All aspects are relevant to the department, but only aspect five is relevant to the committee.

There are two operational indicators to identify skills and performance of individual actors. They are: the presence of employees working mainly with flooding. If no one is able to specialise on flooding it is reasonable to assume that there is a lack of expertise in the department. The second operational indicator is department perception of available skills to address flooding in new DDPs. It might be a risk that the capacity is overstated by the department, therefore the observation needs to be confirmed through triangulation to allow for any interpretation.

Organisational management capacity also has two operational indicators: department perception of available resources to address flooding and department official's perception of support from higher management. The first part overlaps with lack of political support, that means a lack of political support might also affect the capacity of the department, which is reasonable.

Lack of networking capacity relate to both horizontal and vertical networks. Lack of horizontal networking capacity relate to the ability to cooperate with other municipal departments and will be operationalised as: comments regarding flooding

regulations during consultation and review. If there are critical statements towards the flooding regulations the department has not been successful in creating support from other departments. Vertical networking refers to ability to cooperate with national agencies and will be operationalised as: department perception of cooperation with national agencies, this needs to be interpreted carefully since this is not just a matter of the capacity of the municipality, but also depends on other organisations. Insufficient regulatory framework will be operationalised as: MCP correspondence to CAB recommendations regarding flooding. Once again, this overlaps with lack of political support.

Social norms and values are operationalised as: department and/or committees' perception of rising sea levels. This is slightly similar to uncertainty in knowledge, but while uncertainty in knowledge means that one is questioning the scientific basis of the recommendations, the social norms and values relate to the risk being disregarded, because the actor do not believe in the risk.

There is both *efficiency* in output and outcome. Efficiency in output is operationalised as: department/committees' perception of CAB recommendations, with regard to their effect on how the DDPs address flooding. Efficiency in outcome is operationalised as: department/committee perception of whether the actions and recommendations from the CAB decrease the municipalities vulnerability to flooding.

Finally, there are two aspects that relate to *legitimacy*. The planning aspect and networking aspect. They both have two operational indicators each. The planner aspect is operationalised as: department/committees' perception of CABs decision-making process and department/committee's perception of the role of the CAB. The networking aspect is operationalised as: land owners' perception of the possibility to participate in the CABs decision-making processes and land owner's perception of possibility to participate in municipalities decision-making processes. The municipalities decision-making processes is included for reference.

**Table 3: Operationalisation**

	<b>Concept</b>	<b>Operational Indicator</b>
<b>How did implementation fail?</b>	Fail to identify risk (Department)	<u>Presence of:</u> A lack of information about an obvious risk in planning documents
	Fail to act (Department)	Correspondence of CABs comments with measures recommended by department regarding a known risk
	Fail to act (Committee)	Correspondence of CABs comments with measures approved by committee regarding a known risk
<b>What barriers where present?</b>	Uncertainty	<u>Uncertainty in knowledge:</u> departments/committees perception of scientific basis that inform the flooding regulation <u>Uncertainty in responsibility:</u> perceived clarity of flooding regulation regarding the distribution of responsibility by department/committee
	Conflict of interest	<u>Presence of:</u> department/committee motivate a failure to act by referring to the importance of other interests
	Lack of political support	<u>General political strategy in conflict with flooding regulations:</u> I) MCP correspondence to CAB recommendations regarding flooding <u>Lack of funding:</u> II) department perception of available resources to address flooding <u>Lack of priority:</u> III) committee fail to act on a known risk IV) department perception of political support from committee regarding flooding regulations
	Lack of capacity	<u>Lack of skills and performance of individual actors:</u> I) the presence of employees working mainly with flooding. II) the department perception of available skills to address flooding in new DDPs <u>Lack of organisational management capacity:</u> III) department perception of available resources to address flooding IV) department officials perception of support from higher management <u>Lack of networking capacity:</u> V) comments regarding flooding regulations during consultation and review from other municipal departments VI) the department perception of cooperation with national agencies <u>Insufficient regulatory framework:</u> VII) MCP correspondence to CAB recommendations regarding flooding. <u>Contradictory norms and values:</u> VIII) department/committee perception of rising sea levels
	Lack of efficiency	Output: department/committees perception of CAB recommendations, with regard to their effect on how the DDPs address flooding
		<u>Outcome:</u> department/committee perception of whether the actions and recommendations from the CAB decrease the municipalities vulnerability to flooding
	Lack of legitimacy	<u>The planner aspect:</u> I) department/committee perception of CABs decision-making process II) department/committee perception of the role of the CAB <u>The networking aspect:</u> III) land owners perception of the possibility to participate in the CABs decision-making processes IV) land owners perception of possibility to participate in municipalities decision-making processes

# 5 Methodology

The purpose of this chapter is to describe how data will be obtained in accordance to the operationalisation from previous chapter in order to answer the research questions. This chapter describe the case selection, how the fieldwork will be conducted and how content analysis and interviews will be utilised in this research. In order to provide new knowledge of why implementation fail, a research process that are able to address the full complexity of implementation and urban planning is required. Qualitative methods will therefore be utilised in order to give in-depth description of the sequence of events including the perceptions of the key stakeholders (Vromen, 2018, p. 272).

This thesis will also utilise a mixed method approach. The methods will mainly be used to complement each other, they are not nested, and will be applied in a sequence, beginning with the content analysis. Still, since this thesis will use triangulation when possible, it means there will be non-nested and confirmatory aspects as well (Small, 2011, p. 63ff).

The first step is to identify how the implementation failed. To understand the character of the failure a content analysis will be utilised, studying planning documents. The second step is to identify aspects that explain the actions of either the department or committee that caused the implementation failure. These aspects are referred to as barriers in the literature. The benefit of studying pre-existing material like planning documents is that the data does not get affected by the interaction with the researcher, the downside is the lack of flexibility, meaning if there is an important piece of information missing, there is no way to obtain additional information through the use of that method. Using interviews is a way to fill in the blanks from the content analysis, while still having a firm base of data from the content analysis to rely on. Using two types of material enables this thesis to draw on each materials strength (Kapiszewski, MacLean, & Read, 2015, p. 157).

This thesis will use a case study approach since it enables an in-depth understanding of the implementation process, single case studies are common in implementation research in order to capture the full complexity of implementation (Lowndes, Marsh, & Stoker, 2018, p. 272; Winter, 2003b, p. 214).

## 5.1 Case Selection

Now the selection of the case Shorebyplan will be discussed. In this section anonymity and transparency are in conflict, and therefore, this section unfortunately needs to be kept slightly vague in order to protect anonymity.

A demarcation was made in this thesis to focus on the region of Scania, and therefore only cases in Scania will be considered. Scania is chosen since it is especially vulnerable to flooding for two reasons. First it does not benefit from land elevation (SMHI, 2014, p. 37), and second, Scania has the most populated coastline in Sweden, 42% of the coastline has settlements closer than 100m from the shore (SCB, 2011; The Swedish Environmental Protection Agency, 2019, p. 260).

In Scania the case of Shorebyplan was selected. Shorebyplan is a positive case selected by the dependent variable. It is more common to select cases based on the independent variable, but since the goal of this thesis is to increase our understanding of why implementation of flooding regulations fails and how this failure could be explained by the literature on barriers, it would make no sense to select a case where implementation is successful. There is a critique regarding selecting cases based on the dependent variable, but that relate to when the researcher is trying to establish causality by comparing cases, it is important to stress that the aim is not to compare cases but to contribute with additional knowledge of the phenomena and then selecting cases on the dependent variable is sufficient (Geddes, 1990, p. 24).

The case selection follow the general notion of purposeful sampling, that is to choose cases that provide as much information as possible (Patton, 1990, p. 169). Choosing cases based on the dependent variable means choosing a DDP in Scania that has been repealed by the County Administrative Board. Out of all possible cases an extreme case was selected. When the researcher has limited time and resources, like in this case when doing a master thesis, selecting a single extreme case is a one way to still provide valuable insights. The DDP Shorebyplan was selected based on the fact that Shoreby is a municipality with a lot of experience regarding flooding but also a high exposure to flooding. Choosing a municipality that is pioneering the area, means the chance of identifying the barrier lack of capacity is less than in most other cases, the benefit of choosing such a case is that it can shed light on structural challenges to implementation. The high exposure to flooding means that the challenges that are identified in Shoreby, might be relevant to more municipalities in the future, as more and more municipalities will be exposed to flooding. The case of Shorebyplan can hopefully provide valuable insight on future challenges.

## 5.2 Principles of Good Fieldwork

In order to get a deep understanding of the case, field work will be conducted, studying planning documents and interviewing key actors. This thesis will follow the principles of good fieldwork develop by Diana Kapiszewski, Lauren MacLean and Benjamin Read, (2015, p. 26ff). The principles are: engage with context, flexibility, critical reflection and ethical commitment. These will now be presented in order.

To *engage with the context*, means that in order to understand the implementation process, the researcher needs to develop a good understanding of the context. Planning and funding regulations are technically complex issues, and in order to minimise the risk of misinterpreting observations the researcher's personal network was utilised, continuously discussing the research with other planners to ensure a proper understating of the context. Sound fieldwork also accepts a good dose of *flexibility*. That means, even though the fieldwork is prepared and theoretically directed, there is still room to adapt to new information, unexpected challenges and unforeseen opportunities. *Triangulation* refers to the collection of data from multiple sources, enabling different perspectives, looking for observations that could both confirm or contradict previous observations. Another important principle is to *critically reflect* upon the material, and try to avoid tunnel vision, the fourth principle is an *ethical commitment*, trying to minimise any risk of the participants and share the research result with those involved. And last, *transparency*, trying to be as transparent as possible of the different considerations that took place during the research (Kapiszewski et al., 2015, p. 26ff). Important to point out is an ethical commitment and transparency might sometimes be in conflict, when for example anonymity is required to protect participants but to ensure anonymity also requires restrictions of transparency.

### 5.3 Qualitative Content Analysis

In order to understand how implementation failed a content analysis will be utilised. Since the planning process is very transparent and well-documented a content analysis is an efficient and suitable choice of method. Content analysis is also a method that is especially equipped to study phenomena that are public, repetitive and institutionalised, the planning process is such a phenomena (Krippendorff, 2004, p. 77).

This thesis will use qualitative content analysis to study the planning documents. The idea of qualitative content analysis is to draw on the advantages of the quantitative content analysis in a qualitative analysis. Mainly the use of a systematized and transparent process that attempt to achieve a certain degree of intersubjectivity (Mayring, 2000). This thesis will use a directed content analysis, that means it will be structured by previous research, and use premade concepts.

The content analysis will be used to analyse planning documents but also transcripts from the interviewees. The planning documents will be analysed prior to the interviews, that way the content analysis also function as an important preparation to the interviews (Kapiszewski et al., 2015, p. 85). The content analysis will also be used when selecting interviewees.

The material will be selected through snowball sampling. Previous literature and theory will guide how the initial sample is identified. In this case, all documents that are considered to be part of the planning process, meaning all documentation relating to any of the four stages of the planning process: planning decision,

consultation, review and approval. On top of that, all documents relating to the CABs decision will also be part of the initial sample. From the initial sample, all documents related to flooding or Shorebyplan that is referred to from the initial sample will then be added to the total sample (Krippendorff, 2004, p. 117f). At a minimum that means the MCP will also be added, but other strategic documents are likely to be added as well.

In order to be sure no documents are missing all authorities involved in the process will be asked to give all public documents they have relating to the DDP. These documents should be available to the public as a result of the Swedish principle of public access to official records, ensuring the Swedish public, access to almost all public records, including relevant emails to public officials or politicians.

When carrying out the content analysis, step one is to identify key concepts than can be used as coding categories and step two is to operationalise these coding categories, this is described in previous chapter. The operationalisation will then be transformed into a coding guide (see Appendix 1. Coding Guide), giving examples and coding rules for how to code in each test (Mayring, 2000). Using a coding guide make the analysis structured and transparent, still, the coding guide are likely to change during the fieldwork as unexpected data occur. The material will be coded through a thematic analysis (Roulston, 2010, p.162f). The coding will be conducted manually, this is preferable since the texts need to be interpreted in its context, and mechanical measurements might fall short when the analysed phenomena are of social nature (Krippendorff, 2004, p. 126). First the material will be read through and all sections of text that refers to the categories described in the operationalisation will be highlighted. Second the text will be read through and coded and all sections of text that does not fit an existing code will be given a new code. That way this analysis make sure that it does not miss any occurrences of the phenomenon (Hsieh & Shannon, 2005, p. 1281). The codes will be analysed by simulating hypothesis testing. That means the construction of a number of hypothesis of what could be included in the text that would either support or deny the existence of the phenomena of study Appendix 1. Coding Guide). For example, if the barrier uncertainty in knowledge exist, we would anticipate that the committee or department should question the recommendations from the CAB based on its scientific basis. If such an observation is detected in the transcript, it means the hypothesis is affirmed and it is an evidence of the existence of the barrier uncertainty of knowledge. A hypothesis could also be constructed that would deny the existence of a category, or partly deny and partly affirm (Krippendorff, 2004, p. 137ff).

Quantitative descriptions will not be used since the codes are not comparable, and a quantification cannot be carried out with sufficient regard to validity. Instead the evidence will be presented by showing descriptive evidence, quotations. The purpose of using quotations is to be transparent and show the often ambiguous answers from the interviewees. The quotations will be translated, this means an interpretation of the answers will be necessary before they are presented, this is not optimal, but in the end, translating the quotations is more transparent, than not translating them.

A weakness of content analysis is the lack of flexibility, that leads to challenges related to validity, these will be discussed in the section on limitations.

## 5.4 Interviews

This section will describe and motivate the interviews as a choice of method, discuss the role of the interviewer, the strategies applied during the interview's and the general structure of the interviews. Interviews will be used as a method since it enables us to obtain sensitive information on conflicts that is unlikely to be spelled out in public documents. The main aim is to identify the factors that explain the behaviour of the department and committee, but also to confirm the observations in the content analysis. Data will be obtained by conducting semi structured, in-depth interviews, based on a romantic conception of interviewing. A romantic conception of interviewing is in line with the critical realist ontological and epistemological assumptions that inform this research. Amongst the different types of interviews, in-depth interviews are chosen since it is an effective method to reveal sensitive information (Kapiszewski et al., 2015, p. 194; Roulston, 2010).

The role of the interviewer will be as an active listener, the interview will begin with a broad question that is easy to answer. That way the interviewees will feel comfortable. The interviewer will then proceed, stating open ended questions and let the respondent tell his or her story and then follow up with theoretically informed probes. The interview will then finish with a question that is easy to answer (Hermanowicz, 2002, p. 488; Kapiszewski et al., 2015, p. 194ff). Since information about potential conflicts between department officials and either politicians or management is sensitive, it is important to foster rapport. This can be achieved by self-disclosure and sharing information (Dickson-Swift, James, Kippen, & Liamputtong, 2007, p. 332f). Some of the interviewees where reluctant to participate, they were therefor contacted a number of times to discuss the interview, at one occasion, the interviewee where also shown the question in advance, in order to ensure that the interviewee felt comfortable. In order to try to obtain as reliable data as possible, triangulation and countering bias will be used. Triangulation was described in previous sections and to counter bias means that the interviewer try to imagine before the interview what biases that could occur and what probes can be used to try to get to the correct information (Kapiszewski et al., 2015, p. 231).

The interviews will be informed by an interview guide (see Appendix 2. Interview Guide), but it will still remain open to follow unanticipated topics that arise (Hermanowicz, 2002, p. 490). The interview guide will be informed by previous literature and the content analysis and constructed to fit the municipal context. The questions are likely to be adjusted after the content analysis and during the interviews as more knowledge is gained. Before the questions will be used they will be tested in a similar environment in another municipality (Kapiszewski et al., 2015, p. 216f). A final note is that there are always issues relating to reliability when



using intrusive methods like interviews, these will be discussed in the section on limitations.

#### 5.4.1 Selecting Interviewees

This section will discuss how the interviewees were selected and the type of sampling used. Purposeful sampling is relevant since we want interviewees that can offer the most useful information. Using random sampling would not be sufficient, since this thesis is interested in the experience of key actors: the developer, the CAB, the committee and the department. The key actors are identified through the literature on implementation and the operationalisation, therefore it is a theory-based sampling process (Patton, 1990, p. 177).

The interviewees will be selected based on their potential influence and knowledge of why implementation failed (Kapiszewski et al., 2015, p. 212; Patton, 1990, p. 169). The department and committee are the key actors and the focus of this thesis, but the developer and CAB official is also interviewed in order to triangulate and contribute with additional perspectives. Since it is beneficial to include as many perceptions as possible, at least one representative of each relevant stakeholder will be interviewed. The content analysis will aid the sampling by identifying how implementation failed. That means if there has been more than one politician that could be interviewed, the politician present during the implementation failure will be selected.

Eight interviews were conducted, all of the interviewees are referred to as she, in this thesis in order to ensure anonymity. One developer was interviewed (referred to as Land owner), she was selected since she was the one leading the process amongst the two developers. Three representatives from the department were selected, (referred to as Department official 1, Department official 2, Department official 3), they were all involved in Shorebyplan during some of the implementation failures. Three politicians were interviewed, two that held key positions during the implementation failure and one member from the opposition (referred to as politician 1, politician 2, opposition politician). A CAB official was also interviewed (referred to as CAB official), the CAB official was referred to as the one that had most knowledge of the implementation of flooding regulations. Once again, this section had to be slightly vague in order to ensure anonymity.

#### 5.4.2 Positionality & Ethical considerations

This sub-section will discuss issues of positionality and ethical considerations relevant to the interviews. That means discussing the power balance between the interviewee and the interviewer and how the ethical criteria from the Swedish Research Council will be applied.

Being a student interviewing politicians, and sometimes senior civil servants, the power relationship is in favour of the interviewees. That could create challenges like the risk of being ignored (Kapiszewski et al., 2015, p. 219), or not being paid sufficient attention to during interviews (Conti & O'Neil, 2007, p. 70f). To mitigate the risk of not being taken seriously, the topic will be studied extensively prior to the interviews and language and appearance will be adjusted to fit the context (Conti & O'Neil, 2007, p. 68ff). Personal networks will also be used, discussing the different concepts with practitioners prior to the interviews to minimize the risk of misunderstanding crucial information, and to study contextual language (Kapiszewski et al., 2015, p. 219).

The ethical criteria developed by the Swedish Research Council is based on the requirement to protect the individual that participate in the research. This is specified in the requirements, for: confidentiality, consent, information and autonomy. The requirement for confidentiality means that when there is sensitive information obtained the result of the thesis shall be reported in such a fashion that the identity of the interviewees cannot be identified. During this research the department officials are asked questions regarding the negligence of their superiors, worst case scenario the interviewees could risk repercussion. All interviewees are therefore anonymous and the quotations used were selected carefully not to jeopardise anonymity.

The requirement for consent means that the participant shall decide for themselves if they want to participate in the research or not. This was adhered to by booking the interviews in advance, then sending an email with information regarding the research and that the interviews would preferably be recorded. During the interview the interviewer once again asked if the interview can be recorded, and then asked once again if the interview can begin. The requirement for information was also adhered to, all interviews will begin by informing the interviewees of the research project, the participants role in the research, how it will be utilized, that participation is voluntary, that they may terminate the interviews at any time and that they will be anonymous. In the end of the interview the interviewees will be asked if they want to see the interview transcript. The requirement for autonomy means to respect the autonomy of the participant. It requires that the information collected during the project will not be used to any other purpose. The plan is currently involved in a judicial process, that process is outside the scope of this thesis, but in order to make sure the result of the thesis stay out of that process the name of the plan and the municipality will be left out (Swedish Research Council, 2002, p. 7ff).

## 6 Result

In this chapter the result from the content analysis and interviews will be presented. The result will be analysed and presented in accordance to the theoretical framework. First the result of the content analysis will be presented describing the implementation failures that were identified. Then the result of the interviews will be presented where the barriers to implementation are identified. The content analysis and interviews have also been used to triangulate each other, which will be referred to continuously. The presentation of the result will follow the structure of the four major decision points: the planning decision, the consultation, the review and the approval. The developers are from now on referred to as land owners, in order to emphasise that they are not a large construction company, but two private land owners. At the end of the chapter the result is summarised (see Table 4).

### 6.1 How did Implementation Fail?

The content analysis has studied planning documents related to Shorebyplan. The four major decision points of the planning process: planning decision, consultation, review and approval have been analysed to identify where the implementation failure is located and who is responsible. Since there was an old plan in the area with an implementation period that had not terminated, Shorebyplan was paused after the consultation. The process between the approval of the application and the decision to repeal Shorebyplan by the CAB was six years. The exact years are left out in order to secure anonymity.

The process of Shorebyplan began when two land owners applied for a planning decision to build two additional houses approximately two meters above sea level close to the coast in Shoreby. The land was owned by the land owners, and it was located in a small greenery in a populated area. The department argued that the application should be rejected based on the importance of the greenery in the area. This recommendation was supported by a greenery analysis, that was approved by the committee the same year (Application). The greenery analysis state that it is a priority to protect the remaining area that was planned as park, especially considering the fragmentation of the greenery and the concentration of private houses in the area (Greenery analysis). The committee decided to ignore the recommendations from the department, approved the planning decision, and instructed the department to begin developing a new DDP in the area (Application).

In the documents prepared by the department, flooding was not mentioned at all. This is surprising because in an older application it was mentioned that the

ground was below three meters above sea level (Old application). This indicates that the department failed to identify the risk. But to determine if it was a failure, the risk need to be obvious, meaning not in line with either CAB recommendations or municipal strategies. The coastal program, that was the strategic document that guided planning considerations in coastal areas at the time, mention that development in the area need to take precautionary measures if it were below 2,5 meters, meaning that the foundation needed to be adjusted to ensure that the first floor is at least three meters above sea level (Coastal Program 1). The developers mention in their application that they are willing to adjust the foundation to fit the requirements of three meters above sea level. The CABs recommendation that no new settlements should be developed below three meters above sea level in coastal areas where first known to the municipalities in 2012<sup>1</sup>, when the CAB published their Handbook for Adaptation in Water Planning (Persson, Ehrnstèn, & Ewald, 2012, p. 16). That means the risk where at the time in line with both CAB recommendations and municipal strategies, and therefore the risk cannot be considered obvious. In accordance to the coding guide (see Appendix 1. Coding Guide) no conclusions whether a failure to identify the risk has occurred can be determined. The committee approved the planning decision but since the risk where never described, a failure to act cannot be determined.

The same year the plan was sent for consultation. In the planning proposal flooding is only mentioned as a potential risk by the department, and not a risk, as the CAB wrote in their comment during the consultation (Consultation report; Planning proposal 1). Once the plan was sent for review this changed, and flooding where described as a risk which is in line with the CAB statements (Planning proposal 2). Since the plan was still in accordance to both CAB and municipal requirements during the consultation and the risk where described, even if it was not sufficiently described, the department being responsible for the implementation failure is determined to be partially denied at this stage (see Appendix 1. Coding Guide). A great deal of critique towards the plan was submitted during the consultation, from both neighbours, other municipal departments and the CAB. The CAB also submitted a very sceptical comment where they recommended the municipality to terminate the planning process because of flood risk and the importance of the greenery (Consultation report).

Instead of proceeding with Shorebyplan the department recommended the committee to terminate the planning process referring to the many critical comments submitted during the consultation. This time the department described flooding as a risk that motivated the termination of the plan. The Committee rejected the recommendations from the CAB and decided to continue the planning process.

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<sup>1</sup> The CAB did not have any known recommendations at the time, the CAB was working on the premise that below three meters in not suitable since 2011, but it was not well known by the municipalities until the CAB published their handbook of adaptation in water planning in 2012 (CAB official, email, 2020).

Since the department describe the risk of flooding in the documents and recommended that the planning process should be terminated the department is considered to have identified the risk and to have acted sufficiently on the information of the risk. Since the risk was clearly described and the recommendations by the department where rejected an implementation failure is identified where the committee have failed to act during the consultation.

The department then adjusted the planning proposal in accordance to some of the comments that was submitted during the consultation and sent it for review. The section on flooding was now more extensive where the department conclude that there is a risk of flooding. The adjustments made to the plan, pleased the CAB considering the issue of the greenery, but the CAB was still critical relating to the risk of flooding and erosion, stating that the plan is likely to be repealed if the municipality proceeds with the plan (Planning proposal 2; Review report).

After the review the department once again recommended the committee to terminate the planning process. Once again, the committee rejected the recommendations from the department, and decided to continue the planning process. Since the department describe the risk of flooding in the documents and recommended that the planning process should be terminated the department is considered to have identified the risk and to have acted sufficiently on the information of the risk. Since the risk was clearly described and the recommendations by the department where rejected, another implementation failure is identified where the committee also failed to act, this time during the review.

The department then prepared Shorebyplan for approval. In the planning documents one can read that the risk is clearly described but now suddenly the department recommend the committee to approve the plan, no clear motivation is given to why the department suddenly changed opinion. The plan was then approved by the committee. Since the department described the risk of flooding in the documents but did not recommended any measures at all, the department is considered to have identified the risk but to have failed to act sufficiently on the information of the risk. Since the risk was clearly described and the committee did not take any measure to address the risk, the committee also failed to act during the approval. That means two additional implementation failure were identified during the approval, where both the department and the committee were responsible.

## 6.2 What Barriers Where Present?

This section will describe what barriers that were identified during the interviews. The presentation of the identified barriers will follow the major decision points of the planning process, but only the decision points where an implementation failure occurred will be analysed, that is: the consultation, the review and the approval. Focus will be on the barriers identified by the politicians since it is the committee that is mainly responsible for the implementation failure. The result will be analyses

continuously as it is presented through the theoretical framework. A summary of the result is presented at the end of this chapter (see Table 4).

### 6.2.1 Barriers Present During Consultation

Two *conflicts of interests* were identified. First a conflict between environment and adaptation. The importance of the greenery where the primary reason why the department first wanted to terminate Shorebyplan. The land owners and the municipality did then negotiate a solution where the municipality demanded that the development should be located in a way that ensured minimal impact on the greenery and that the remaining greenery should be passed over to the municipality, that way the municipality could ensure that the remaining greenery was protected from further development. Politician 1, described that getting control of the area was an important aspect that motivated why they continued the planning process:

We thought it was fair that you could create a property in that location, with the great benefit that we got a very large greenery in exchange. The land is valuable, it is this coastal landscape with dunes and everything that we really value, and we don't have much land along the coast. It is as we say the *Shoreby* farmers [my italics], it is the rights of the farmers. The municipality owns nothing along the beach, here we saw a chance to get control of a very large piece of land (Politician 1, 2020, my translation).

The second conflict of interest identified is a conflict with economic interests. This conflict is confirmed by department officials that affirm that additional development where the political priority at the time:

[I]n that time it was the political alliance, which meant they were interested in more development. More development, more income, more housing, that way of thinking (Departement official 1, 2020, my translation).

This statement is confirmed by the strategic documents at the time, where it is clear that the municipality wanted to support additional coastal development, for economic reasons. “More development in the coastal area and a higher degree of permanent development provide growth and additional inhabitants” (Coastal Program 1, my translation). The conflict with economic interests is also connected to the influence of the developers. When answering a question regarding why the committee rejected the recommendations from the department, a member of the opposition state:

“the *another politician* [my italics], who was a member of the Moderates, and sometimes, to be perfectly honest, she wanted to please certain people, and she was often able to get the majority of the committee on her side” (Opposition politician, 2020, my translation).

The statement that the politician considered the interest of the land owners are to some extent confirmed in an interview with politician 1:

*The land owners* [my italics] had large properties of land but where not able to develop anything on them [...] and we thought it was reasonable to be able to build a house if one own that much land, she [land owner, my note] also grew up in the area (Politician 1, 2020, my translation).

Politician 1 confirms that the personal situation regarding one of the land owners were taken into consideration and was one of the reasons that motivated the decision. At the same time politician 1 downplay the importance of the land owners when asked about their importance for the process:

They [land owners, my note] where more of the character of private individuals, if you meet a professional developer or someone who wanted to buy and develop a large piece of land, then the discussion often became much more heated, then it was more discussion, this was more, they were interested in developing two sites for themselves (Politician 1, 2020, my translation).

This description of the land owner is not in line with how any other actor describe the role of the land owners.

The land owners where very insistent. They were very keen on developing their property, or properties, it was two. I believe they did quite a bit of lobbying on the politicians (Departement official 1, 2020, my translation)

We had a ton of contact, [...] she is very energetic, really, and she calls and she keeps track of everything, and she is pushing (Departement official 3, 2020, my translation)

The two conflicts of interest are mainly how the politicians motivate the decision, but other barriers were also identified. There are different interpretations of the recommendations between politicians and CAB officials regarding whether three meters above sea level refer to the height of the first floor or the required height of the ground. The politicians often refers to the three meters as the height of the first floor (Politician 1, 2020) but the CAB has a different point of view:

[T]he base of the building also need to be located on suitable soil. This only ensure that one does not get wet on their feet when they are indoors, but does not ensure that the soil is suitable as demanded by the legislation (CAB official, 2020, my translation).

This is interpreted as *uncertainty of knowledge*. A *lack of legitimacy* where also identified, where a politician where very critical towards the actions of the CAB.

Since the CAB, at least not at the time, [...] never gave any preliminary decision, or even preliminary comments, there were no consultation with the CAB where one can sit down and discuss. They only commented on finished plans, which was complete rubbish, then it was not possible to get any guidance or find consensus (Politician 1, 2020, my translation).

This is to some extent confirmed by the CAB that state they did not have any dialogue with the municipality regarding this specific plan. The statement from the politician is interesting, because it embodies the general idea of planning as trying to find consensus and balance different interests against each other, where the politician wants to solve the differences with the CAB by sitting down at a table, discussing and trying to negotiate and find consensus. The CAB perceive their role to be completely different.

“We can only assess what we have in front of us, the document that we have at that point in time. We follow the law, as simple as that” (CAB official, 2020, my translation)

The quota indicate that the CAB decision-making process is quite different from the municipal planning process. The same politician expressed a frustration regarding the CABs recommendations:

[T]he CAB wrote the same comment no matter what we did at the time, everything was shit as soon as it was here in *Shoreby* [my italics], we got negative comments om almost everything. Was it on farmland, or bordering to farmland was it shit, was it in the forest was it shit, was it to close to water or lakes was it shit, there was almost nowhere left were we can build up here, and that is still the case today. At the same time in *another municipality* [my italics] they are allowed to build almost in the water (Politician 1, 2020, my translation)

There is also an indication of *lack of political support*, from a department official when discussing the risk of flooding:

It was something that did not really concern them back them. One thought it was okay to demand that the foundation should be constructed in such a way that it was three meters above sea level, and then it was okay (Departement official 1, 2020, my translation).

Still the issue of political support was not one-sided. The management describe they had sufficient funding, so with regard to funding there was no lack of political support. It is hard to determine if the general political direction is in conflict with the flooding regulations. The MCP relevant at the time have a section on flooding. The MCP state that the risk of flooding is generally a problem if the ground is less than 2,5 meter above sea level (Shoreby, 2013). This is less than the CAB recommend, which is three meter above sea level, but the municipality also have stricter recommendations for certain areas and for areas that might suffer from increasing subsoil water. The CAB is generally positive towards the MCP with



regard to how it addresses flooding, but are critical towards how specific areas are considered. No safe conclusion can be drawn regarding whether the general political strategy is in line with the flooding regulations or not. That means there is insufficient funding, a lack of priority and the general political direction is unclear. That means no conclusions can be drawn regarding the presence of lack of political support at this stage.

## 6.2.2 Barriers Present During Review

During the review there was a new committee. The barriers identified were uncertainty, lack of efficiency, lack of legitimacy and conflict of interest. Regarding *lack of Political Support*, the situation continues to be unclear. The funding is still perceived as sufficient, the general political direction is the same, and the recommendations were ignored, but with one difference, the department official had had a more positive perception regarding the committee's dedication to prevent flooding. She describes how the committee has generally been more and more sceptical towards coastal development and argue that this shows in the development of the strategic documents.

And if one study today's MCP, the Coastal plan that was recently approved, but also other planning documents [...] they have been gradually more restrictive towards more development along the coast, and today it is almost that, well, we are not considering to plan a lot of new areas along the coast (Department official 2, 2020, my translation).

Still, no conclusions regarding lack of political support can be made since the different observations are too contradictory. But the *conflict the interest* related to the landowners were identified as important once again. The land owner had meetings with the politician and prior to the decision to send the plan for review the entire committee was out to meet the land owner and see her property (Land owner, 2020; Politician 2, 2020). Politician 2 perceives the role of the land owners to have been important to the process and when motivating the decision to proceed with the planning process, politician 2 motivates this by referring to the interests of land owners:

There were more and more land owners, and there were a number of these plans along the coast, and then we in the committee, well it was me and *another politician* [my italics] that looked into if there were any area where it was possible to oblige the land owners (Politician 2, 2020, my translation).

Next quotation shows that the politicians are very reluctant to stop a planning process once it has begun, since they feel responsible towards the land owners.

[I]t was a problem, because they [the land owner, my note] were more or less promised then, since a couple of years back, that it shall be possible. It was the new practice from the CAB and the new regulations regarding shoreline protection that made it more and more difficult to develop these areas that are located on low ground close to the coast (Politician 2, 2020, my translation).

This perception was confirmed by the department official 2:

[I]t was a general view that plans should be pursued to the end, and that the municipality should carry out what it has previously decided. It was often out of concern of the developers, they have the right to get their matter tested was the general opinion (Departement official 2, 2020, my translation).

A third aspect that complicated the relationship is the issue of equal treatment. The principle of equal treatment is a very important principle in the Swedish civil service and it is also part of the Swedish Local Government Act that regulate Swedish municipalities ("The Swedish Local Government Act," 2017). This is challenging to the municipalities because planning processes are long, and can take a number of years. So once a new plan is finished the circumstances might have changed, but other land owners might then request to get a similar development approved. This could also be the case if the municipality approve a plan that is questionable, and the CAB misses it, then other land owners would expect a similar treatment.

It is common that there has been a similar decision before and that might be the case here as well. Other people have previously been allowed to do what I want to do, this type of argument was common, and is still common today. If this plan [Shorebyplan, my note] gets approved we are likely to get an applicant in half a year that say: they were allowed. This is also an aspect that the politicians consider, and rightfully so, since it is a matter of equal treatment. But it raises the issue of when to stop, when is the plan that inappropriate that the principle of equal treatment cannot be applied (Departement official 2, 2020, my translation)?

*Uncertainty in knowledge* was also still an issue, where there were different interpretations of the recommendations between the politicians and the CAB officials. This time the difference where whether the recommendations should be perceived as a worst-case scenario: "Nobody really knows and we are still using some kind of worst kind scenario, it does not have to be that bad" (Politician 2, 2020, my translation). This is very different from the CAB that worry whether the current recommendations are enough:

There are other reports that consider more parameters than IPCC, and they reach the conclusion that we are facing considerably higher sea levels. So, we [the CAB, my note] argue that the risk may be even greater than we state in our comments (CAB official, 2020, my translation).

A difference from the consultation is that the decision to continue the planning process was now more motivated by a resistance towards the CAB. The resistance is motivated by a perceived *lack of legitimacy* and *lack of efficiency* on behalf of the CAB.

It is a concern, since the municipality should be independent, when it comes to, I mean we have a monopoly when it comes to planning in our municipality, that should be used with reason [...] but when the government intervenes with new decisions from above, that means our hands are tied, [...] we have decisions from our municipal council to expand current development, and then suddenly one is not able to do that because there are new directives. To some extent, it makes land owners feel that we have tricked them, because now they are not able to do what we told them. This creates a lot of conflict between the politicians and the members of the municipality (Politician 2, 2020, my translation).

Two issues of legitimacy are raised in this statement, first the politician perceives planning to be an issue that should be determined by the municipality, and the CAB's actions are an infringement of municipal autonomy, this refers to the planner aspect of legitimacy. The second critique refers to the result of the CAB's intervention, the conflict that it creates in the municipality. This refers to the networking aspect of legitimacy, because legitimacy is created in planning through a reflexive and deliberative process that involves different stakeholders in the decision-making process. In this case it even involves making a deal where the land owners gave away all the remaining land in the area to the municipality in order to secure their plan. The comment by politician 2 points to a problematic aspect of the current organizational structure where the CAB can repeal the plans, that it damages the legitimacy of the planning process. This is reinforced by a unison perception that there is a lack of dialogue from the CAB, this is in sharp contrast to how the municipality works during the planning process. The land owner experienced contact with both the municipality and the CAB and stated during an interview "you cannot compare the two. There is no such thing as a dialogue with the CAB, they make their decisions, they make their assessment, and that's it!" (Land owner, 2020, my translation).

When it comes to the *lack of efficiency*, generally most actors agree that the recommendations have an impact on how the municipalities address flooding, but when it comes to outcome efficiency, the politicians are more critical and state that the regulations are too inflexible and argue that it should be possible to "develop isolated houses in the areas along the coast, otherwise there is soon nowhere where we can build over there" (Politician 2, 2020, my translation), and later on she describes what she perceives to be the challenge of flooding.

The city has to be protected, and there we have everything with infrastructure, hospitals, supply of electricity, the purification plant that is important to the entire municipality. These are big issues, and a big

concern that is involves a lot of money, these are issues that we discuss every week (Politician 2, 2020, my translation).

The local politicians do not perceive new plans to be the main problem, instead they perceive the existing settlements that has been developed in vulnerable locations to be the main problem. The CAB official state she partially shares the critique from the municipality:

Yes, that is something I can partly agree upon. But that is a consequence of the current legislation where we can only intervene in new plans, but existing areas is really the biggest concern to all municipalities in Scania. There are so many settlements, vi estimate that if the shore line increase with three meters that would effect 23 000 houses and approximately six percent of the population in Scania live below three meters, so yes, the big question is the existing settlements (CAB official, 2020, my translation).

A department official state that she is positive towards the recommendations but also raises some concern regarding the implementation when asked about whether the recommendations from the CAB makes Scania safer with regard to future flooding:

Yes, at least I hope so. Even if it is a task that is not easy to implement everywhere since there is a mix of old and new plans. It is not enough to make Scania safe from flooding, but it helps (Departement official 2, 2020, my translation).

When the department official discuss old plans she refers to that building permits are assessed differently than DDPs, that means a land owner can get a building permit on a plan that is located in a vulnerable area where a new plan would never be allowed.

### 6.2.3 Barriers Present During Approval

The approval occurred only half a year after the review and therefore the situation where very similar. There was one big difference, that is the department failed to act upon the risk. In the interview, it became clear that the department had not changed their mind, but simple “gave up at the end” (Departement official 2, 2020, my translation) since they knew the committee would reject the recommendation anyway. That means the behaviour of the department can be explained by a perceived *lack of political support* from the committee, still the overall picture of the political support remains unclear.

To get a grip on the political support has been challenging, today Shoreby has a very ambitious coastal plan, more ambitious than the CAB recommendations and in accordance to Department official 2, “it would be completely unthinkable to say yes to Shorebyplan today” (Departement official 2, 2020, my translation). At the same time the politician still believe that the plan should be completed, which seems

very contradictory. A department official describes this to be a consequence of old decisions:

One could think that they [the committee, my note] should have followed the recommendations from the department and terminated these plans, it would have been more consistent. Then one would have acted from the will of today. But the logic in organizations run by politicians is not that simple because old decisions can come back and haunt you (Departement official 2, 2020, my translation).

That links to the perceived obligation of the committee to fulfil old agreements, and to treat everyone equal that was previously described.

### 6.3 Summary of Result

This section will summarise the result (see Table 4). The result has shown that four implementation failures were identified, the committee failed to act at three occasions and the department failed to act once. The department failed to act because of a perceived lack of political support. What motivated the committee to refrain from the recommendations from the department changed slightly over time. First it was mainly two conflicts of interest, ensuring environmental protection that was in conflict with implementing flooding regulations and second, implementing flooding regulations that was in conflict with additional development, that was an interest shared by both the municipality and the developer. Later in the process the failure to act was once again motivated by flooding regulation being in conflict with the additional development, but now the interest was mainly represented by the land owner but still prioritised by the committee. Another aspect that was relevant to the entire process but became more important later in the process was a critique of the actions and the role of the CAB relating to a perceived lack of efficiency and legitimacy. The barrier uncertainty of knowledge was also identified since there was a disagreement whether the plan was in line with the recommendations or not. The political support has been ambivalent and contradictory, all stakeholders perceived the department to have sufficient resources to address flooding and the general political strategy became more and more ambitious over time, but still the recommendations from the department was ignored during the entire process.

*Table 4. Summary of Result*

	MAJOR DECISION POINTS IN PLANNING PROCESS			
	Planning Decision	Consultation	Review	Approval
<b>Department (Fail to identify risk)</b>	Unclear	No	No	No
<b>Department (Fail to act)</b>	No	No	No	Yes
<b>Committee (Fail to act)</b>	No	Yes	Yes	Yes
<b>Barriers present</b>	-	<ul style="list-style-type: none"> <li>• Conflict of interest</li> <li>• Uncertainty</li> <li>• Lack of legitimacy</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict of interest</li> <li>• Uncertainty</li> <li>• Lack of legitimacy</li> <li>• Lack of efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Conflict of interest</li> <li>• Uncertainty</li> <li>• Lack of legitimacy</li> <li>• Lack of efficiency</li> <li>• Lack of political support</li> </ul>

# 7 Analysis and Limitations

This chapter will analyse the result using previous literature on implementation and discuss the limitation of this thesis in order to ensure transparency.

## 7.1 Analysis

In order to add some additional depth to the analysis and get a deeper understanding of the role of the department and the committee, the result will also be analysed using implementation literature (see Figure 1). Both the implementation context and the interorganisational relations will be analysed and some remarks will be made regarding the policy design and formulation.

The planning process include a number of actors, in addition to the four stakeholders interviewed in this thesis, both private and public, that have a stake in the planning process. There are also many veto points. The committee has at least four veto points, sometimes more, the CAB has one additional veto points, and on top of that, the developer may decide to terminate the planning process at any time. Because of the great deal of actors and veto points the implementation context is considered to be complex, making successful implementation less likely (O'Toole, 2003, p. 239).

The result indicate that two organizational relationships are especially important in order to understand the implementation failure, the relationship between the municipality and the developers, and the relationship between the municipality and the CAB. From the literature on implementation there are three reasons why organisations cooperate, authority, exchange and common interest (Ibid, p. 238ff).

The relationship between the CAB and the municipality is characterised by the CAB using their authority to repeal plans to force the municipality to comply. The relationship between the municipality and the private developers is characterised by mutual interdependency. The private developers need plans and sometimes land from the municipality and the municipality needs the investment from the developer, there is a mutual exchange and as long as the task is to develop new settlements there is also a common interest between the municipality and the developer. The developer wants to sell additional real estate and the municipality wants additional tax payers. Using authority is seldom possible for municipalities since the developer, may just move their investment to another municipality. One could think that the municipality would be able to use authority to force small land owner to comply, but this case shows, that even small land owners can have a considerable influence over the planning process.

The result show that the committee was reluctant to terminate ongoing planning processes, out of concern to the private developers. That means it takes time to implement flooding regulations, since they are not implemented in ongoing plans. That creates a second problem, because once the old plans, that was ongoing when the new regulation came into place, are finished, land owner will expect equal treatment, making it hard to suddenly start implementing the regulations. That means the cooperation with the land owners, and the demand for equal treatment, may create a path dependency that hamper the implementation of flooding regulation.

Using implementation literature, the case of Shorebyplan can be understood as a conflict between two interorganisational relations where the committee prioritise the relation with the developer. The result gives some indication to why this is the case. First of all, the result show that there is a great deal of criticism directed towards the actions and the role of the CAB regarding a lack legitimacy and efficiency. It is reasonable to assume that the perceived lack of legitimacy and efficiency is having a negative impact on the authority of the CAB. Uncertainty in knowledge might also be an issue that affect authority, since it enables different interpretations of the CAB recommendations. The result also shows that the strong influence of the developers is not only the case when the developer is a large construction company but also a local land owner can be an influential actor. The result shows that the influence from the land owners were important, even when the general political strategy became more ambitious regarding flooding regulations, the committee were very reluctant to disappoint the developers. The reluctance can partly be understood as worrying for free riders (O'Toole, 2003, p. 242). Free riders refer to other municipalities that ignore the recommendations, and by doing so, are able to attract private capital and wealthy tax payers, while other municipalities take their responsibility and decrease vulnerability. One observation that could be interpreted as supporting this hypothesis is the quota in the result when politician 1 state that “in *another municipality* [my italics] they are allowed to build almost in the water” (Politician 1, 2020, my translation). The analysis indicates that focusing on improving municipal institutional capacity might not be enough, since the failure is also rooted in the interorganisational context.

The character of the interdependency is also important. The interdependence between the municipality and the developer can be understood as sequential, since there are multiple veto point, one after the other. In these situations the implementation literature state that creating a new veto point unit, can be an effective way to ensure that certain objectives are considered in a complex implementation context (Ibid, p. 241). That means there is theoretical support for the current organisational construction granting the CAB veto power over flooding regulations.

The critique directed towards the CABs actions partly relate to issues of policy formulation and design. The critique related to efficiency, refers to the fact that neither the CAB nor the municipality can address building permits in vulnerable areas, and the fact that the policy only addresses new DDPs and not existing settlements, this refers to policy formulation. The critique relating to the role of the CAB is an issue that relate to policy design.



## 7.2 Limitations

This section will acknowledge the different limitations of this research and describe how they have been addressed through the research process. The limitations of the theoretical framework and the choice of method will be discussed in relation to validity and reliability. Then generalisability will be discussed in light of this thesis being a single case study.

### 7.2.1 Validity and Reliability

This section will first discuss validity relating to the theoretical framework, the operationalization and choice of methods, then reliability will be discussed, focusing on the limitations of using interviews.

An issue related to validity is whether the perceptions of barriers correspond to actual barriers, the perception is likely affected by the interviewees individual experience and might be biased. Still the perceptions are important since it is the actor's perceptions that determine their actions, and in the end, it is the actions of actors that determine whether implementation is successful or not. Perceptions of barriers are therefor considered relevant. The issue of bias was also addressed through triangulation and by trying to counter bias.

Another aspect is that confirming the existence of a barrier, does not necessarily say anything about the impact on implementation from that barrier. Since most of the barriers were identified by asking the interviewees to motivate their decisions, their responses are likely related to why they acted as they did. The one barrier that was not identified this way is uncertainty, that was identified by comparing interpretations of the recommendations, to what extent the presence of uncertainty relate to the actual outcome should be interpreted very carefully.

The lack of flexibility in content analysis might have repercussions to validity. The failure to identify the risk is assessed by what is written in the planning documents, but it does not say anything about what information that was actually presented to the committee, the issue of flooding might have been discussed extensively during the meetings. Still, this seems unlikely, since approving or rejecting a DDP is a highly regulated exercise of public authority and the municipal responsibility to determine the suitability of an area prior to development is regulated in the PBA.

Intrusive method like interviews always have reliability issues. Especially when the researcher has a more active role. There are concerns whether the interviewees are affected by the presence of the interviewer or that the interviewees might give the impression of being more informed than they actually are. Another major issue is whether they are being honest about their opinions, or honest about their motives, since a negative view could be interpreted as critique of their superiors or admitting to have acted against the law. This was a big challenge to this thesis, and discussing why the political committee did not implement the flooding regulation was

perceived as very sensitive by some actors, and there was a reluctance from some of the interviewees to participate or talk about the role of the committee. Some interviewees required to be contacted a number of times, to foster rapport before they would accept to participate. On top of fostering rapport, triangulation was once again used to try to determine the reliability of the observations. Regarding the politicians the challenge was to understand their real motives and to make sure they really answered the questions. It sometime required that one where persistent and once again try to counter bias. A related challenge was that face to face interviews where not possible because of the covid-19 pandemic. This was unfortunate and important to keep in mind when interpreting the result. Still interviewees did reveal both important and sensitive information. The interviewer might also be biased, because the thesis is directed by a theoretical framework and the interviews are structured by a premade interview guide. This means the interviewer might unintentionally influence the interviewee and/or overemphasise certain aspects and miss others. To address this limitation the interviewer tried to remain flexible and open to new types of explanations. The theoretical framework where also updated during the interviews to incorporated new issues.

How to evaluate qualitative observations always brings challenges regarding reliability, especially when there are contradicting observations. This thesis tries to handle this challenge by being transparent and refrain from drawing any conclusions when it was unclear.

## 7.2.2 Generalisation

This section will discuss to what extent this thesis is generalisable. First and foremost, as this case study focuses on one DDP in one municipality, it is important to emphasise that this will not be representative for all Swedish municipalities.

Since this is just one case, the possibility to generalise is limited and it is not possible to determine how influential every barrier is. Another issue is that the literature on barriers point to rather general phenomena that are commonly found, (uncertainty, lack of political support, conflict of interests) which also makes it hard to make strong predictions based on a single case. Also, choosing an extreme case, has both pros and cons. Choosing a municipality that is pioneering the area means that a lack of capacity was not very likely to be identified, and is likely a much bigger problem in other municipalities. The benefit of the case selection is that it brings out the structural challenges that can not only be solved by increasing institutional capacity. These issues are likely going to be relevant for more municipalities when they are facing similar challenges as Shoreby in the future.

Even though this is only one case and the findings need to be interpreted carefully in light of previously described limitations, since the research is based on previous literature from a number of case studies, it is considered relevant to similar cases.

## 8 Conclusions

This research process started out by asking the question: how can we understand the role of the department and committee in the failure to sufficiently implement flooding regulations in Shorebyplan? This final chapter will summarise the answer to the research question, discuss the implications and contributions of this thesis and make recommendations for future research.

### 8.1 Answering the Research Question

This section will first describe how the implementation failure in Shorebyplan can be understood. Then the factors that might explain why flooding regulations were not implemented will be discussed. This section will finish by describing the main findings of the thesis, where the problem of the interorganisational context is the most important finding.

The result show that the implementation failure should be understood as mainly a failure to act by the committee. Even if the department also failed to act at the very last stage of the process, it is unlikely that it would have made a difference to the outcome, since the same committee rejected the recommendation to terminate Shorebyplan only half a year earlier. Instead the department tried to get the politicians to implement the regulation multiple times. The focus is therefore going to be on the role of the committee in the rest of this chapter.

A number of barriers have been identified that can explain the behaviour of the committee, mainly conflicts of interest, lack of efficiency and lack of legitimacy, but uncertainty of knowledge were also identified. Even though it is not possible to determine exactly how influential each and every barrier is, two themes stand out: the conflict between implementing flooding regulations and the interest of the developers to construct additional settlements and the critique directed against the CAB regarding efficiency and legitimacy.

The result of this thesis show that the role of the committee can be described as actively opposing the implementation of the flooding regulation. Their behaviour is a result of the interorganisational context, where there is an interdependency between the municipality and the developers. The policy tries to address this by giving the CAB veto power over issues relating to flooding in new DDPs. But the policy design creates a lot of tension, between both the CAB and the municipality. The tension between the municipality and CAB arise because of three reasons. First of all, there is a clash between two different organisational cultures, second the

CABs actions create tension between the municipality and private developers which stresses the municipality, and third, the policy, including the role of the CAB, is perceived as lacking legitimacy and efficiency, which is mainly the result of an incomplete policy formulation and design.

In the current interorganisational context, a critique of the CABs authority and a very active developer, was the main reasons to why the committee opposed the implementation of the flooding regulation.

## 8.2 Implications of Result

This section will discuss the implications of the result, first theoretical implications where the result of the thesis will be discussed and compared to previous research in the area. Then the societal implications of the thesis will be discussed. A Swedish researcher that has written extensively about implementation of adaptation policies in urban planning is Sofie Storbjörk from Linköping University. The findings of this thesis will mainly be discussed in relation to her research.

### 8.2.1 Theoretical Implications

This sub-section will describe the theoretical implications to the role of developers, the existence of path dependency, the role of the CAB and the implications of the interorganisational context.

Traditionally the involvement of private interests in the implementation process is viewed as something positive. Sofie Storbjörk summarizes previous literature as: “[i]nvolving the private sector is seen as a way to increase the efficiency, legitimacy and sense of common ownership in implementation”. Storbjörk herself challenges this view and show that developers, in contrary to the traditional view, are critical or even actively resist adaptation policies (Storbjörk, Hjerpe, & Isaksson, 2018, p. 81). The result of this thesis is in line with Storbjörks findings and support them by showing that developers has played a crucial role in the implementation failure of Shorebyplan. In another article Storbjörk discuss the role of the planner at the planning department. She identifies that implementation is obstructed by path-dependency, where new settlements are motivated by the existence of old settlements, since the old settlements needs to be protected anyway, new one can be built as well. This thesis also confirms Storbjörks findings of path dependency, but argue that the problem of path dependency might be even more extensive. Since the result of this thesis indicate that path dependency also occurs because of the principle of equal treatment and a reluctance to implement new regulations in existing planning processes.

There is some theoretical support for the current organisational construction where the CAB is granted veto power if the municipality fail to sufficiently consider the risk of flooding. Generally, the interviews support this notion, still an important

point to make is that such a construction create a lot of tension, and it requires that the authority of the CAB is retained, otherwise it might create resistance from local actors, and since the jurisdiction of the CAB only include new plans, there are ways the municipality can bypass the CAB.

Finally, the current literature on implementation of adaptation is often focused on improving the local institutional capacity (Nilsson et al., 2012; Storbjörk & Hedrén, 2011; Wamsler & Brink, 2014). The result of thesis indicates that improving institutional capacity is not enough, since the implementation failure is not only located in the municipality, but in the interorganisational context, in which the municipality exist.

## 8.2.2 Societal Implications

This section will discuss the societal implications of the result, the challenge of the interorganisational context and potential changes to both policy formulation and design.

First of all, the result of this case shows that the interorganisational context create big challenges for implementation of flooding regulations. Since the common interest of the municipality and the developers is additional development, implementing a regulation that prevents development in attractive areas is a challenge. The result of this thesis indicates that in the existing interorganisational context the current trajectory with additional coastal development is likely going to proceed.

The perceived lack of legitimacy and efficiency relate to issues of policy design and formulation, these can be adjusted in order to make them more sufficient. A first step would be to grant the municipality the authority to reject building permits because of the risk of flooding, that means old and new DDPs would be assessed on equal grounds.

Next step would be to give the CAB authority to monitor the issued building permits that relate to old DDPs. Even if the role of the CAB is contested, it seems to have an effect on at least output, and without the CAB the problem of free riders would be even worse, therefore developing the role of the CAB is likely a better way forward.

The relation to the CAB is constructed in such a way that it creates tension, if the relationship could be altered, implementation can be improved. One way would be to give the CAB authority over a regional adaptation fund that could be used to protect existing settlements. That way the cooperation would not only be characterised by authority but also exchange, increasing the incitement for the municipality to cooperate with the CAB.

A more far reaching suggestion would be to change the policy instrument. Where the current regulation is monitored on a case by case basis, another approach would be to simply ban additional development in all areas that are considered vulnerable to flooding by the government. It would be more efficient since not each and every single case needs to be tested, it would also relieve the municipality from

the pressure of the developers. But it is likely going to be heavily criticised since it would be perceived as an infringement of municipal autonomy.

Another possibility is to make the developers to so some extent responsible for the development. This is currently a problem since most developers that build new settlements are selling them long before the rising sea levels become a problem. One way to address the role of the developer would be to make them financially accountable, that would make developers more careful developing new settlements in vulnerable locations.

### 8.3 Suggestions for Future Research

A fair number of case studies have now been conducted that explore barriers to implement adaptation. The field would benefit from a large N study that try to determine the explanatory power of different barriers and try to establish causality or at least correlation. It would be interested if such a study continued to explore the impact of the interorganisational context.

The hope is that this thesis has mas a contribution that could pave the way to a more extensive future study. Because for every day that pass by, the importance of this topic is getting more and more pressing.

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# Appendix 1. Coding Guide

RESEARCH DESIGN			CODING GUIDE				
	Actor/Barrier	Operationalisation	Affirm	Partly affirmed	Neither affirmed or denied	Partly denied	Denied
<b>How did implementation fail?</b>	Fail to identify risk (Department)	Presence of: A lack of information about an obvious risk in planning documents	The plan is not in line with neither CAB recommendations or municipal plans and the risk is not described	The plan is not in line with either CAB recommendations or municipal plans and the risk is not described	The plan is in line with both CAB recommendations and municipal plans but the risk is not described	The risk is described, but not in line with CAB statement	The risk is described and in line with CAB statement
	Fail to act (Department)	Correspondence of CABs comments with measures recommended by department regarding a known risk	The risk is described, measures are recommended and approved but CAB does not consider them sufficient			The risk is described, measures are recommended and approved and the CAB only have marginal remarks on the actions	The risk is described, measures are recommended and approved by both committee and CAB
	Fail to act (Committee)	Correspondence of CABs comments with measures approved by committee regarding a known risk	The committee fail to act if, I) the risk is described II) measures are recommended III) Committee decide to ignore recommendations, or approve insufficient recommendations IV) CAB criticise action			The risk is described, measures are recommended and approved and the CAB only have marginal remarks on the actions	The risk is described, measures are recommended and approved by both committee and CAB

RESEARCH DESIGN		CODING GUIDE				
Actor/Barrier	Operationalisation	Affirm	Partly affirmed	Neither affirmed or denied	Partly denied	Denied
What barriers where present?						
Uncertainty	<p><u>Uncertainty in knowledge:</u> departments/committees perception of scientific basis that inform the flooding</p> <p><u>Uncertainty in responsibility:</u> perceived clarity of flooding regulation regarding the distribution of responsibility by</p> <p><u>Presence of department/committee</u> motivate a failure to act by referring to the importance of other interests</p> <p><u>General political strategy in conflict with flooding regulations:</u> I) MCP correspondences to CAB recommendations regarding flooding <u>Lack of funding:</u> II) department perception of available resources to address flooding <u>Lack of priority:</u> III) committee fail to act on a known risk IV) department perception of political support from committee regarding flooding regulations</p>	<p>The scientific basis of CAB decision is questioned by committee or department</p> <p>There is a disagreement on the distribution of responsibility</p> <p>Actors motivate the lack of considerations to flooding by referring to other interests</p> <p>I) MCP less ambitious than CAB recommendations II) Department state they lack resources III) see fail to act (committee) IV) Department motivate action by referring to lack of support from committee</p>	<p>Different stakeholders interpret the scientific basis differently</p> <p>Actor identify conflict of interest but not clear if it might have affected behaviour of actor.</p>			<p>All stakeholders agree on the same scientific basis</p> <p>Agreement on the distribution of responsibility</p> <p>Actors do not consider there to be any conflict of interests</p> <p>I) MCP is more ambitious than CAB requirements II) Department state they have resources III) see fail to act (committee) IV) department state the committee is engaged in issues relating to flooding</p>
Conflict of interest						
Lack of political support						
Lack of capacity	<p><u>Lack of skills and performance of individual actors:</u> I) the presence of employees working mainly with flooding. II) the department perception of available skills to address flooding in new DDPs <u>Lack of organisational management capacity:</u> III) department perception of available resources to address flooding IV) department officials perception of support from higher management <u>Lack of networking capacity:</u> V) comments regarding flooding regulations during consultation and review from other municipal departments VI) the department perception of cooperation with national agencies <u>Insufficient regulatory framework:</u> VII) MCP correspondence to CAB recommendations regarding flooding. <u>Contradictory norms and values:</u> VIII) department/committee perception of rising sea levels</p>	<p>I) No one at the planning department is working mainly with flooding. II) The department perceive they lack necessary skills to address flooding III) Department perceive they lack resources to address flooding IV) Department official perceive lack of support from higher management, V) Critical statements regarding flooding regulations in consultation or review from other municipal departments, VI) The department perceive a lack of support from national agencies VII) See general political strategy. VIII) Department/committee question whether sea level will rise</p>		<p>V) See general political strategy</p>	<p>I) There are civil servant at the department working mainly with flooding. II) The department perceive they have necessary skills to address flooding III) Department perceive they have resources to address flooding IV) Department official perceive to have support from higher management, V) Lack of critical statements regarding flooding regulations in consultation or review from other municipal departments, VI) The department perceive to have support from national agencies VII) See general political strategy. VIII) Department/committee does not question whether the sea level will rise</p>	

RESEARCH DESIGN		CODING GUIDE					
	Actor/Barrier	Operationalisation	Affirm	Partly affirmed	Neither affirmed or denied	Partly denied	Denied
What barriers where present?	Lack of efficiency	Output: department/committees perception of CAB recommendations, with regard to their effect on how the DDPs address flooding	Department/committee perceive that the recommendations or actions by the CABs to have no effect on how the DDPs address flooding	Department/committee perceive that the recommendations or actions by the CABs to have little effect on how the DDPs address flooding	Department/committee perceive the effects of the recommendations or actions by the CABs regarding how DDPs address flooding to be unclear		Department/committee perceive that the recommendations or actions by the CABs is having a notable effect on how DDPs address flooding
		<u>Outcome:</u> department/committee perception of whether the actions and recommendations from the CAB decrease the municipalities vulnerability to flooding	Department/committee perceive the recommendations or actions by the CABs to have no effect on the municipalities vulnerability to flooding	Department/committee perceive the recommendations or actions by the CABs to have little effect on the municipalities vulnerability to flooding	Department/committee perceive the effects of the recommendations or actions by the CABs regarding the municipalities vulnerability to flooding to be unclear		Department/committee perceive the recommendations or actions by the CABs to have a notable effect on the municipalities vulnerability to flooding
	Lack of legitimacy	<u>The planner aspect:</u> I) department/committee perception of CABs decision-making process II) department/committee perception of the role of the CAB <u>The networking aspect:</u> III) land owners perception of the possibility to participate in the CABs decision-making processes IV) land owners perception of possibility to participate in municipalities decision-making processes	I) Department/committee perceive CABs decision-making process to lack legitimacy. II) Department/committee perceive the role of the CABs to lack legitimacy. III) Land owners perceive they can not participate in the CABs decision-making processes IV) Land owners perceive they can not participate in the municipalities decision-making processes	III) Land owners perceive it is difficult to participate in CABs decision-making processes IV) Land owners perceive it is difficult to participate in the municipalities decision-making processes			I) Department/committee perceive CABs decision-making process to be legitimate. II) Department/committee perceive the role of the CABs to be important. III) Land owners perceive they can participate in CABs decision-making processes IV) Land owners perceive they can participate in municipalities decision-making processes

## Appendix 2. Interview Guide

<b>INTERVIEW GUIDE</b>		
Interviewee:		
Date:		
Time:		
Place:		
Interviewer:		
<b>INTRODUCTION</b>		
<p>Is okay that I record our interview? It will simplify my work and it will not be distributed. My name is Måns Berger and I am studying a Master of Political Science at Lund University</p> <p>Right now I am writing my master thesis and it is about how municipalities take into consideration the risk of flooding when developing new areas. I have chosen to study Shorebyplan in particular. I have read all the protocols from the plan, the consultation and the review, but I hope you can contribute with more information about the discussions that preceded the decisions so that I can better understand why you chose to act as you did.</p> <p>You will be anonymous, it is voluntary to participate and you can terminate the interview at any point Shall we begin?</p>		
<b>Summary and translation of the interview guides</b>		
<b>QUESTION</b>	<b>Probe</b>	<b>Possible Data</b>
Can you start by telling me when you first came into contact with Shorebyplan?	Why did the committee change their opinion?	Uncertainty Conflict of interests Lack of political support
Why do you think the committee and department had different opinions regarding Shorebyplan?	Why did the committee prioritise that way?  How was the commitment from the committee regarding the issue of flooding?  What was the management point of view?	Conflict of interests  Lack of political support  Lack of capacity
How common was it that the committee disregarded the recommendations from the	Why did the committee ignore the recommendations from the department this time?	Conflict of interests Lack of political support

The department were openly critical towards the decisions of the committee, how was that received?	So there where no comments from the committee regarding you're recommendations?	lack of political support
After the consultation it became clear that the CAB where very sceptical towards Shorebyplan, why did you	Why was X prioritised above flood risk?	Legitimacy Conflict of interests
Did you have any contact with the land owner?	How did you perceive the role of the land owner?	Conflict of interests
Was there anyone at the department that worked specifically with flooding?	Did you have sufficient resources to address flooding?  Did you have sufficient capacity to address flooding?	Lack of capacity
In PBA it says that one have to consider the risk of flooding when planning new areas, what does that really mean?	Is it clear what that means for Shoreby?  Is the responsibility of Shoreby clear?  How do you perceive the cooperation	Uncertainty Lack of capacity
The CAB was critical all along towards the plan, and then decided to repeal it, what do you think about the actions of the CAB?	How does the CABs recommendations affect urban planning in the municipalities?  Does it make Scania safer from flooding's?	legitimacy efficiency
The CAB has a recommendation that say no development below three meters above the sea level, what do you think about such a		Uncertainty Conflict of interests
Can you describe the contact you had with the municipality?	How was the dialogue with the municipality?  Do you think you (developer) might have had an effect on the result?	Legitimacy
Can you describe the contact you had with the CAB?	How was the dialogue with the CAB	Legitimacy
What is your opinion on the risk of flooding?		Lack of capacity
Is there any challenge to integrate flood risk in urban planning?		Lack of capacity Uncertainty Conflicting interests
<b>END INTERVIEW</b>		
Thank you very much		
Now I will continue to interview others, in the meantime I will transcribe the interviews and then my thesis will be completed by the end of May. If you want, can I summarize the interview and send it to you so you can check that you agree with everything that has been said?		
I will send you an email, and there you will have my phone number, if you have any questions, don't hesitate to contact me. Once again, than you very much for your participation		