



A worldview approach: Explaining conflict and deadlock in interactive processes

The importance of values and perceptions in
interactive processes

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Preface

This Master's thesis is written as part of the programme Sustainable Development: Environmental Policy and Management. It is the result of a year of hard work and constant thinking and wondering.

The idea that worldviews might play a role in conflicts and consensus in interactive processes first came to me during the course 'Sustainability Outlook', in which thinking in worldviews was enthusiastically discussed by Professor Van Egmond. I'd like to thank Professor Van Egmond for his enthusiasm on the worldviews. The idea of value pluralism grasped my attention. After an attempt to write a proposal on value pluralism as inherent tension between environment and democracy I realised I wanted to study the interactive processes themselves. I returned to my original idea; might worldviews be partly able to explain deadlocks or halfway compromises in interactive processes?

This research relied heavily on the willingness of institutions and people to provide me with the necessary information. Without access to archives and the memories of people involved I could never have carried out my ideas and conducted this research. I am therefore grateful to all those people who have contributed to this research.

For Scheldt Estuary case, I would like to thank the following people for their time and help: Leen van den Berg, secretary of the Consultation Advising Parties (OAP), who gave me access to all minutes of meetings and other documents and reports of the OAP. Lisette Veldkamp van Rij, secretary of the BOWS, who helped me a lot with locating minutes of meetings and other documents of the BOWS process. I would also like to thank Peter de Koeijer, Marga Vermue-Vermue, Leny Poppe-de Loeff, Vincent Klap and Peter van Bossuyt for their time and willingness to be interviewed and talk openly about the whole process.

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Chantal Goetheer

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1. Introduction

Ever since the Brundtland commission has defined the term ‘sustainable development’, the concept has been attracting growing attention. Sustainable development is a conception of development, which brings together environmental, social and economic considerations, often coined “planet, people, profit” or the “three p’s”, in an attempt to balance them. The Brundtland report mentions citizen participation in decision-making as a prerequisite for sustainable development (Brundtland Commission, 1987).

There is a reason why the Brundtland Commission sees participation as a prerequisite to sustainable development. Any answer to sustainability issues is determined by societal views on how the three p’s of sustainable development - people, planet, profit - should be balanced. Therefore there is not one single answer; there are multiple answers. Because of this multiplicity of conceptions of sustainable development, sustainability issues are complex and difficult to solve (Runhaar et. al., 2005).

Sustainable development is more than an abstract concept; it has become a leading principle in many fields of governmental policy. For example, sustainable spatial development has become one of the main aims of Dutch spatial planning policy. This policy aims to guarantee and protect collective goods, such as nature and clean water, while enabling development. The Dutch spatial planning policy connects many different policy fields, such as environment, spatial planning, water management, nature and mobility (VROM et. al., 2006). Hence, the government has to balance these different policy fields and the many interests involved in its search for a sustainable spatial development. The problem with addressing sustainability issues such as sustainable spatial development, is that sustainable development is a general term and different actors have a different idea of what sustainable development is. This complicates decision-making further; besides different policy fields and different interests, these different views on sustainability also have to be taken into account to develop a supported policy. Hence, sustainable (spatial) development can be seen as a complex public policy problem (Runhaar et. al., 2005).

Making the Dutch spatial planning policy operational is not an easy task. Conflicting perceptions on sustainability are common during the development of a regional spatial policy. The government has the task to address and solve these spatial planning issues and to set plans for a balanced and sustainable spatial development, but struggles to find the best approach (Klijn & Teisman, 1992).

1.1 The importance of interactive processes in solving sustainability issues

“Sustainable development poses [...] complexities to policy-makers who aim to attain this objective” (Runhaar et. al., 2005: 27). The need for multi-sector and multi-actor cooperation in the search for sustainable development made the traditional top-down policy-making an unsuitable instrument for attaining sustainable development. In a top-down approach the government sets the goals and searches for ways to reach these goals. Experts point out the optimal policy alternatives to reach the set goals (Klijn & Teisman, 1992). However, this approach overestimates the steering capacity of the government (Koppenjan, 1993). Policies stemming from top-down decision-making have often lacked support and encountered problems in their implementation phase. The top-down approach is therefore ill-suited to solve complex sustainability issues. Multi-sector and multi-actor cooperation has become an increasingly popular

instrument to help make-up for the drawbacks of state-centred policy-making. The government has started using interactive policy-making and have involved non-state actors to attain its sustainability objectives as an alternative to the traditional top-down approach.

Why is participation so important when it comes to policy-making and, more specifically, when it comes to solving sustainability issues?

Participation may engender new ideas, experiences, expertise and new solutions that would not have otherwise been considered. Furthermore, the involvement of citizens and NGOs in policy-making diminishes the risk of conflicts and of lack of public support. These advantages of participation are especially useful when trying to address sustainability issues. The input on different problem definitions, solutions and experiences into the policy process may enable a better balancing of sustainability's three p's. In addition, participants may shed more light on the different sides of the multi-faceted concept of sustainability. Finally, because there are many views of sustainability, not including these different views will make the lack of public support and problems in the implementation phase even more likely (Bruyninckx & Bachus, 2001; Runhaar et. al., 2005).

Interactive policy-making finds its basis in network theory and the steering of networks. State and non-state actors participated in interactive policy-making aiming at formulating and implementing a sustainable policy, which would be both effective and supported (Van der Arend, 2007; Runhaar et. al., 2005).

As afore-mentioned, interactive policy-making is based on the need to bring different views of sustainability to the fore. These different views are determined by actor's values and perceptions, which often clash in an interactive process (Van Eeten, 1999). Therefore, solving these conflicts is key to decision-making in interactive processes. Failure to solve such conflicts may result in deadlock (Koppenjan, 2006). Therefore, values and perceptions should be seen as important factors in interactive processes that address sustainability issues.

1.2 Knowledge gap: Values and perceptions in network theory

Interactive policy-making is based on the notion that policy processes take place within networks in which both private and public actors do not have enough resources to tackle problems by themselves. Actors depend on each other in order to reach their goals and have to interact with each other in order to tackle complex issues such as sustainability issues (de Bruijn et. al., 1993; van Tatenhove & Leroy, 1995; Klijn & Teisman, 1992). Public administration and political science have theorised much about this new form of governmental steering, which raises interesting questions such as: How and to what extent can the interactive process or network be steered? Who (not) to involve in the process? When does interactive policy-making succeed and when does it fail?

The literature on network theory and interactive policy-making can be divided into two approaches: the policy network as an analytical model and the policy network as a steering model (for more details, see Tatenhove & Leroy, 1995). The first approach focuses on the characteristics of networks. This literature aims at understanding the functioning of networks better and often uses public administration or political sciences theories. The latter approach is a more normative-prescriptive approach of interactive planning, which puts emphasis on consensus and is solution-aimed. It focuses on the development of strategies aimed at facilitating consensus and formulating conditions for successful network management (de Bruin et. al., 1993;

Tatenhove & Leroy, 1995). In this light, interactive policy-making has also been discussed and analysed in relation to sustainable development. Besides discussing the multitude of approaches of interactive planning in the field of environment and sustainability, the literature on interactive planning asks critical questions, including: to what extent the process and substance should be combined to produce an outcome that is sustainable? (See also Assetto & Hajba, 2003; Bulkeley & Mol, 2003; Bruyninckx & Bachus, 2001; De Bruin et. al., 2002; Burroughs, 1999; Feichtinger & Pregernig, 2005a & b). While interactive policy-making has often been presented as *the* solution, the limits of interactive policy-making and participation are increasingly recognised. In its interactive form, policy-making became a much more open-ended process where outcomes were largely unpredictable and the process was difficult to steer (see also www.grenzenaanparticipatie.nl; De Bruin et. al., 1993; De Bruin & Ringeling, 1993; Klijn & Teisman, 1992; Klijn et. al., 1993; Klijn, 2005; Koppenjan, 1993; Van Tatenhove & Leroy, 1995; Bruyninckx & Bachus, 2001).

In interactive policy-making literature, attention is only occasionally paid to the role of values and perceptions, but analysing the role of values and perceptions that cause conflict in interactive processes sheds new light on the limits of interactive policy-making. An actor's view of sustainability is based on its values and perceptions. These may be conflicting. Conflict is not bad per se: it can help clarifying positions, give insight in different aspects of a problem or provide the array of solutions. Conflict becomes problematic when it leads to a deadlock in the discussion. Unresolved conflicts may also lead to instable compromises which might break up eventually (Koppenjan, 2006). To come to a consensus or compromise, it may be necessary to bring the parties closer together and to bridge existing conflicts. A study by Van Eeten (1999) shows that conflicts based on diverging belief systems (different views of sustainability) are hard to solve and lead to 'dialogues of the deaf'. Arguments and solutions are articulated from a belief system, seen as the only valid one by its beholder. Engaging in discussions with someone having a different belief system can therefore lead to conflict (Van Eeten, 1999). Belief systems and corresponding values and perceptions thus determine the extent to which conflicts in interactive processes lead to deadlocks or compromise. They are an indication of the limits of interactive planning.

Most studies on interactive policy processes analyse the role of power, resources and institutions in interactive processes. It is often assumed that if decision-makers clarify the values and beliefs of actors, conflicts will arise. Thus, the literature offers few insights to understand the role of values and perceptions in interactive processes. The literature does not analyse how values and perceptions influence interactive processes, or the role they play in conflicts (as in de Bruin & Ringeling, 1993; de Bruin et. al., 1993; Koppenjan, 1993; Klijn et. al., 1993; Klijn & Teisman, 1992; Klijn, 2005; Koppenjan, 2006; Hanf & O'Toole, 1992).

Hence, the following question arises: How do these perceptions and values influence interactive processes and the (im)possibility to resolve conflict and come to a consensus?

1.3 Research perspective: A worldview approach

Besides the network characteristics power, resources and rules that can be seen as variables that influence and explain the occurrence and the solution of conflicts in interactive policy-making (Hufeling & Ringeling, 1990), values and perceptions are also needed to understand how conflicts in interactive processes develop and are

solved. Actors' values and perceptions of reality and sustainability determine the way they act, the strategies they choose and the problems and solutions they see (Klijn & Teisman, 1992). Specifically in interactive processes aimed at sustainable development, the different values and perceptions of sustainability will come into conflict because each actor has a different perception of sustainability and different values. Whereas power and resources may explain how agreements came about, values and perceptions may offer a different understanding of the quality of this agreement. It may also offer a deeper understanding of conflicts because it is values and perceptions, not power and resources, which form the basis of conflict.

Handling a pluralistic view on values and perceptions is challenging, as the possible variations are numerous. Belief systems or worldviews in which values and perceptions are combined into a fixed number of categories provide an interesting avenue to handle this pluralism. The two most important elaborations on worldviews or belief-systems are Thompson's Cultural Theory and the worldviews of the Netherlands Environmental Assessment Agency (MNP) is the (Dutch) national institute for strategic policy analysis and evaluation in the field of environment, nature and spatial planning.

In 1990, Thompson offered a 5-type system as a comprehensive framework to understand values and perceptions. More recently, the MNP (2006) used a somewhat different yet sometimes similar approach to understand developments in society (Thompson et. al., 1990; MNP, 2006a). The MNP's worldview approach and Thompson's Cultural Theory provide a systematic approach to look at values and perceptions and offer a different view on the development of conflict and consensus in policy networks and interactive policy processes.

1.4 Research aim and issue

The aim of this research is:

To examine if worldviews are an important explanatory factor to explain why in some interactive processes deadlock and halfway compromise occur.

This research focuses on the role played by worldviews in causing deadlocks and halfway compromises in some interactive processes. Of course, other factors influence the development of interactive processes and might lead to deadlocks or halfway compromises, such as power relations, distribution of resources and a bad organisation of the interactive process. These factors are not taken into account in this research because of time restrictions, and because they have been addressed in literature. Including them here would also add too much complexity to the research. This research focuses instead on perceptions and values in the form of worldviews, which are at the basis of actions and arguments in interactive processes.

The main questions of this research are:

- *To what extent can the involvement of actors with different worldviews in an interactive process explain the occurrence of deadlock and halfway compromise in the selected interactive processes?*
- *What lessons for interactive planning in general can be learnt from insights into the role played by worldviews in causing deadlocks and halfway compromises in the selected interactive processes?*

This research analyses the worldview's role in interactive processes by testing hypotheses in case studies. The hypotheses will offer explanations of the reasons why conflicts arise in an interactive process in which different worldviews interact, why these conflicts lead to deadlocks, how compromises are reached between worldviews and why these compromises can be seen as halfway compromises. The hypotheses will be based on the Cultural Theory and MNP's Worldview Approach and will be formulated at the end of chapter two.

1.5 Research object: the interactive process and worldviews

The interactive process is the object of this research and the worldviews are the glasses used to look at the interactive process. But how can we look at an interactive process when using the perspective of worldviews?

An interactive process is used as input for decision-making. The decision-maker initiates an interactive process to solve or address a (sustainability) problem and to generate possible problem definitions and/or proposed solutions. The interactive process thus has to lead to an outcome or consensus. For that reason, conflicting worldviews must come together and end in agreement. However, worldviews and their corresponding values and perceptions may be so diverging that it becomes very difficult to reach consensus.

The interactive process and the subsequent decision-making takes place in the policy sub-system. This system contains only the perceptions, arguments, interests, problem definitions and proposed solutions (in short worldviews) of those actors that are involved in the interactive process and decision-making (Ney, 2006).

Some interested parties (and thereby some worldviews) may be excluded from the policy sub-system or parties may leave the policy sub system on their own initiative. This is likely to happen when perceptions or worldviews are strongly opposed. Excluded parties cannot directly exert influence on the contents of the interactive process and the decision-making. They can participate in the wider policy debate or excluded terrain surrounding the interactive process and the decision-making. The excluded terrain includes all interested actors, all (policy) arguments relevant to the issue, all problem definitions, all proposed solutions and thus all worldviews. Individuals and organisations enter the excluded terrain as soon as they publicly express interest in the interactive process and the decision-making about the particular problem (Ney, 2006).

The interactive process is the arena where different parties interact in an organised manner with the purpose of reaching some sort of agreement. Thus the interactive process and its policy sub-system is object of this research. The excluded terrain does not feature structured interaction, but it is solely in the latter that all actors and worldviews are represented. These excluded views will not be represented in the outcome of the interactive process, and as a result, its outcome may lack essential insights and therefore be unbalanced. In order to get full insight, these excluded actors will also be included in the study of the interactive process and policy sub-system.

1.6 Research methodology

This research is a theory-testing research. Hypotheses are derived from the Cultural Theory and MNP's work on worldviews. The hypotheses form the perspective used to analyse the interactive processes. At the end of the research the theory is reviewed based on the findings of this research. The hypotheses are tested for their validity in case studies. Chapter 2 shows the argumentation leading to the hypotheses. Chapter 3

discusses how the hypotheses will be tested. This section discusses the general methodology and the selection of case studies.

1.6.1 Research strategy: case study

In order to analyse worldviews in interactive processes and to test hypotheses, the interactive processes themselves have to be studied. The most logical way to do this is by conducting case studies of interactions in policy networks. A case study gives the opportunity to study interactive processes more in depth than would be possible with a survey, which does not allow insight in the values, perceptions and interactions of an interactive process. Qualitative data and a certain depth of analysis are required in order to recognise different worldviews in an interactive process and to study their interaction over time. Conducting case studies is therefore most suitable for this type of research (Verschuren & Doorewaard, 2005).

Because of the labour-intensive data generation process connected to conducting case studies, only a strategic sample of cases can be analysed. This has consequences for the external validity of the results of the analysis. The conclusions may only be valid for the set of cases analysed. However, this is not a real drawback in this case, as this research wants to explore the influence of worldviews on the development of interactive processes. It will still give rise to interesting discussion points on interactive processes and network management.

Two methods of sampling cases exist: choosing cases with minimal variation or cases with maximum variation. Because explanation is more difficult when cases are selected with a maximum variation (Verschuren & Doorewaard, 2005), and since this research aims to explain the progression of interactive processes on the basis of worldviews, a selection of cases with a minimum of variation is most suitable.

1.6.2 Selection of cases

The case studies need to fulfil several requirements:

- The cases need to be interactive processes. A process is interactive when the policy development happens in cooperation with a variety of stakeholders representing different interests. The policy development and the resulting advice, agreement or decision is the shared responsibility of all participants and involves a certain commitment. During the process, these stakeholders may discuss the problem definition, and/or solutions. Moreover, the process is to some degree open to other actors and transparent (Pröpper & Steenbeek, 1998).
- In the selected interactive processes, conflicts have to have occurred between the different actors involved. During conflict different values or worldviews are articulated.
- The actors must be interdependent, so that the parties have to interact in order to come to a solution to problems they perceive. Interdependence is an incentive to interact despite conflicting values and perceptions. When parties are interdependent, one can expect that different types of worldviews are present.
- The actors need to be relatively autonomous in order for them to determine their own strategy based on their objectives, and act according to their worldviews. Under such conditions the different worldviews can best be recognised in the actions of actors (Nelissen et. al., 2000).
- The cases need to involve multiple actors with a variety of interests, visions and goals, and involve complex policy issues. These issues must be related to

sustainable development and spatial planning. Conflicts that arise in these types of cases generally take place between different values, perceptions and worldviews.

- The cases need to have a similar problem structure in order for the values and perceptions involved in the problem to be similar, for similar parties to be involved and for the interaction patterns between worldviews to be similar.
- For practical reasons available documents need to reflect the different positions and the discussion that took place.

Based on these requirements, regional spatial planning issues that are related to nature and water are selected as case studies. The Netherlands is relatively rich in water and wetlands, which are, in the Netherlands, of importance both for biodiversity and for spatial planning. Indeed, wetlands are, on the one hand, a crucial habitat for many bird (and plant) species, and on the other, they are a prized resource for spatial planning given the high land use pressure the country is under. Many wetlands areas are therefore confronted with debates regarding management issues and the desirability of human developments. Interactive processes concerning the management or development of wetlands are thus characterised by a variety of values and perceptions that are likely to conflict.

It is expected that similar parties are involved in these types of cases and that similar values and perceptions can be found in these types of interactive processes. Thus the patterns of interaction between worldviews are likely to be similar. Even though this similarity in cases makes it easier to conclude how worldviews can explain the development of interactive processes, it also means that the conclusions might be different when looking at different types of cases with different types of problem structures.

The selected cases are projects that result from national policy plans. Because the controversies surrounding the national plans are abstract, the differences in worldviews may be difficult to determine. Consequences for the area and the activities therein only become clear when plans are elaborated into detailed projects. At that point controversies crystallise and differences in perceptions on problems and solutions come to the fore. Worldviews are more opposed to each other and excluded parties get a clear view on what the plan is about.

The cases cover two national plans concerning regional spatial planning, nature and water. This thesis will analyse one project from the following national plans:

- The ‘Development Outline of the Scheldt River Estuary 2010¹’ is a cooperative plan between the Belgium and Dutch governments. Its aim is three fold. First, it aims to establish a healthy and dynamic ecosystem, with preservation of the physical system characteristics of the Scheldt River estuary. These natural characteristics are under pressure since the natural quality of the Scheldt River Estuary has declined over time. Second, the Outline aims to improve safety against flooding. Third, the Outline aims to optimise the accessibility to the port of Antwerp in the Scheldt River estuary. The focus of this thesis will be on the analysis of the improvement of the natural quality by means of ‘de-poldering²’ of certain polders for the purpose of nature restoration (Proses, 2005). The controversies surrounding ‘de-

¹ De Ontwikkelingschets 2010 Schelde-Esuarium.

² De-poldering means giving land back to the sea or river in order to give the river more space.

poldering' are significant. De-poldering can't be discussed without discussing the accessibility and safety these issues are also discussed when needed.

- The Spatial planning key decision (PKB) Wadden Sea aims at the sustainable protection and development of the Wadden Sea as nature area. Human activities were allowed as long as they were in line with the aim of the PKB. All activities were assessed on their effects on the Wadden Sea. This thesis analyses the policy regarding shellfish fisheries in the Wadden Sea, specifically the mechanical cockle fisheries (VROM, 2007). This policy development was characterised by controversies, some of which still linger.

Both cases are examples of area-aimed policy (*gebiedsgericht beleid*) that address economic development and environment in an integrated manner. Interaction with interested parties took place, but resistance of certain parties was also present. The parties involved in these processes are interdependent and relatively autonomous in determining their strategies. Finally, these processes are related to clear policy decisions.

1.6.3 Research methods: content analysis

Thus, this thesis studies the progression of the interactive processes in two case studies. First, the separate cases are examined independently as if they were single case studies. The results of these cases are then compared to identify potentially similar patterns in interaction between worldviews and to draw lessons for the interactive planning practice.

There are two possibilities to gather the required data:

- Studying a case by attending meetings of stakeholders, making transcripts of the process and questioning the participants before, during and after.
- Studying the minutes of meeting during interactive processes and interviewing participants.

Attending the actual interactive processes and making transcripts thereof will give an unbiased look behind the scenes. There is no or little bias in this method as no information will be lost or coloured through summarising them in documents or remembering them in interviews. However, the results will contain a very high level of detail and analysing such a process will be *very* time intensive. Furthermore, only a short period of time can be analysed.

Studying the documents of meetings and conducting interviews will not provide too much detail. A difficulty here is that (very) detailed records of meetings are often lacking. Part of the loss of detail can be offset by conducting interviews with participants and excluded parties of the process. This approach allows studying larger periods of time and more cases. However, the results are more easily biased depending on the level of detail of available documents and the memory of the interviewees. Bias can be diminished by comparing the interviews with positions taken in published documents and media.

Thus, the case study analysis began by conducting a contents analysis of the documents. Chapter three will elaborate on the methods used to do so. Then selected participants were interviewed, which allowed gathering important information which could not always be found in policy documents and minutes of meetings. The interviews gave insight in the process of interaction, the areas of agreement and disagreement, the way consensus or compromise was reached, and on the perceptions of the interviewee.

The interviews were semi-structured: the basis was a list with topics and rough questions to discuss. The interviewees were encouraged to tell their story in their own words and according to their own perceptions. The interviews were used to verify and complement the information found in policy documents and minutes of meetings. The general interview protocol for both cases is outlined in Annex I.

It is important to note that the interviews were also used to determine the worldview of the actor by enquiring after the underlying perceptions of nature, the problem and solution and the process. The worldviews were determined by the researcher, derived from document analysis and interviews. The interviewees did not consent to the worldview they were awarded.

The interviews had to cover all groups of actors involved in the two cases; nature organisations, government and business. The interviewees were identified and selected from minutes of meetings and other policy documents. It was not always possible to interview all of the selected stakeholders, because some were no longer involved in the organisation they represented during the interactive processes. Annex II contains the list of interviewees.

When the case studies were finished the findings were put to the interviewees. This provided a last check of the findings.

1.7 Reader's guide

This thesis assesses to what extent values and perceptions, in the form of worldviews, can explain why in some interactive processes conflicts can't be solved and lead to deadlock and halfway compromises instead. As the title suggests this thesis takes a worldview approach. The worldview approach makes the plurality of values, perceptions manageable and provides a fixed number of belief-systems that determine how sustainability, nature and the world are seen. The worldview approach is a combination of Thompson's Cultural Theory and the worldview approach of the MNP. Chapter 2 makes the worldview approach operational. This results in a theory and hypotheses that explain from a worldview perspective why interactive processes end up in deadlock and halfway compromise. Chapter 3 discusses the research methodology of the worldview approach. Chapter 4 and 5 are the case studies to which the worldview approach will be applied. In chapter 6 conclusions are drawn and the worldview approach and methodology are discussed. Chapter 6 discusses the implications this research has for the interactive planning practice.

2. The theory behind the worldviews

The theoretical approach of this research is based on Thompson's Cultural Theory (CT) and the MNP's worldview approach (WA). Section 2.1 introduces these approaches. Section 2.2 and 2.3 elaborate on respectively Thompson's CT and MNP's WA. Section 2.4 compares the two approaches, it summarises the differences and the implications the use of one of these approaches would have for this research. To come to an operational worldview approach as used in this research, the dimensions and categories of the CT and the WA are compared and fitted together (Sections 2.5.1 and 2.5.2). When the approach is made operational, section 2.6 elaborates on the conflicts that are expected to arise when two actors with different worldviews interact. Section 2.7 then introduces how according to the worldview approach these conflicts may be bridged and consensus may be found. Section 2.8 develops a theory on the role of worldviews in interactive processes. In section 2.8 hypotheses are developed that have to test to what extent worldviews are a factor in conflicts and deadlock in interactive processes.

2.1 Introducing two models for viewing value and perception

This research focuses on the influence of values and perceptions on the progression of interactive planning processes. As stated in the first chapter values and perceptions determine the way people act and what they prefer (Van Eeten, 1999). However, studying values and perceptions is not an easy task. People have a myriad of values and perceptions. The combinations that can be made are seemingly endless. Is there any way of reducing all possible combinations of values and perceptions and subsequently reduce any combination of preferences and strategies?

In science, models and theories are used to construct a simplified and generalised simile of reality in order to make the complex reality understandable and researchable (De Vries, 2006). By means of using the selected models it is possible to reduce the plurality of values and perceptions into a limited number of categories, without necessarily losing (or maybe even gaining in) explanatory power. The two models that will be discussed in this chapter are; the Cultural Theory (CT) and MNP's worldview approach (WA). These models may be used to understand the progression of interactive planning processes.

The Cultural Theory (CT) stems from anthropology and is based upon the grid-group typology of Mary Douglas. The grid-group typology has been developed as a tool to deal with cultural diversity. This approach maps social positions based on the extent to which individuals are incorporated into bounded units (groups) or/and the extent to which life is circumscribed by externally imposed prescriptions (grid). Both group and grid can limit an individual's choice. This typology results in four categories: high grid-high group, high grid-low group, low grid-low group, low grid-high group. Thompson et. al. (1990) elaborated this typology into a five category typology: the Cultural Theory (CT). The CT serves as an analytical tool to study people, culture and politics (Thompson et. al., 1990; Mamadouh, 1999).

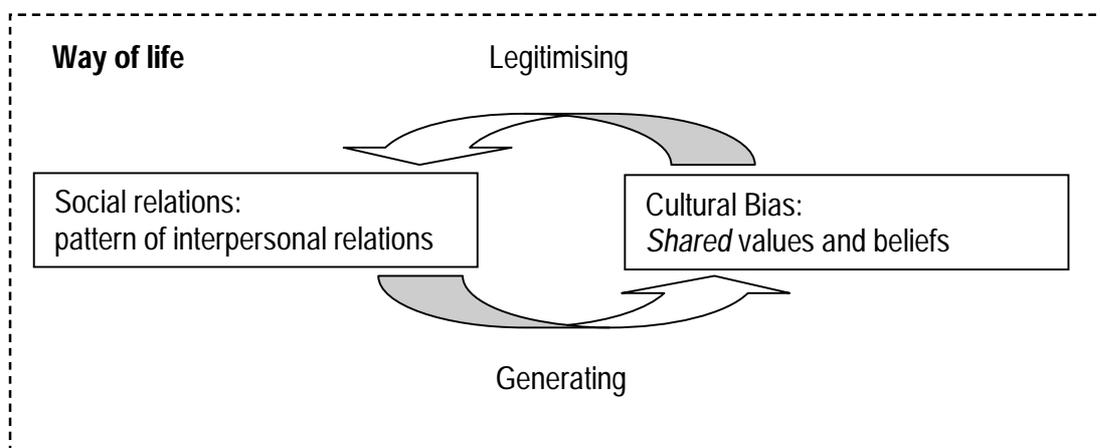
The MNP's worldview approach (WA) was developed to assess the sustainability of the Dutch society and to come to a useful segmentation of Dutch society based upon the values people have. According to the MNP, sustainability is determined by the personal values and goals of the population (value orientation) and the desired social environment in which a person thinks it can best realise its values and aims (worldview). The WA is based upon extensive empirical research of the Dutch

population, carried out by TNS-Nipo. TNS-Nipo is part of the TNS Group, an organisation that conducts opinion polls and customer research (MNP, 2006a).

2.2 Thompson's Cultural Theory

The Cultural Theory (CT) is a theory about how individuals perceive and give meaning to situations differently. The central concepts of the CT are 'ways of life', 'cultural bias' and 'social relations'. The CT starts from the notion that a person's interpersonal relations (social relations) generate preferences and perceptions that determine the values and beliefs (cultural bias) that a person has. At the same time, the values and beliefs of a person legitimise and sustain the type of relationships the person is involved in (Thompson et. al., 1990). This self reinforcing loop is visualised in figure 2.1.

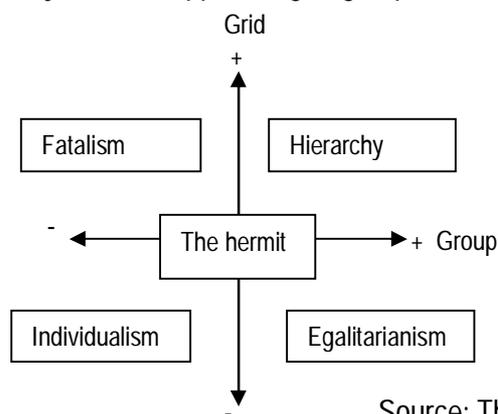
Figure 2.1: The central concepts of CT



The CT assumes that both the social relations and the cultural bias, even though present in many different shapes in society, are reducible to only a few basic categories that are universal. Those categories consist of a combination of social relations, values and beliefs called a way of life. Social relations reinforce the type of values and beliefs and vice versa. Only certain combinations of social relations and values and beliefs are possible. Other combinations would not form a self reinforcing loop and thus do not form a stable combination.

The CT claims that there are only five ways of life. These typologies are discovered by assessing cultures according to Douglas' grid-group dimensions (Mamadouh, 1999; Thompson et. al., 1990; Ney, 2006). Figure 2.2 shows the mapping of the five ways of life on the grid-group dimensions.

Figure 2.2: Ways of life mapped on grid-group dimensions



Source: Thompson et. al., 1990: 8

Due to the self-reinforcing loop of social relations and cultural bias combining into a way of life, the five ways of life are mutually exclusive and exhaustive. Other patterns of preferences and beliefs would legitimise different social relations and other patterns of relations would generate different preferences and values. Each way of life in that manner sustains itself (Thompson et. al., 1990; Mamadouh, 1999).

Values and perceptions have an implicit role in CT. According to the CT, facts are perceived through a perceptual lens determined by a specific way of life. As a result each way of life has its own beliefs or perceptions of concepts like ecosystem stability, nature, human nature, needs and resources. Each of these beliefs fits its way of life and legitimises the action its adherents take and the problems and solutions the adherents perceive. As a result of these different perceptions, each way of life has a different strategy to meet their needs and each way of life has different priorities (Thompson et. al., 1990). This makes it an interesting approach to study values and perceptions in interactive processes.

Logically, the perceptions of each way of life (of e.g. the physical environment) can't all be true at the same time. The beliefs of each way of life are a partial representation of reality only. Nature itself does not adhere to one specific way of life. It manifests itself in various ways depending on the time, place and conditions. When adherents of a way of life are confronted (frequently and clearly) with a discrepancy between perception and reality or experience, they can decide to change its perceptions and beliefs, and accordingly also their relations and thus change to a way of life that matches reality better. It must be noted that, changing ways of life is only a last resort. Before the build up of mismatch between reality and perception is so big it triggers change, each way of life tries to remove the obstacles they see to why the world is not always as they believe it should be. Each way of life has typical solutions and strategies to change the world. But these solutions and strategies may have unanticipated side effects and weaknesses and may not always work. Rival ways of life see these weaknesses and can make amends for them if the two groups of adherents would cooperate (Thompson et. al., 1990).

According to the CT each way of life thus needs the other ways of life to make up for weaknesses of solutions and to provide actions that it can't provide for itself. Alliances are then formed between ways of life when this is perceived beneficial, when confronted with the weaknesses of their own ways of life and to increase their power to make the world as they believe it should be.

To form alliances some concessions have to be made to the strictness of their way of life. Excluded ways of life can define themselves against this alliance and in that way try to gain power. So, each way of life competes with the others but also needs the other ways of life to make up for weaknesses. But even alliances still have some weaknesses, because some ways of life are excluded. Therefore, in the end the alliance will break up. In this manner the strengths of rival ways of life can wane and wax, but none can ever take control (Thompson et. al., 1990).

When looking at this theory, one wonders if the solution then lies in an alliance with all ways of life, excluding none. A balanced alliance would have a wider repertoire of (re)actions and it will meet less dramatic weaknesses. According to the CT, in such a case disagreements will surface and the alliance will be very difficult to sustain. With two ways of life each way of life needs to make concessions, but with four or five ways of life these concessions must be much bigger and varied.

The interesting thing about the CT is that the groups are mutually exclusive and there is no middle all could move to. There is no way to balance all ways of life into one alliance. This has serious implications when applied to interactive planning processes. Conflict becomes unavoidable and even necessary to point out pitfalls, but the conflict can never be resolved in a balanced manner.

2.3 MNP's Worldview Approach

The MNP is the Dutch national institute for strategic policy analysis and evaluation in the field of environment, nature and spatial planning. The worldview approach (WA) of the MNP was developed to assess the sustainability of (the Dutch) society. In order to assess the sustainability of Dutch society, insight was needed in what quality and type of life people desired and how this quality of life should be brought about. By means of large scale opinion polls the MNP derived a combination of value orientations that resulted in categories of worldviews with specific goal-means orientations. Because the WA is firmly founded in the value orientations of people, a categorisation arises that has a strong explanatory and predicting power of the sustainable behaviour of people. The MNP uses the WA as foundation for policy choices and to show the different views of sustainability that exist in society (RIVM, 2004). The MNP acknowledges that sustainability is not an objective concept; rather sustainability and quality of life are viewed in different ways by different people. The preference for a certain quality of life and hence a certain configuration of sustainability is closely connected to the values and goals people strive for in life (their value orientation) and the desired social environment in which a person thinks to realise it goals best (worldview) (MNP, 2006a). Thus, in choices regarding sustainability and development issues, as can be found in interactive processes, values and worldviews determine what outcome is preferred. The WA shows that the desired development of society and life differs per worldview. These different perceptions have to be taken into account in governmental policy aimed at sustainable development (MNP, 2006b).

TNS-Nipo, by order of the MNP, has conducted an extensive representative survey of the Dutch society to measure the value orientation and worldview preferences of the Dutch society in order to construct a useful segmentation/configuration of the values/worldviews the Dutch society has. The MNP uses the resulting segmentation to gain insight in the issues that are important to the Dutch society and their view on sustainability (MNP, 2006a).

Three steps had to be taken before the MNP could construct a useful segmentation of (the Dutch) society. First, a segmentation of the value orientation had to be constructed. Second, a segmentation of worldview preference had to be constructed and finally, the value orientations and worldviews had to be linked.

Values did not explicitly play a role in the worldviews rather the worldviews are characterized by (desired) different economic, social-cultural, ecological, technological and institutional developments. However, implicitly worldviews are supported by certain value orientations. By combining the value orientations and worldviews the role of values in the worldviews is made explicit (MNP, 2006a).

To come to a segmentation of the value orientation, the internationally recognized list of Rokeach (1973) values had to be ranked by the respondents. After statistical

analysis³ eight value orientations were designed and respondents were classified in one of these groups. The analysis pointed out two principal dimensions that determined most how this value space looks like: self aimed versus other aimed and conformity versus progress/ development (RIVM & MNP, 2004).

Besides the value orientation the view on quality of life is also connected to the social environment in which the citizen thinks he can realize his goals best (worldviews).

The MNP distinguished four worldviews based upon scenarios used by the IPCC. Those scenarios reflect an environment that is more aimed at efficiency through markets or at solidarity through governments and that is either more globally or more regionally oriented. The respondents had to indicate their preference for a worldview by allocating 100 points to the worldviews. Implicitly, the preference for a worldview says something on what problems the respondents perceive and how they can best be solved (MNP, 2006a; RIVM & MNP, 2004).

Several analyses conducted by the MNP point out that a relation does exist between value orientation and worldview⁴. Table 2.1 shows the correlations between the worldviews and the value orientations. From this table combinations of worldview and value orientation can be derived. Negative correlations indicate that these value orientations do not match with the worldview concerned (MNP, 2006a).

Table 2.1 shows that worldview A1 is correlated to the luxury seeking and the business men, worldview A2 is correlated to the enjoyer and the conservative and to some extent the business men, worldview B1 is correlated to the engaged and the open-minded and finally worldview B2 is correlated to the caring and the engaged.

Table 2.1: Correlations between worldviews and value orientations (MNP, 2006a)

<i>Worldviews</i>	A1	A2	B1	B2
<i>Value orientation</i>	R	R	R	R
<i>The caring</i>	-0.07	-0.02	0.03	0.14
<i>The conservative</i>	-0.08	0.02	-0.09	-0.06
<i>The enjoyer</i>	0.01	0.11	-0.11	-0.05
<i>The balanced</i>	-0.02	-0.05	-0.07	-0.07
<i>The luxurious seeking</i>	0.12	0.03	-0.08	-0.05
<i>The business men</i>	0.21	0.10	0.06	-0.04
<i>The open-minded</i>	0.00	-0.09	0.12	0.03
<i>The engaged</i>	-0.07	-0.09	0.20	0.11

Significant (p<0.05) correlations are printed in bold

The combination of value orientations and worldviews that the MNP found, are seen as the ones that explain the world best (Van Egmond, 2008). Nevertheless, there is no

³ First a principal component analysis (PCA) was conducted to reduce the rankings of the respondents and place them in a two-dimensional value space. Then a cluster analysis was conducted to divide the value space in groups.

⁴

- Correlations between worldviews and value orientations point out which value orientation belongs to which worldview and which value orientation does not fit to a worldview.
- Factor analysis of the dimensions of the value orientations and the worldviews point to a common co-ordinate system with the dimensions regionalisation-globalisation and giving-taking.
- Analysis of which combined dimensions lead to a minimal difference between the scores on worldviews and value orientations also show the common dimensions regionalisation-globalisation and giving-taking.

one on one relation between the value orientation respondents prefer and the worldview they prefer. The correlation between worldview and value orientation is therefore not so strong that the preference for a worldview can predict the preference for a value orientation at the level of the individual (MNP, 2006a; MNP, 2006b). The relation between worldview and value orientation (the worldview approach) *can* be used to explain underlying motivations and perceptions at a more aggregated, group level.

Diagonal opposite worldviews are opposed in their value orientation; what is important for one group is unimportant for the other group and vice versa. Furthermore, people close to the boundary of two worldviews have more similarities in their values than people of the same group but bordering to an other worldview. Thus the worldviews are not completely homogenous as a group (MNP, 2006a).

The MNP reports say nothing on the interaction between worldviews. At the time of publication the development of the WA did not cover interaction of worldviews. However, there are some thoughts on how worldviews might interact. These thoughts show resemblance to the CT. The worldviews need other worldviews to either identify themselves against or to address weaknesses the other worldviews don't perceive. When worldviews identify themselves against other worldviews they move to more extreme positions. When they encounter flaws of their own way of thinking they can move to the middle, towards a balanced solution in which aspects of all worldviews are present (Van Egmond, 2008). This runs counter to the claims of the CT and has different implications for interactive processes.

2.4 Cultural Theory and the Worldview approach compared

When comparing the CT and the WA it is clear that both approaches differ from each other and these differences represent strengths or weaknesses. These differences have implications for the analysis of interactive processes.

First and most obvious, the CT is based on theory and logic and is not strongly founded on empirical survey data (Mamadouh, 1999), whereas the WA is clearly founded on empirical survey data and not on a theoretical basis (MNP, 2006a).

The weak (original) empirical basis of the CT is a reason for some critics to dismiss the CT because the CT does not fit their empirical results. They claim that the CT reduces reality too much and therefore loses explanatory power. Other critics don't dismiss the CT immediately as they appreciate its strengths, but they do see a problem in the weak operationalisation of the CT. CT is applied in several disciplines and each researcher makes the CT operational to suit their particular analytical needs (Ney, 2006). This re-interpretation of the CT leads to slightly different approaches and different interpretations. On the other hand, re-interpretation allows for specifying the precise content of the model to the context it is used in, in this case interactive environmental planning processes. According to Mamadouh, (1999) empirical typologies could strengthen the theoretical CT.

The WA is such an empirical typology. A strength of the WA is that the model is very explicit on the values that belong to each category. All (Rokeach) values can be plotted on to axes and can be coupled to value orientations and worldviews. In addition, the WA is specifically aimed at sustainability issues. On the contrary, the role of values in the CT is very implicit. This may be due to its theoretical basis. Thus the WA may be a valuable addition to the CT which focuses more on perceptions and behaviour that is implicitly based on values as well as relations.

Because the CT is based on theory, the relations between the ways of life are well considered and as a result the CT is quite specific about interactions between ways of life. The WA on the other hand is primarily (or solely) based on empirical survey data. There was little reflection on the deliberation and interaction between the worldviews. A well founded view on interaction of worldviews or ways of life is crucial when one wants to use the model for analysing interactive processes.

A further difference between the CT and the WA is that the CT distinguishes between active and passive ways of life. The active ways of life are actively involved in society and try to recruit more adherents and gain in power. The active ways of life believe they can change the world. The passive ways of life (fatalism and the hermit) are either not interested in interaction and changing the world or don't believe they have the power to change the world (Mamadouh, 1999). Fatalists and hermits can not be expected to participate in an interactive planning process. Thus in interactive planning only three categories of the CT are expected to be involved. The categories of the WA are all useful when analysing interactive processes. Section 2.5.2 elaborates on this topic.

A final, but important, difference between the CT and the WA is that the categories of the CT are clearly defined, mutually exclusive and internally uniform. A group can't be classified in two categories. The CT implicitly assumes that the grid-group dimensions are dichotomous (Thompson et. al., 1990; Mamadouh, 1999). Thus the CT is easier to use in the analysis of interactive planning processes as there will be fewer doubts when trying to classify groups of people. The WA is based on empirical data and as a result it is much more difficult to create mutually exclusive categories. The dimensions of the WA are to a certain extent continuous. When axes are looked upon as continuous mixed and hybrid groups become possible (Mamadouh, 1999). Reality is more likely to match the idea of continuous dimensions in which hybrid groups are also a possibility. On the other hand it is difficult to handle hybrid groups because the number of possible categories is much bigger and this will complicate explanation. The assumption of dichotomous or continuous dimensions also has an other important implication for the analysis of interactive planning processes. When the dimensions are viewed as being continuous, the positions people can take can be either more extreme or more balanced. In this respect, it is interesting to note that the WA value segmentation has a middle group called 'the balanced'. The WA thus assumes that in interaction (and interactive planning processes) a balanced middle position could be found which incorporates aspects of all four worldviews. The CT views the group-grid dimensions as being dichotomous and as a result they also believe that a synthesis between the ways of life is impossible; the ways of life are antagonist and inherently adversarial (Mamadouh, 1999).

To summarise, the CT and the WA at points differ in their basis, assumptions and are at points more or less elaborated. Therefore the use of either one of the approaches would have implications for the analysis of interactive planning processes. So what does a model need to make it suitable to study the progression of interactive planning processes?

First of all the model needs to be at the same time general and specific. The model needs to be specific enough to classify relevant perceptions, values, interests, problem perceptions, strategies and perceived solutions into the proper category. On the other

hand, the model needs to be general enough in that it envisages the general relations between strategies, arguments and perceptions when it is not possible to retrieve more in depth information on one aspect of a worldview. The CT is a more general theory that has a broader scope than the WA. The CT envisages a more general framework of perceptions. However, the examples Thompson et. al (1990) gave of each way of life, lie far from the context of interactive decision-making in the field of the environment. These examples illustrate the general idea of each way of life, but this understanding of the ways of life has little to do with the (Dutch) reality of interactive processes regarding environmental issues. The WA looks at the values and ultimate aims that people may never achieve but always will strive for in a sustainability context. As such, the WA gives a clear indication of the positions people will take with regard to environmental or sustainability issues. Furthermore, the worldviews of the WA are more detailed (MNP, 2006b). Thus, the WA has to be used to make the categories fit to be used in interactive processes regarding environmental issues.

Second, it is important that the model contains a clear view on interaction. After all, the interaction in interactive planning processes is the object of analysis. The CT has a clear vision on interaction and change in ways of life. The WA does not have such a clear vision. The CT can thus provide a theory on how the parties will interact.

Finally, the categories need to be exclusive, so that the ambiguities related to classification are diminished as much as possible. The categories of the CT are clearly defined and mutually exclusive. The categories of the WA are not homogenous and mutually exclusive. As a result there could be a number of hybrid worldviews.

Based on the above the CT is chosen as the main model that is used to analyse interactive processes. However, the CT still needs to be made operational and fitted to the context. The WA is used to make the ways of life more specific, this would facilitate classifying arguments, strategies and perceptions with regard to environmental issues.

2.5 Making the Cultural Theory operational

In order to be able to use the model of Cultural Theory to analyse interactive planning processes the CT must be made operational and fitted to the context of interactive processes regarding environmental issues. The WA will be used to colour the ways of life of the CT. In this research, each way of life or worldview functions as a blueprint for constructing plausible and credible policy arguments in interactive processes focused at environmental and sustainability issues.

2.5.1 Making the group-grid dimensions operational

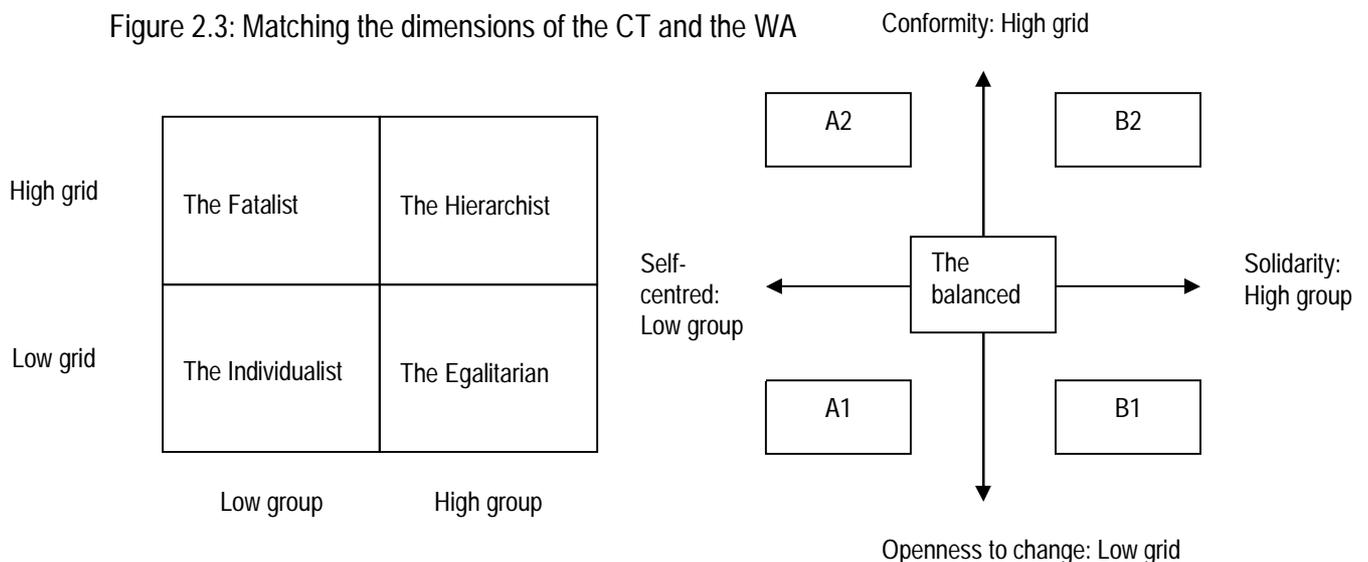
When colouring the CT with the WA, the first element that needs to be discussed is the dimensions of both models. The dimensions the two approaches use to distinguish between categories differ. The CT uses the dimensions grid-group. The WA uses different dimensions; the first dimension represents a scale from solidarity (other aimed) to self-centredness. For the other dimension, alternate definitions were used. This second dimension represents a scale from openness to change, large scale and uniformity to conservation, small scale and diversity. This dimension has to be understood in the light of globalisation and regionalisation. In a globalised world there is an openness to change, many activities are increased in scale, therefore many things become uniform. In a more regional world, where activities are kept small scale, the diversity can be conserved, this world is change resistant (MNP, 2006b).

To a certain extent, one can project the grid-group dimensions into the dimensions used by the WA. The dimensions solidarity versus self-centredness could be seen as scoring high or low on the group dimension. Solidarity can best be achieved by incorporation into a group or bounded unit, while self-centredness is characterised by individualism and a lack of group.

The other dimension is more difficult to match with the grid dimension, because of the multiple characterisations of this dimension. One could see the small scale world, aimed at conserving diversity (own culture and ideas) as a world in which one has to conform to (externally) imposed prescriptions, while openness to change could be seen as a lack of external prescriptions and a certain tolerance to differences and a certain freedom to act. However, other interpretations are also possible.

Figure 2.3 shows that a strange thing happens when applying the group-grid dimensions to the WA in the manner just discussed. The solidarity-self-centredness dimension can be replaced with the group dimension while retaining a similar categorisation. But when replacing the openness to change- conservation dimension with the grid dimension, the B1 worldview is supposed to match the egalitarian way of life, while the B2 worldview is supposed to match hierarchy. However, when reading the descriptions B2 has much more in common with egalitarianism than with hierarchy and B1 has much more in common with hierarchy instead of egalitarianism. The other categories do have a proper match as A1 is more individualistic and A2 more fatalistic. The mismatch is the result of the nature of the dimensions. The grid-group dimensions are abstract and refer to organisation of groups. The dimensions of the WA are specific and refer to the values of a worldview.

Figure 2.3: Matching the dimensions of the CT and the WA



The traditional interpretation of the grid dimension does not match the reality of interactive decision-making in which all groups are perceived as autonomous to determine their own strategy (Koppenjan, 2003).

A more useful dimension for interactive decision-making regarding environmental issues says something on the scale of life (and solutions) and the view of ecosystem stability. A preference for a small scale life is (partly) determined by the view of the ecosystem stability. When an ecosystem is viewed as fragile or unpredictable, life has to be small scale, only modest demands can be made on nature otherwise nature will collapse. The other way around, when an ecosystem is viewed as stable then one can defend a larger scale life and demand more of nature without having to fear or expect

collapse. Figure 2.4 shows that this leads to a different combination of worldview and way of life.

Figure 2.4: Changed dimensions: matching the CT and the WA

Large scale	The Individualist/ A1	The Hierarchist/ B1
Small scale	The Fatalist/ A2	The Egalitarian/ B2
	Self-centred	Solidarity

2.5.2 Making the categories of the ways of life operational

Now that worldview and way of life are coupled, let's see how the values and perceptions and views of the worldviews match with the ways of life. Annex III illustrates that the worldviews and ways of life coincide largely as regards content. Thus the ways of life can be complemented with the worldviews and their values. Annex III shows for all combinations of worldview and way of life pictured in figure 2.4 the aspects: 'how the world works', 'preferences/ interests', 'the perception of nature and sustainability', 'the perception of human nature', 'perceived problems', 'perceived solutions/ management strategies', 'blind spots' and finally the 'underlying values'. Text box I summarises the main story lines for each way of life complemented with the more detailed aspects of the worldviews. From here on the combination of way of life and worldview is referred to as worldview. Furthermore, the names of the worldviews are used instead of the names of the ways of life as these are more neutral.

The fatalists are a special case. According to the CT only the three active ways of life are involved in interactive decision-making. The active ways of life are individualism, hierarchy and egalitarianism. Fatalism is thus a passive way of life and it is unlikely that it will be involved in interactive decision-making (Thompson et. al., 1990). However, with worldview A2, fatalism can be reinterpreted and better fitted to reality. In that case fatalism is still likely to avoid interactive decision-making especially with regard to environmental issues, but when their personal interests are threatened they may try to influence the process from the excluded terrain. The hermit is not a useful category in interactive processes; it will not get involved in such processes.

Box 1 The five worldviews (CT and WA combined)

The A1 worldview values performance and power. A1 is competitive and market oriented. Economic growth is sustained by improving performance and production. Competition, free trade and technological innovation increase efficiency and keep prices low. In that manner economic growth is the means to improve everyone's situation. Ecosystems are stable and will always return to equilibrium. Nature is controlled by the skill to convert it into raw materials. Nature is a production factor. This view of nature allows for a strategy of trial and error. Raw materials are transferred into economic growth by skill, daring and knowledge. Only when there is demand for environmental-friendly products, companies will produce them. Protection of nature must not inhibit the economy. The A1 worldview believes that conservation only for the purpose of conservation is wrong. Risk is opportunity; the risks of enterprises and applications will be mitigated by future (technological) developments. Failure occurs because of bad luck or incompetence. According to the A1 worldview there are only provisional boundaries that are subject to negotiation. Humans are egoistic. Confrontation of interest is therefore inevitable. The needs of an A1 adherent are high and improving one's skills and taking risks and opportunities are used to meet these needs, risks are accepted. The market mechanism steers life. Technological development will find an answer to the present problems.

The A1 worldview seeks continued economic growth. Adherents believe that exchange always makes people better off. They fail to see certain types of benefits and costs and do not recognise externalities.

Adherents of the A1 worldview are ambitious and aimed at performance. Freedom, progress and intellect are valued. A1 adherents strive for continued economic growth, high performance and an increasing income. They desire a comfortable, luxurious and stimulating life.

The B1 worldview values solidarity, but because humans are often interested in their own gain strong hierarchical relations and clear rules can prevent self gain and stimulate solidarity. People can be involved if problems and solutions are pointed out to them. The authority acts for the greater good.

The quality of life is more than money and possessions. Everyone is responsible for society and the other (inter and intra generational equity). Only with solidarity and cooperation there can be a common well-being. Freedom and wealth are important but only within accepted boundaries.

Ecosystems are stable only up to certain thresholds, when these thresholds are exceeded a shift and possible collapse result. Therefore, careful management of resources is necessary. Experts have to determine the best management regime and set the acceptable risks, because nature is a complex of interlinked mechanisms. Nature is viewed as a common heritage of man kind and has to be preserved as such and for the future generations.

Global problems such as poverty, climate change and biodiversity loss are viewed as important.

Enough resources need to be present to keep all people happy, otherwise the hierarchy can't be maintained. Redistribution serves to limit discontent. Collective sacrifice leads to gain in the future. Resources are carefully managed and subsequently allocated to the people by the government. Differences in economic situation are justified by differences in education and specialisation. The government has to ensure basic services for everyone. Civil society has also an important role in addressing societal and environmental problems.

The hierarchy and rules are self-imposed but also serve to make sure that others also follow their rules of the game.

The B1 worldview has many responses to resolve conflict. The B1 worldview runs the risk of stagnation and unresponsiveness. Adherents of the B1 worldview are open-minded, tolerant, have a sense of responsibility, feel involved and strive for a just society.

The B2 worldview values equality and sense of community. Equality in chance is not enough, equality in situation is strived for. The scale of life has grown too large with the current globalisation. Life has to decrease its scale. The own (social) environment is important. People should have attention for each other. People need to take a step back to care for the environment and each other. Solidarity is very important.

According to the B2 worldview nature and resources are fixed. Ecosystems are seen as fragile and human interference would lead to disequilibrium and collapse. People are in a downward spiral of depleting natural resources. Our consumption rate is unsustainable. People should only make modest demands on nature, therefore needs need to be decreased by everyone.

People are easily corrupted by money and power and (forced) equality and social control guard humans against this corruption. Economic growth leads to inequality, therefore wealth needs to be redistributed. The B2 worldview accentuates the risks of economic growth and technological development (for society and for nature). They criticise these developments and predict future downfall. External forces are to blame for this downfall. This worldview tries to make a change by criticising. Citizens have to take local initiatives to improve the environment and the social environment. Because of a lack of hierarchical relations conflict is difficult to solve. There is a lack of leadership. Furthermore, they are afraid of innovations.

Adherents of the B2 worldview are altruistic, have a sense for community and responsibility, they are social, immaterialist, solidary, self disciplined, prudent, prefer simplicity, harmony and equality.

The A2 worldview strives for personal and family survival. The world has changed for the worse. They feel that they are controlled from without and struggle to influence their situation in life. The A2 worldview is concerned with security and welfare. Their welfare is threatened by outsiders (terrorism, open boundaries). They want to protect what they have and make their life comfortable, move ahead. But they feel they lack the power to go ahead. Politicians have to listen to the wishes of the people and respond to the problems people perceive. But institutions and politicians are distrusted and often follow an agenda of their own. This reinforces the powerless feeling of the adherents of an A2 worldview.

Nature is only important when it concern one's own environment. Especially health related issues are important. The A2 worldview is only concerned with environmental issues when it affects their job. Social issues in terms of employment, migration and security are the most important aspects of sustainability.

According to the A2 worldview people are incapable of helping the other. People (have to) take care of themselves and their own problems. People are only responsible for themselves. There is distrust between people.

About many things little can be done to change them, adherents of the A2 worldview perceive their ability to steer low, as they distrust institutions. They vote for those that they feel listen to them and seems to be a 'common' person. The adherents are often coping with life is it comes trying to protect its own interests. Sometimes they try to protect their interests by protesting or going to court. They are not interested in bigger problems as they can't change them.

2.6 Areas of disagreement between worldviews

A worldview consists of perceptions and beliefs which help the adherents identify relevant data. Each worldview thus constructs a specific story from reality, filters data to fit in its worldview and prioritises issues according to its worldview (Ney, 2006). As each worldview has a different belief-system and thus constructs a different story from reality, prioritises differently and sees different problems, there will be areas of disagreement between worldviews. Based on the worldview approach one can expect certain conflicts to arise when different worldviews interact. There are typical areas of disagreement concerning nature and the environment, perceived (environmental) problems and solutions, and concerning human nature and the scope for cooperation. This section will only discuss the areas of disagreement between the three active worldviews: A1, B2 and B1. The A2 worldview is left out of this section as they are not very concerned with environmental issues. Furthermore, they are unlikely to participate in an interactive process as discussed above.

2.6.1 Disagreements about nature and the environment

The four worldviews have a different view of nature that lead to different approaches to nature. The A1 worldview perceives nature as being inherently stable. Nature is seen as a production factor. Thus nature can be used to improve the human situation. The B2 worldview has an opposing perception of nature. According to its adherents nature is fragile. Therefore only modest demands can be made upon nature. The B1 worldview has a perception of nature that lies in between. They believe that nature is stable but within certain thresholds, therefore nature needs to be carefully managed (Thompson et. al., 1990).

The A1 worldview holds that the B1 worldview and especially the B2 worldview are too careful with nature. The A1 worldview believes that the other worldviews unnecessarily impede developments.

The B2 worldview mirrors these objections. It believes that the B1 worldview and especially the A1 worldview are too careless with nature and strain nature too much. According to the B2 worldview disaster and collapse of nature are around the corner. Finally, the B1 worldview thinks that the A1 worldview is too careless with nature and may push nature across its thresholds of equilibrium causing ecosystem shifts. The B2 worldview is in the opinion of the B1 worldview too careful and obstructs necessary developments (Van Egmond et. al., 2007).

In the interactive processes the positions parties have on nature conservation versus development are important measures for the disagreement between parties. The need for nature conservation depends on what the parties believe is important to strive for in life and what perception they have on ecosystem stability.

To the A1 worldview economic growth and success are important in life. Therefore, the A1 worldview holds the opinion that nature conservation may not inhibit the economy.

Immaterial things like nature and friendship are important to the B2 worldview. For them nature is a source of inspiration and relaxation. Combined with the perceived fragile ecosystems conservation of nature is very important. Developments may only take place when not endangering nature.

The B1 worldview also believes nature should be conserved, but are less strict in their view of nature conservation than the B2 worldview is. This can be explained by the view that ecosystems are stable within certain thresholds.

2.6.2 Disagreements about perceived (environmental) problems and solutions

The problems and solutions that each worldview perceives follow from their perception of nature and how different worldviews deal with this perception. Hence, each worldview perceives different (environmental) problems and solutions to those problems.

The A1 worldview does not perceive environmental problems. Its adherents treat them as a problem of scarcity⁵. For example, natural resources are not depleted, rather A1 adherents view their extraction in terms of economic feasibility. New technology can make extraction economically feasible. The A1 worldview perceives different problems as more important, such as government intervention and other impediments to developments. In the opinion of the A1 worldview the limits and boundaries that the B1 and B2 worldviews want to impose to developments withhold people from optimal performance, disrupt the market mechanism and inhibit growth. The A1 worldview believes that whatever (environmental) problems it may face, they can be solved by a proper functioning market mechanism and by technological innovations. The market mechanism in their opinion will also be able to take care of nature when people are willing to pay a certain price for it.

The B2 worldview perceives environmental problems much more from the perspective of over consumption. Ongoing economic growth and human activities will put pressure on nature and this pressure leads to collapse. Technological development does not pose a solution to problems, but is merely an excuse to keep exploiting nature. Also the market mechanism can't be a solution because it is inherently linked to economic growth. B1 criticises and in that manner try to raise awareness of environmental problems. The B2 worldview believes in a bottom up approach. By making people aware they believe that people will act. The government fails to do enough because they have to balance different interests.

The B1 worldview perceives environmental problems especially from a management perspective. They recognise that nature is complex and interlinked. The thresholds need to be determined in which nature is still stable. Because of the complexity of nature these thresholds are viewed from a global or European context rather than a national or regional context (Van Egmond et. al., 2007). The B1 worldview believes that nature needs to be managed carefully. The government is the only organisation that has enough expertise to determine management plans. Especially science is capable of determining the thresholds. The market and citizens lack insight in the complex mechanisms of nature (Van Egmond et. al., 2007).

Thus not only do the worldviews perceive different (environmental) problems, but they also perceive different solutions and see the solutions of the others as flawed or problematic. This will further complicate the interaction between different worldviews. In an interactive setting agreement on problem definitions and solutions need to arise, but such agreement might be difficult to reach. Underlying disagreements on the problem definition or solution may complicate interactive processes.

⁵ Production factors, e.g. nature, are used to produce goods. But at the same time nature is also a good. When people want to protect nature they will have to pay for it. Scarcity (as used by economics) forces people to make a choice what they believe is important.

2.6.3 Disagreements about human nature and the scope for cooperation

Finally, the worldviews also have divergent perceptions of human nature. These perceptions of human nature determine how they react to other actors. This can have effect on the forming of alliances between worldviews.

The A1 worldview believes that man is self-seeking and will pursue its own interests at the costs of an other's interests. Adherents further believe that man is self-centred and aimed at gaining more wealth and success. The A1 worldview will thus take up a strong position in deliberation and tries to gain as much as it can, believing that the others will try to do the same. The A1 worldview might therefore return to positional bargaining when it feels the compromises it has to make are too big.

The B2 worldview believes man is solidary and immaterialist, but believes that man is easily corrupted by power and wealth. The B2 worldview therefore deems that in deliberation none of the parties can claim epistemic sovereignty. Therefore in an interactive process the egalitarians will deliberate, but have no means to reach agreement as none of the parties' ideas can have more weight. They are reluctant to accept a form of hierarchy in interactive processes, that determines which interest or argument is more important.

The B1 worldview also believes that man is solidary, but also believes that man needs clear and strong rules to develop a sense of responsibility. Hierarchy is needed to ensure that decisions are taken for the greater good. The B1 worldview therefore desires clear rules, a division of responsibility and a body that will take the ultimate decision. In an interactive process the B1 worldview will deliberate and cooperate but the ultimate decision will be taken by a decision-making body. This body may decide on priorities in case of deadlock.

2.7 Alliances between worldviews or change of worldviews

Now that it is clear what the areas of disagreements between worldviews look like in an interactive context and what the scope for cooperation between the worldviews is, this section will discuss which worldviews are most likely to form an alliance based on certain commonalities or smaller disagreements.

In interactive processes, parties not seldom manage to come to some sort of consensus. From the view of the CT a real consensus between different worldviews is not possible, because the underlying differences persist. That consensus does arise, may be explained in two ways: either during the process some parties change their worldview and the conflict disappears, or the worldviews feel cooperation may be beneficial to them for the time being.

2.7.1 The changing of worldviews

Each worldview has its own perceptions of life, nature, problems and solutions. In an interactive process these different perceptions are confronted with each other. Not all of these worldviews always fit reality or experience. When a worldview (repeatedly) does not match reality and when it is confronted with different perceptions that may match reality better, dislodgement may occur and result in a change of worldviews.

When an actor changes its worldview the actor has two or three worldviews to choose from to adopt. The one the actor chooses to adopt is the one that represent the actual world best. In what cases may a party change its worldview?

An actor with an A1 worldview may change worldviews when its skills are never awarded and when the actor appears to have no control in the world. The A1 adherent

then might turn to the A2 worldview. Also when the actor is confronted with collapse he/she might change worldviews and either adopts a B1 or B2 worldview.

An actor with the B2 worldview may change its worldview when all precaution still leads to collapse. The actor then can turn to the A2 worldview. The actor also may change its worldview when others prosper without any collapse occurring. In that case the B2 adherent might turn to either the A1 or B1 worldview.

An actor with a B1 worldview might change worldviews when the experts can't predict the world (turn to the A2 worldview), when despite the careful management collapse occurs (turn to the B2 worldview), or when competitors do better without being careful and knowledgeable (turn to the A1 worldview) (Thompson et. al., 1990).

2.7.2 Possible alliances between worldviews

Parties may also decide to cooperate when they perceive this is beneficial. Cooperation may be beneficial when a worldview is confronted with the flaws of the solution it proposed and other worldviews point these flaws out and offer solutions to these flaws. Furthermore, cooperation may be perceived as beneficial when it offers the opportunity to increase its power to change the world as they would like to see it (Thompson et. al., 1990).

The Cultural Theory envisaged the following alliances:

Alliance 1: The A1 and B1 worldviews

The A1 worldview profits from defence by law which can ban unwanted practices the market mechanism could not ban. The B1 worldview profits from the sustained economic growth and enhanced innovation. Both the A1 and B1 worldview play down future risk (to some extent) because their attention is on current dangers of cohesion and growth. In addition, they both believe that innovation and expertise are able to cope with future (environmental) challenges. However, the A1 and B1 worldviews still conflict in their perceptions of nature. The B1 worldview demands a strict management of nature and wants to impose rules. The A1 worldview does not believe in any boundary. When free trade and competition is disrupted too much or when management can't be strict enough, the alliance will fall apart (Thompson et. al., 1990).

Alliance 2: The B2 and A2 worldviews

The B2 worldview tries to make people aware and mobilise them to take action. The B2 worldview will most likely first try to mobilise and raise the awareness of the A2 adherents. The A2 worldview is not very concerned with the environment but mostly want to secure its own position in life. The A1 and B1 worldview already have a stronger opinion regarding the environment and other aspects of life. It is easier to convince the A2 worldview of the ideas of the B2 worldview. Especially, when the A2 worldview feels that the B2 worldview can help them secure their position in life, they might be willing to cooperate. But the A2 worldview is reluctant to become active and keeps distrusting others. Thus this alliance will have little power and may not lead to strong actions (Thompson et. al., 1990).

Other alliances with the B2 worldview

Alliances with the B2 worldview are seen as more problematic. The B2 worldview rejects other worldviews as they put too much strain on the social and natural world.

The B2 worldview both rejects the hierarchy of the B1 worldview and the market mechanism and growth of the A1 worldview.

The B1 and B2 alliance: The B2 worldview will benefit from the decision-making mechanisms of the B1 worldview, which will enable them to decide and act. The B1 worldview will benefit from the attention to the lower classes that are more satisfied. But the B2 worldview still fears that the alliance will lead to overshoot and that the highest ranks will not listen to them. The B1 worldview feels the constraints of the demand for equality and the preservation of nature at any costs and the wish for long deliberation (Thompson et. al., 1990).

The A1 and B2 alliance: This alliance is highly unlikely. They both like to have minimal intervention by authority. But both have such different and conflicting perceptions of nature that this alliance is probably not seen in an interactive process concerning environmental issues.

Due to the many differences between the worldviews it is very unlikely that they will manage to form an alliance of more than two worldviews. These alliances are only expected when confronted with disaster and when there is a need for unified and direct action (Thompson et. al., 1990).

2.8 The formulation of hypotheses

This chapter showed what the CT and the WA encompass and how they can be fitted together. Subsequently, section 2.6 and 2.7 discussed the worldview approach perspective on conflicts and consensus in interactive processes. In this final section five hypotheses are posed based on the worldview approach discussed in this chapter. These hypotheses reflect the worldview perspective on conflict and consensus in interactive processes. These hypotheses are used to analyse the two selected cases.

The previous sections showed that each worldview has a different perception of life. Some of these perceptions, for example the perceptions of nature, are incompatible. These perceptions lead to a difference in the problems and solutions the worldviews perceive. Thus in an interactive process in which agreement has to be reached on problems and solutions, the underlying differences in perception will lead to conflicts. The more worldviews are present in the interactive process, the more conflict there will be. Thus according to the CT, conflict in interactive processes can be reduced to conflicts between worldviews. This leads to the first hypothesis that explains why conflict arises:

Hypothesis 1: When different actors with different worldviews are brought together in an interactive process, this will lead to disagreement and conflict between the different worldviews.

The first hypothesis aims to show that conflicts between actors are actually conflicts between worldviews. This is the case because the differences between the worldviews do not only consist of divergent positions, but find their basis in a different idea of how the world should function and how nature is. Because of the differences in perception between worldviews, creating a common perception of the problem and solution is difficult. For each worldview, its own perception is true and the others perceptions are faulty. Each worldview tries to reach epistemic sovereignty, dominating the outcome of the interactive process. For this reason, attempts to build

consensus founder on the underlying differences in perception or worldview. This leads to the second hypothesis.

For the purposes of this research consensus means a common perception, an agreement that satisfies the interests of all actors and to which every actor agrees. Consensus differs from compromise because it does not reflect a common perception. A compromise is a settlement between actors in which all actors give in a bit on their original demands, but in which differences in perception persist.

Hypothesis 2: When one tries to create consensus between different worldviews these attempts will founder on underlying differences in perception.

From the perspective of the CT, a real consensus between different worldviews is not possible because underlying differences persist and are too large. But the aim of an interactive process is the creation of a consensus or at least a package deal (compromise) to address a certain problem.

According to the CT, a consensus could be possible when the number of worldviews that are represented in an interactive process is decreased. The CT envisages two ways to reduce the number of worldviews present in an interactive process.

First, by excluding actors with a different worldview. An interactive process seldom includes all interested actors. The initiator often has to choose who to invite and who not to invite. Some actors are not invited because they are not sufficiently cooperative or they actors do not want to be included because they can't recognise themselves in the process. It is also possible that during the interactive process some actors drop out and move into the excluded terrain. According to the CT, exclusion by choice or force is likely to happen when these actors have different worldview and therefore are unable to cooperate in the interactive process. Actors that are excluded discuss in the excluded terrain. Due to this exclusion, the number of worldviews present in the interactive process decreases and thus it may be easier to reach consensus. However, then the consensus does not include the view of the excluded actors.

A second way of reducing the number of worldviews present in the interactive process is when actors change worldviews as described in section 2.7.1. A change of worldview is triggered when reality does not match the perceptions of the worldview. Also in this case consensus should be easier to reach.

If the number of worldviews present in the interactive process remains the same, conflicts persist. According to the CT this conflict can't be bridged. However, alliances might be formed between different worldviews. These alliances are formed when they are advantageous to both worldviews and are never seen as lasting solution by the CT. 'Allies remain competitors; antagonism is always there just beneath the surface' (Thompson et. al., 1990: 89). An alliance is formed when the worldviews recognise that the other worldview has benefits and when they realise that they are stronger together. Conflict may thus be bridged and result in agreement. But this agreement has to be a compromise or a package deal, because differences in perception always persist. In an alliance both worldviews have to moderate their demands and make an exchange acceptable to both worldviews. An alliance between more than two worldviews is unlikely. The above leads to the third hypothesis on how agreement may be reached according to the CT:

Hypothesis 3: When one tries to create agreement between actors in an interactive process, agreement arises when

- a. *The interactive process is exclusive and only contains one worldview.*
- b. *Actors change their worldview and as a result there is only one worldview present in the interactive process.*
- c. *Alliances are formed between two worldviews within the interactive process.*

Thus, according to the CT, there are some possibilities to come to an agreement in interactive processes. But in these cases problems loom on the horizon.

In the case of hypothesis 3a and 3b, other worldviews are excluded. The agreement only represents one perception. This is also the case when there were more worldviews included in the interactive process, but when the agreement is formed between actors with a similar worldview, excluding the other worldviews. The CT says that each worldview has blind spots that only other worldviews can perceive. Each worldview's perception is only part of reality. An agreement that only represents one worldview will thus be unbalanced. When two worldviews are able to come to an agreement on a solution there will still be some blind spots when not all worldviews are included in this solution.

In case of hypothesis 3c, the agreement is a package deal or compromise. Each worldview has moderated its demands. But as seen in section 2.7.2, when the moderations are too large, the alliance falls apart. General commitments are therefore most easy to achieve. The more specific the consensus becomes, the deeper the agreement between parties has to be and the more the perceptions of each worldview have to be moderated. In addition, the underlying differences in perception do not go away. Hence, the general compromise masks the persistent differences in perception and the compromise will be interpreted differently. This will complicate the implementation of the agreement, the differences may then resurface.

Finally, the different perceptions are also reflected in the grassroots support of the actors. This will further complicate the implementation of the agreement.

This leads to the fourth hypothesis:

Hypothesis 4: When agreement is reached between actors with different worldviews, this will lead to problems in a succeeding (implementation) phase because

- a. *Outcomes of the interactive process in which not all worldviews are involved have typical pitfalls or blind spots and may therefore be seen as halfway compromise.*
- b. *The (general) agreement is interpreted differently by the actors.*
- c. *In the grassroots support the underlying areas of disagreement are still reflected.*

3. Research methodology: testing hypotheses

This research is about explaining the progression of an interactive process from the perspective of worldviews. This research analyses the role of worldviews in interactive processes by testing hypotheses in case studies. The hypotheses are based upon the theoretical framework as described in chapter two. The hypotheses explain why conflict arises in interactive processes in which multiple worldviews interact, how this conflict looks like, why deadlock in the debate arises, how compromise between worldviews may be reached and why this leads to halfway compromise. The hypotheses have to be tested against the empirical findings of the two case studies.

Two steps need to be followed before the hypotheses can be tested. First, for each case the interactions between actors needs to be reconstructed as described in section 3.1. Second, based on the reconstructed narrative the worldview of each actor needs to be determined. How the worldview of each actor can be determined is discussed in section 3.2. After these two steps the hypotheses can be tested. Section 3.3 describes how this testing takes place. The general research methodology and selection of cases have been discussed in section 1.6.

3.1 Reconstructing the narrative

The first step of the analysis will be reconstructing the interactions. The interaction of different worldviews can be studied from a discourse perspective. According to the discourse perspective, conflict between stakeholders is in essence about how actors perceive the world (Hajer, 2005). Decision-making and interaction is here a “system of competing discourse coalitions and their struggles to ‘control shared meanings’ and to gain acceptance of their framing of a policy issue” (Durning, 1995). In a discourse analysis, the interaction between the different parties or worldviews can be seen as a narrative or story of arguments and positions. During the interactive process each actor tries to convince the other actors of its point by using arguments and taking up positions. The narrative consists of the arguments and positions of different actors and how these positions and arguments interact (Ney, 2006). Thus the narrative tells which actors are involved in the interactive process, what their position is and which arguments they use to convince the other actors. Furthermore, the narrative shows how actors relate to each other and what conflicts arise during the process. Finally, the narrative shows how the interactive process progresses over time; different actors may enter the interactive process or different problem definitions may arise, different solutions may be proposed or other arguments may enter the interactive process. (Ney, 2006). It is also important to include the excluded terrain in the analysis. The excluded terrain contained those actors that were not involved in the interactive process. Analysis of the excluded terrain is important to be able to assess the quality of the consensus.

To reconstruct the narrative the following has to be listed:

- The actors in the interactive process and the excluded actors
- The positions of the actors
- The interests of the actors
- The perceptions of the problem and solution
- The arguments they use to convince others of their point
- The perceptions of other’s arguments and positions
- Disagreement/conflict and agreement/alliances between actors
- Changes in any of the above over time

This research is focused on the interactive process which takes place in the policy sub system. The policy sub system is the area where decisions are made and advice is given and where structured interaction takes place. The excluded terrain, the place of excluded actors and public debate, is also important for this analysis; the excluded terrain may undermine the consensus reached in the interactive process. The first four hypotheses focus on the interactive process and the last hypothesis also focuses on the excluded terrain.

The narrative will be reconstructed with the help of the following sources

- Minutes of meetings that took place
- Other policy documents that reflect the different positions of the actors
- Documents on decisions made
- Documents that reflect the different positions of the actors positions of the excluded terrain; for example news paper articles
- Published studies
- Interviews in which emphasis lies on the perceptions of the actors and the perceptions of the other's argumentation.

3.2 Recognising worldviews in the interactions

Determining the worldview of each actor is the second and key step of the analysis. While reconstructing the narrative for the two selected cases, information was gathered about the arguments, positions, perceived problems and solutions of each actor. The completeness of these arguments, positions and perceptions depends on the completeness of the information found. Some documents were not accessible, some documents could not be located in time. Furthermore, it was not possible to interview all involved people. Based on the available information the arguments, positions and perceptions of all actors were listed.

Then a labelling system was designed based on the main characteristics of each worldview. The main characteristics of each worldviews were derived from section 2.5.2 and annex III. The main characteristics encompass the following aspects: how the worldview thinks the world works, preferences/ interests, the adherents' perception of nature and sustainability, their perception of human nature, perceived problems, perceived solutions/ management strategies and blind spots. The labelling system consists of labels which are typical for a specific worldview. Annex IV shows the predefined labels for each worldview.

Comparing the arguments, positions, perceived problems and solutions of each actor to the main characteristics of each worldview was the next step. All positions, arguments used, problem definitions and solutions or proposed management strategies were coupled to characteristics of one of the worldviews. This matching of arguments, positions and perceptions of actors with characteristics of worldviews is explicitly included in annex VI for the case of the Scheldt Estuary and in annex VIII for the case of the mechanical cockle fisheries in the Wadden Sea. It was rare that all arguments, positions and perceptions were matched to characteristics of only one worldview. Oftentimes an actor thus had characteristics of multiple worldviews. When an actor used a clear majority of arguments belonging to one worldview, the actor was categorised under this worldview, despite the fact that he did have some other characteristics. Sometimes an actor used arguments belonging to a mixture of worldviews. In those cases where there was no clear dominant worldview, the actor was categorised more than one worldview. The categorisation into worldviews was

not always straightforward. Section 6.3.3 discusses the methodology used in this research and will discuss the categorisation in more detail.

Special attention was paid when aspects of the actor's position arise that do not fit the general worldview the actor is ascribed to. These deviations are important to discuss how useful the worldview approach is in analysing interactive processes.

The worldviews were ascribed by the researcher, not the interviewees. During the interviews the characteristics of the worldviews were discussed to test the coupling of actor and worldview based on the documents, but the actors did not get to choose a worldview. Rather questions were asked like: 'which problems and solutions did you see'. This information was then used to complement and verify information from documents.

3.3 Testing the hypotheses

When the narrative of the interactive process is reconstructed and the worldviews of each actor are determined the hypotheses can be tested. This section indicates how the hypotheses will be tested in the cases and when the hypotheses are accepted.

Hypothesis 1: When different actors with different worldviews are brought together in an interactive process, this will lead to disagreement and conflict between the different worldviews.

The first hypothesis provides insight as to why conflict arises. The first hypothesis states that the conflicts that arise in interactive processes are actually conflicts between worldviews. To test the first hypothesis the conflicts between the different actors in the cases are listed and analysed. Then the worldviews of the actors are determined. The hypothesis states that the conflict that arises in the case studies can be brought back to conflicts between worldviews. Thus a next step is to assess, for each conflict, whether the conflict is indeed a conflict between worldviews as the worldview approach suggests.

But the worldview approach goes one step further. Section 2.6 suggests that one can expect certain conflicts to arise when different worldviews interact. Conflicts between worldviews should thus revolve around the typical areas of disagreement described in section 2.6. A final step in testing hypothesis 1 entails comparing the conflicts or areas of disagreement that arose in the interactive process to the typical areas of disagreement.

The hypothesis is accepted when the conflicts in the interactive process are indeed conflicts between worldviews and when they represent typical areas of disagreement between worldviews.

Hypothesis 2: When one tries to create a consensus between different worldviews these attempts will founder on underlying differences in perception.

The second hypothesis explains why conflict in an interactive process becomes a deadlock. The attempts to reach an agreement fail because of the persistent differences in perception that can't be bridged. The hypothesis implies that true consensus can't be reached. When a consensus is reached there will always be some differences that may undermine this consensus.

In order to test this hypothesis, first the intermediate or final outcome of the interactive process needs to be reviewed. Does this outcome reflect a consensus or

common perception of the actors or does the outcome reflect a compromise which represents a trade-off?

Consensus is an agreement to which every actor agrees, which satisfies the interests of all actors and which represents a common perception. Compromise does not represent a common perception; rather it is a settlement between actors in which all actors give in a bit on their original demands.

If indeed agreement is reached, a second step is to review how the agreement (either consensus or compromise) came about. To what extent and why did arguments and positions converge or diverge?

This hypothesis is accepted when the outcomes represent compromises instead of consensus, when differences in perceptions persist.

Hypothesis 3: When one tries to create agreement between actors in an interactive process agreement arises when

- a. The interactive process is exclusive and only contains one worldview.*
- b. Actors change their worldview and as a result there is only one worldview present in the interactive process.*
- c. Alliances are formed between two worldviews within the interactive process.*

The third hypothesis states when according to the worldview theory, agreement is possible. Again the (intermediate and final outcomes) need to be reviewed. First, it needs to be assessed which elements of which worldviews are represented in the outcomes. When there is only one worldview represented in the outcome, the first two parts of the hypothesis are relevant to explain why only one worldview is represented in the outcome. When more than one worldview is represented in the outcome it is likely that the outcome represents a compromise (verified with the previous hypothesis). In this latter case the last two parts of the hypothesis may explain why agreement came about.

The first part of the hypothesis can be tested by looking at how many worldviews are represented in the interactive process and how many worldviews are represented in the outcome. When there is only one worldview both in the process as in the outcome, the interactive process is exclusive (see beginning section 2.7).

The second part can be tested by looking at changes of arguments and perceptions of each actor. Did one or more actor's change perceptions. Does the actor's new perception match with the characteristics of a different worldview? And does this change match one of the changes envisaged in section 2.7.1?

To test the third part of the hypothesis the alliances that are formed between actors in the interactive process need to be assessed. Second, the compromise needs to be reviewed. Which actors and which worldviews are involved in the compromise? How was original conflict bridged? Which moderations did each actor make to its original demands and perceptions before agreement could be reached? Then the alliances that are made in the interactive processes need to be compared to the alliances that might be expected according to the worldview approach as described in section 2.7.2. Are the concessions similar to the concessions that would have to be made when two worldviews form an alliance?

Hypothesis 4: When agreement is reached between actors with different worldviews this will lead to problems in a succeeding (implementation) phase because

- a. *Outcomes of the interactive process in which not all worldviews are involved have typical pitfalls or blind spots and may therefore be seen as halfway compromise.*
- b. *The (general) agreement is interpreted differently by the actors*
- c. *In the grassroots support the underlying areas of disagreement are still reflected.*

The last hypothesis explains why agreements as listed in hypothesis 3 may fail in the implementation phase and thus leads to halfway compromise. This hypothesis assumes that interactive processes lead to halfway compromises because the inherent differences between worldviews are not overcome in the resulting agreements.

To test hypothesis 4a one needs to look at the excluded terrain. In this case the outcome does not reflect all worldviews and some worldviews are not included in the interactive process. In the excluded terrain these excluded actors criticise the agreements made in the interactive process. The questions that need to be asked here are: Can this criticism be brought back to criticism due to a difference in worldview and perception? What counter arguments do the actors in the excluded terrain use to oppose the developments and outcomes of the interactive process?

Hypothesis 4b and 4c can be tested by looking at the implementation phase.

To test hypothesis 4b the following questions need to be answered: Do disagreements arise on how the consensus or outcome needs to be interpreted and implemented? Are these disagreements similar to the ones voiced before in the interactive process?

Hypothesis 4c can be tested by looking at the reactions of the grassroots support to the agreement. Are these groups opposing the plan? Which arguments do they use to oppose the plan? Are the areas of disagreement of the interactive process repeated in the grassroots support?

Hypothesis 4a is accepted when the excluded actors criticise the agreement from their own excluded worldview. Hypothesis 4b is accepted when there are (major) disagreements in the implementation phase between alliance partners on the interpretation of the agreement. Hypothesis 4c is accepted when the grassroots support of the alliance partners criticise the agreement, which cause the alliance partners to break up the alliance.

4. Case study: The future of the Scheldt Estuary

4.1 Introduction

Up till now the worldview approach of this thesis has been elaborately discussed. This chapter applies the worldview approach to the case of the Scheldt Estuary.

The Scheldt Estuary is that part of the Scheldt River between Ghent (Belgium) and the river mouth in Flushing (the Netherlands). The Scheldt Estuary has considerable ecological value. It is one of the few estuaries marked by a complete salinity gradient. Shoals, sandbars and salt marshes surface and submerge again. The Estuary has been influenced and shaped by human use. The Scheldt Estuary links Antwerp to the North Sea. Over time the estuary has been deepened and widened to keep the port of Antwerp accessible to the largest ships. The port of Antwerp deems further deepening necessary. Deepening and other human use has led to an unfavourable conservation status of the estuarine nature of the Scheldt Estuary. According to conservationists, estuarine nature has to be restored. The Scheldt River is furthermore prone to flooding, especially in Flanders. In addition, shipping accidents pose an external risk (Gerrits, 2008). The management of the estuary is complicated due to these different aspects.

The worldview approach assumes that conflicts between worldviews can't be resolved and lead to deadlock and halfway compromise. This assumption can be tested by means of four hypotheses. The first hypothesis discusses to what extent conflicts between actors are conflicts between worldviews (section 4.4.1). According to the worldview approach conflicts arise in interactive processes because of differences in perception between worldviews. Conflicts can be useful, but when conflicts lead to deadlock, conflicts become problematic. Each worldview sees its own perception as true. Therefore, conflicts can't be bridged and consensus building fails due to different perceptions (section 4.4.2). The third hypothesis claims that agreement is only possible between similar worldviews or when a package deal is made (section 4.4.3). In both cases these agreements are problematic and encounter problems in the implementation phase. According to the fourth hypothesis, agreements between similar worldviews exclude other worldviews and lead to partial solutions or protest, while package deals fail due to different interpretations and protest from grassroots support (section 4.4.4).

4.2 Case overview

This section discusses the key events of this case. Annex V shows the key events in a timeline. For a more elaborated overview see Gerrits (2008). This case study starts in 1995, but has a much longer history. At the end of the 16th century the Spanish blocked the Western Scheldt and made sure that the port of Antwerp was inaccessible. The Dutch maintained this blockage. This was a major economic blow for the port of Antwerp. In 1839 the Netherlands and Belgium concluded a treaty, known as the division treaty or *scheidingsverdrag*. This treaty contained a provision on the guaranteed accessibility of the port of Antwerp (Poorter, 2006; Gerrits, 2008).

4.2.1 The 2nd deepening of the Western Scheldt

In the 20th century the port of Antwerp wanted to deepen the Western Scheldt. The port of Antwerp referred to the treaty of 1839 and argued that the navigational channel of the Western Scheldt had to be deepened to keep the port of Antwerp

accessible for large container ships. On January 17, 1995, after lengthy negotiations, the Dutch and Flemish Prime Ministers signed a formal agreement on the second deepening of the Western Scheldt. But the deepening would have negative effects on the nature in the Western Scheldt. According to Dutch nature conservation policy (SGR: *Structuurschema Groene Ruimte*) nature compensation had to take place. Because nature compensation touched upon the interests of the inhabitants of Zeeland, a regional consultation body, the BOWS (*Bestuurlijk Overleg Westerschelde*) was asked to come up with a nature compensation plan. To support and give direction to the discussions in BOWS, an assessment was made by experts. They assessed possible compensation projects and proposed eighteen projects. Some of these projects laid claims on agricultural lands or entailed de-poldering: giving agricultural land back to the river. Farmers, water boards and citizens opposed the plans proposed by BOWS and concluded that public support for most of the proposals lacked, especially when these proposals would result in de-poldering.

On February the 2nd, 1996 the Dutch House of Representatives ratified the treaty concerning the deepening of the Western Scheldt (hereafter deepening treaty) mainly because of wanting to remain good neighbours to Belgium.

The compensation plan of the BOWS in the end only contained three measures of which none entailed de-poldering. The central government turned down this plan. It did not constitute sufficient compensation. In the summer of 1996 the Commission Western Scheldt was established to come up with a nature compensation plan. The Commission presented its findings in August 1997. The Commission advised to take short term measures that did not include de-poldering. Furthermore, they suggested the design of an integrated policy on the development of the Scheldt Estuary for the longer term. The report of the Commission Western Scheldt was discussed and accepted by the Dutch House of Representatives. In the meanwhile the Western Scheldt was deepened (Gerrits, 2008; Klinkers, 2005).

4.2.2 The future of the Scheldt Estuary

On 17 March 1998, according to the suggestion of the Commission Western Scheldt, a working group was established to design a Long Term Vision on the Scheldt Estuary (LTV). The LTV views the further development of the Scheldt Estuary from a triple perspective; increased accessibility of the port of Antwerp, nature restoration and protection against flooding. The LTV was published on January 18, 2001. The LTV formed the basis of political discussion on the future of the Estuary.

On September 29, 2001 the European Commission officially warned the Dutch state. Not only was the compensation for the second deepening deemed insufficient, the Scheldt Estuary was also in an unfavourable conservation status and estuarine nature had to be restored. On March 4, 2002 the Netherlands and Belgium signed the Memorandum of Flushing. This Memorandum aimed at the design of a Development Outline for the Scheldt Estuary that had to give effect to the short term aims of the LTV. Thus, the Development Outline had to integrate accessibility, nature and safety into one plan. The Development Outline was developed by ProSes, a bilateral organisation. In 2002, ProSes established a consultation group called the Consultation Advising Actors (OAP). The OAP could comment, discuss and advise on the Development Outline. Several societal organisations, both from Flanders and Zeeland, were represented in the OAP. ProSes published the Outline on September 10, 2004. The OAP issued its advice on November 19, 2004.

The Development Outline contained among others a nature restoration plan. In Zeeland 600 hectares estuarine nature had to be developed, in Flanders 1,100 hectares

estuarine nature had to be developed. Actors disagreed how the nature had to be developed; the question was whether or not de-poldering was an acceptable option.

On December 21, 2005 the Flemish and Dutch governments signed the Scheldt Treaties. The Scheldt treaties included the main decisions regarding the Development Outline. One of these decisions was the de-poldering of a Flemish-Dutch polder, named the Hertogin Hedwige polder which is 300 hectares in size. The province of Zeeland had to come up with a plan to develop the other 300 hectares of estuarine nature. The province organised a steering group involving the main stakeholders. However the stakeholders kept disagreeing on how the nature should be developed. A number of citizens had organised a strong anti de-polder movement.

Before entering into force, the Scheldt treaties had to be ratified by the Dutch and Belgian Parliaments. The majority of the Dutch House of Representatives opposed the de-poldering plans. In 2006, the Commission Maljers was established to look for alternatives to de-poldering. At the end of 2006 this Commission concluded that there were no good alternatives to de-poldering. The Dutch House of Representatives ratified the Scheldt Treaties in December 2007; the Dutch Upper House ratified the treaties in July 2008. But the ratification took place under the condition that alternatives to de-poldering are sought and that no forced de-poldering would take place. However, it soon got clear that few farmers wanted to de-polder voluntarily. The Dutch House of Representatives asked for yet another Commission to assess alternatives to de-poldering (Koppejan c.s., TK 30862), but also the Commission Nijpels dismissed alternatives to de-poldering.

After discussing the advice of Commission Nijpels the majority of the House of Representatives still opposed de-poldering. Actors from Zeeland kept bringing up alternatives. On April 17, 2009 the Dutch Cabinet finally decided to develop the required estuarine nature by means of alternatives. De-poldering is thus rejected. The lack of support from Parliament and the opposition from Zeeland were important reasons to reject de-poldering. However, the European Commission still has to assess if the aims of the nature restoration are met. If the current nature restoration plan does not fit the European nature legislation, then the Hertogin Hedwige polder will be de-poldered as laid down in the Scheldt Treaties. In the mean time the permits for the deepening of the Western Scheldt are issued. Recently, the port of Antwerp made clear that a fourth deepening looms on the horizon (Gerrits, 2008; Klinkers, 2005; Commissie Natuurherstel Westerschelde, 2008; Minister Verburg, 2009; PZC, 2009a &b).

4.3 The interactions surrounding the Scheldt Estuary

4.3.1 The interactive processes

The interactions surrounding the Scheldt Estuary have taken place over a long time. At different moments in time, there have been several bodies in which multiple actors interacted. However, not all of these instances can be characterised as interactive processes. A process can only be called an interactive process when the policy development and resulting agreements are made in cooperation with a variety of stakeholders representing different interests and when this involves a shared responsibility and certain commitment of all participants to the process and its outcomes. Furthermore, these stakeholders are able to discuss on the problem definition, and/or solutions and the process has to be transparent and open (Pröpper & Steenbeek, 1998).

The first interactive process that took place in this case study was the BOWS, which had to advise on the nature compensation related to the second deepening. Because the nature compensation primarily touched upon the interests of the inhabitants of Zeeland, the BOWS was considered to be a good platform to develop a nature compensation plan. The BOWS was an existing regional policy developing body in which governmental actors from Zeeland, the municipalities, water boards and the province, cooperated. The BOWS was chaired by the province of Zeeland. In addition to the discussion within the BOWS an open planning process was initiated by the BOWS. Nine public meetings took place and five special target group consultations were conducted. The five target groups consisted of the water boards, agriculture, environmental organisations, tourist organisations and fisheries. This open planning process was conducted to exchange alternative views of the problem and solution with the general public and the local stakeholders.

The second interactive process that took place was the OAP. The OAP had to advise and comment on the Development Outline Scheldt Estuary. The OAP discussed how to combine issues of accessibility, safety and nature into one coherent package of measures. Thus, contrary to the BOWS, the OAP could also discuss on the desirability of a third deepening. For that reason the OAP had a bilateral representation. The OAP was led by an independent secretariat consisting of neutral Flemish and Dutch chairmen and consisted of both Flemish as Dutch governmental, environmental and economic stakeholders. The Flemish agricultural organisations were excluded from the process. The parties of the OAP could discuss both the problem definition as the solutions. Both the BOWS as the OAP were open participative processes leading up to an advice.

A third interactive process was the discussion in the Dutch House of Representatives. The nature compensation and restoration measures encountered much public resistance. This resistance was mirrored in the debates that took place in the House of Representatives. They had to ratify the treaties concluded between the Netherlands and Flanders on respectively the Deepening Treaty and the Scheldt Treaties.

The Commission Western Scheldt and the process by which the Long Term Vision was designed cannot be characterised as interactive processes. These were closed processes merely consulting other parties or being only research-based.

4.3.2 Interactions on the 2nd deepening: 1995-1998

The 1995 deepening treaty in the Dutch House of Representatives

In January 1995, the Flemish and Dutch governments concluded an agreement and drew up a treaty on the (second) deepening of the Western Scheldt. Because the deepening was expected to have negative effects on the estuarine nature of the Western Scheldt, Dutch nature policy required that the deepening had to be accompanied by nature compensation.

In February, 1996 the Dutch House of Representatives debated and voted on the deepening treaty⁶. The VVD, PvdA, CDA and D66 argued that, given the long history of negotiating on the deepening and other coupled issues, the Netherlands had to be a good neighbour and despite the disadvantages they chose to ratify the treaty. In their opinion, ratification would mean there was more room in other bilateral negotiations.

⁶ The VVD, CDA, PvdA, D66, Groenlinks, CU and SGP are the main Dutch political parties. The VVD equals the liberals, PvdA equals the social democrats, CDA equals the centrist democrats, D66 equals the liberal democrats, Groenlinks equals the greens, and the CU and SGP are parties based on Christianity.

The CU (formerly the RPF) and Groenlinks opposed the treaty and did not wish to ratify it. The SGP initially opposed the treaty, but in the end voted in favour. These three parties argued that deepening would not be needed when Flemish ports would cooperate. The disadvantages of the deepening would be too large. It would lead to a deterioration of the estuarine nature.

Groenlinks argued that the European and national nature legislation required full nature compensation, which would only be possible by means of de-poldering. Groenlinks did not want to deepen without a proper compensation plan including de-poldering. In 1995 there was no nature compensation plan yet. Not all political parties were as positive towards de-poldering as Groenlinks. The CU, SGP and VVD turned down de-poldering. De-poldering would be a destruction of capital (dykes and fertile agricultural land) and it would decrease safety levels against flooding. The CU and SGP argued that without de-poldering a proper compensation was impossible. Given that they rejected de-poldering, they argued that there would be no proper compensation and thus rejected deepening. The VVD was in favour of deepening and questioned the amount of nature compensation. However, according to the VVD the decision which and how much nature needs to be compensated is arbitrary; the same type of nature can't be re-created. Financial compensation would be possible in the eyes of the VVD.

The PvdA, CDA and D66 were reticent. These parties believed that Zeeland had to decide by means of the BOWS consultation. The PvdA and D66 hinted that they did not oppose de-poldering. The CDA referred to the importance of agricultural interests, implying opposition to de-poldering. As a result, the Dutch House of Representatives ratified the deepening treaty, to show they are indeed a good neighbour. The BOWS had to come up with a nature compensation plan (Proceedings II 1995/96, 56 pp. 4073-4114; Proceedings II 1995/96, 58 p. 4148).

The BOWS on the nature compensation plan⁷

From the proceedings and other documents of the BOWS the following narrative has been reconstructed.

The BOWS decided to consult experts on the best way to compensate for lost nature. In February, 1996, experts put forward three types of measures: measures in the Estuary itself, de-poldering and inland measures (Rijkswaterstaat directie Zeeland, 1995). De-poldering is seen as the most effective compensation measure. The experts argued that only de-poldering gives more space for increase in shallow waters, mud flats and salt marshes. The experts only used ecological criteria to weigh the options. The BOWS opposed the deepening, but the deepening had been decided upon already. The BOWS could only discuss the nature compensation.

All actors of the BOWS were reluctant towards the options offered by the assessment. The municipalities emphasised the need for public support and the feasibility of the compensation plan. The municipalities were not in favour of de-poldering because they foresaw a lack of public support.

The water boards also opposed de-poldering. They viewed de-poldering as destruction of expensive dykes. In addition, de-poldering would lead to a longer stretch of dyke, which decreases safety levels and increases maintenance costs. Both the municipalities and the water boards questioned the effectiveness of de-poldering. De-poldered areas may fill up with sediment and currents might destroy present salt

⁷ This section is based on the proceedings and other documents of the BOWS. For an elaborate list see the literature listings under Documents interactions BOWS.

marshes; the so called Seine effect. De-poldering and inland measures were undesirable as they affect adjacent agricultural lands and would impose restrictions on businesses and village expansion. Furthermore, both de-poldering and inland measures, were destroying valuable agricultural landscapes. The compensation plan would increase the spatial claims in municipalities.

The province of Zeeland was put in a difficult position. It had to make sure that a compensation plan was made that would meet the required amount and quality of compensation. The province emphasised that the compensation would have to meet a certain quality level, measured by ecological criteria. But the province also agreed to the arguments of the municipalities and the water boards; safety levels could decrease and de-poldering did constitute destruction of capital. The central government put pressure on the province by pointing out that the compensation plan had to meet ecological standards and that by excluding de-poldering and inland measures these standards would not be met.

The public meetings and the BOWS

During the public meetings, the BOWS took up a neutral position. They hoped for arguments and alternatives that would help build up a convincing plan. Agriculture, the recreational sector and many citizens were present during the public meetings.

Many participants opposed the deepening itself. They argued that the ports of Antwerp and Zeebrugge had to cooperate. They wanted to have a say on the deepening, because they would be confronted with the disadvantages. During the public meetings there was little support for de-poldering. Several widely shared concerns regarding de-poldering were similar to the concerns of the water boards; de-poldering as destruction of capital and leading to decreased safety. The argument of the governmental actors that the safety levels would be guaranteed did not convince the participants. Furthermore, many people were afraid that de-poldering would lead to an increase of water board taxes. Many participants argued that de-poldering is not in the nature of the people of Zeeland. The arms of Zeeland states 'Luctor et Emergo'; 'I wrestle and resurface'. Zeeland has a history of land reclamation and fighting against the water. In 1953 many people died during a disastrous flooding. Therefore de-poldering would be irreconcilable with the history and culture of Zeeland.

For agriculture, nature compensation on agricultural lands, be it de-poldering or inland measures, was simply unacceptable for multiple reasons. A few years ago agriculture cooperated with the implementation of the Nature Policy Plan. Due to this plan 7,600.00 hectares agricultural land became nature or agricultural nature. Agriculture cooperated and was under the impression that for the coming years there would be no additional nature claims. The agricultural sector threatened to withdraw their cooperation to the Nature Policy Plan when the compensation plans would lead to a loss of agricultural lands. The government was seen as an unreliable partner.

In addition several farmers and citizens distrusted the intentions of the BOWS. Due to the strong focus on ecological criteria during the selection of options, people accused the procedure to be 'hot air'. They believed that a deal was made between environmental groups and the regional government to include de-poldering anyways.

Agriculture and citizens alike argued that agriculture needs more land instead of less to remain competitive. Farmers predicted that when de-poldering would take place, the salt water seepage and damage through wild birds would increase. Moreover, the agricultural sector pointed out that the nature compensation principle also allows for a financial compensation when it is not possible to physically compensate, as would be the case due to the large public resistance.

In the view of the agricultural sector, nature is not of economic importance. Convincing evidence of the necessity of the nature compensation measures lacked. The opponents of de-poldering pointed out that the amount of compensation represents only 1% of the Estuary. The costs of compensating for such a small percentage were generally deemed too high, especially when the new nature would be inaccessible.

The agriculture and citizens questioned the point of reference for the amount of compensation. They argued that the Scheldt might regenerate itself and otherwise human interference might prevent negative effects. Others said the system is so that complex predictions are useless. And still others believed that giving more space to river dynamics is the only way to preserve the estuarine nature.

The definition of nature used by the government was also questioned. Salt marshes are only a phase in a succession of nature types, leading in the end to land. In that light it was suggested to take measures in the Land of Saefthinge to prevent succession of the salt marshes there. Others argued that this would only replace nature with nature.

Environmental advocates were somewhat under-represented during the public meetings. Where they were present, they opposed deepening for other reasons; deepening would lead to a deterioration of nature. The international importance of the estuarine nature would justify unpopular measures such as de-poldering. According to the environmental groups, the deterioration of nature can only be stopped when the Western Scheldt has more space for dynamic processes to take place, thus some de-poldering is required. However, the environmental organisations were willing to compromise and settle for less than a 100% quality compensation to meet the interests of the farmers. Agriculture rejected the possibility of reaching a compromise that would include de-poldering or inland measures and threatened to use every means of causing delay.

After the public meetings when it got clear that the resistance against de-poldering was large, the municipalities all turned down de-poldering as option for nature restoration. The lack of public support led to a lack of political support. The BOWS advised to implement two inland measures and one measure to be taken in the estuary itself. The municipalities and water boards emphasised that de-poldering merely for nature restoration would remain unacceptable in the future. The province of Zeeland also rejected de-poldering, but feared that the plan would not meet the demands of the central government.

The environmental organisations did not accept this advice; the plan did not compensate for enough lost estuarine nature. The central government did not agree either; the compensation plan of BOWS did not meet the requirements. After the BOWS process the discussion shifts to the Dutch House of Representatives. At this point there was still no real compensation plan.

Discussion in the House of Representatives on the Nature Compensation Plan

In June 1996 the Dutch Senate decided that a neutral Commission had to be established to come up with a nature compensation plan (Proceedings I 1995/96, 36 pp. 1797-1810). That some compensation needed to take place was not questioned, the question was rather the form and extent of the compensation. The Commission Western Scheldt presented its plan in August, 1997. It contained measures for the short and long term. The plan of the Commission was supported by municipalities, water boards, the province of Zeeland and the central government. The agriculture opposed the plan because it involved inland measures. The environmental actors

opposed because it, because it did not include de-poldering. The minister urged the Dutch House of Representatives to consent to the plan; otherwise there would be no compensation at all.

The VVD, CDA and SGP agreed to the plan, as it did not include de-poldering and had a support base. They explicitly turned down de-poldering also on the longer term and already indicated that there would be no expropriation for de-poldering. D66, PvdA and Groenlinks were disappointed. They requested additional compensation measures. They argued that compensation is the responsibility of the national government and that public support is not a requirement. D66, PvdA and Groenlinks feared that the long term measures would never be carried out, but because there was finally a plan after many years of debating, they agreed to the Commission's plan. Additional measures would be sought. Thus, this phase ended with the approval of a compensation plan, for which extra measures still had to be sought. But a new phase already loomed at the horizon. The Dutch and Flemish governments commissioned the drawing up of a Long Term Vision on the future of the Scheldt Estuary. In reaction to this plan, a motion against de-poldering on the longer term was adopted (Proceedings II 1996/97, 80 pp. 5520-5567; Proceedings II 1996/97, 82 p. 5646; Kamerstukken II 1997/98, 25 187, nr. 11, p. 1-12).

4.3.3 Interactions on the Development Outline 2001- 2009⁸

Discussing the accessibility of the Development Outline in the OAP

In 2002 the Memorandum of Flushing was signed. The LTV was used as a basis to design a Development Outline Scheldt Estuary; an integrated policy addressing the accessibility of Antwerp, nature restoration and safety against flooding. The OAP was established to discuss the Development Outline Scheldt Estuary 2010. The OAP was the first interactive body that includes both Flemish and Dutch stakeholders.

The start up of ProSes was accompanied with some delays. To the Flemish actors delays were unacceptable. At the end of 2004 the decision-making had to be finished. Delays would negatively influence the willingness to cooperate from the Antwerp side. Environmental actors and the governmental actors of Zeeland emphasised the necessity of careful research.

The Flemish actors saw the deepening as a solution to the accessibility issues, while the environmental actors saw the deepening as a problem leading to deterioration of the Estuary. The actors of Zeeland felt that accessibility and consequently deepening were too much at the centre of the Outline. The problems that accompanied the second deepening were still in their memory. They therefore wanted the deepening to be conditional. All actors from Zeeland thus at first opposed deepening, albeit for different reasons. Before a deepening could take place the consequences of the second deepening had to be known and the loss of nature had to be compensated sufficiently. The Flemish actors had an economic stake in the deepening, and argued in favour of deepening. The deepening would be necessary to meet the demands of the shipping industry. In addition, the deepening would also would pose a solution to problems of unemployment in the region. Furthermore, the port actors argued that the deepening would improve the external safety on the Western Scheldt, as shipping traffic would be spread over the day and peak traffic at high tide would be reduced, diminishing the

⁸ This sub section is based on the proceedings of the OAP. For an elaborate list see the Literature listings under Documents interactions OAP.

chance of accidents. Finally, the port actors claimed to have a right to deepen based on an 1839 treaty. This argument kept resurfacing in the discussion and several times they threatened to enforce this right.

The municipalities of Zeeland worried about external safety. Because of the increased risk of accidents with larger ships, the developments within some municipalities were impeded. They also worried about the compensation and accompanying spatial claims that would result from the deepening (Taakgroep Westerschelde, 2009a).

The uncertainties of the effects of deepening remained a stumbling block for the environmental actors; the deepening could lead to deterioration of nature. Due to uncertainties and a lack of progress in determining the conservation objectives for the Western Scheldt in the light of the Birds and Habitat Directive, conditions for deepening couldn't be determined. The environmental actors also still remembered the troublesome nature compensation for the second deepening.

The discussions surrounding the second deepening were also still in the minds of the agricultural actors. They feared that the discussions on de-poldering and inland measures to restore nature would resurface. The agricultural actors expected that the burden of nature compensation would be so high, when added to the nature restoration that had to take place according to the Birds and Habitats Directive, that the costs would outweigh the benefits and the third deepening would be cancelled (ZLTO, 2009).

The actors from Zeeland felt that the consequences for Zeeland had not been taken into account sufficiently. The deepening had to have more benefits for Zeeland.

During the discussions, the port of Antwerp introduced an alternative dumping strategy of dredged sludge. The alternative dumping strategy would prevent negative effects of deepening. This solution was increasingly accepted by all actors. This strategy would make nature compensation unnecessary. But even though the alternative dumping strategy seemed to provide an answer to the problematic integration of deepening and nature, there were still some uncertainties on the effects of deepening. The environmental and the governmental actors of Zeeland feared that the deepening would still have unanticipated effects, despite the new dumping strategy. Therefore, they respectively asked for a buffer in the form of extra nature restoration and an intervention scenario. The port actors opposed sharp boundaries that determine when to intervene. Procedures on what to do in case of unanticipated effects of deepening were agreed upon (ZMF, 2009). The discussion on the deepening and its effects calmed down and opposition against the third deepening decreased, but the discussion on nature restoration was far from finished.

Discussing the nature restoration of the Development Outline in the OAP

Now that nature compensation for the third deepening was not required, there was still a discussion on nature restoration. The LTV stated that the Estuary is deteriorating and nature restoration was needed (Zanting & Ten Thij, 2001). In this context de-poldering entered the discussion again. A Nature Restoration Plan (NOP) was made by a number of universities which showed that specific habitat types were deteriorating and had to be restored. How the nature restoration plan should be filled in was difficult to agree on. The nature organisations noted that in the future, de-poldering would be unavoidable and worried about the lack of support. Nature organisations saw de-poldering as the most effective means of restoring salt marshes and shoals. They feared that the deepening would take place as planned, but that the nature restoration would be delayed, just as happened during the second deepening. A specific plan for nature restoration was lacking. They felt as if taken hostage since the

nature restoration depended on support that would be acquired in the future. They wanted to select the projects based on their nature effectiveness.

But the NOP was disputed by agriculture because there were no conservation objectives yet for the Scheldt Estuary. Other actors accepted the NOP as expert judgement (ZMF, 2009; ZLTO, 2009; Taakgroep Westerschelde, 2009 a & b). Agriculture strongly opposed the possibility of de-poldering and other measures that claim agricultural lands. They argued that in the past much land had been taken for nature restoration. Agriculture questioned the foundations of the amount of nature restoration desired. They argued that the Estuary had improved in the last decades. But the other actors did not discuss the amount of nature compensation, they accepted that some nature restoration had to take place. It was always argued that this amount of nature restoration was needed because of the EU nature legislation (ZLTO, 2009). To have some gain, agriculture asked for flanking policy for agriculture in which their interests were also taken into account and they wanted a broadening of the search area for nature restoration projects (ZLTO, 2009). The other actors agreed that the effects on agriculture have to be taken into account.

The governmental actors of Zeeland felt the pressure of the EU to come up with a good quality nature restoration plan. But they realised they were faced with the problem of lacking support for nature restoration. Therefore the province of Zeeland wanted to have the director's role in developing a nature restoration plan so that they could search for a broad support base. The municipalities had not changed their position on de-poldering since the discussions on the second deepening. Still, they were reticent in the discussion on de-poldering. It was at that point not clear where which measures would be taken (Taakgroep Westerschelde, 2009 a & b).

The Flemish governmental actors felt that the nature restoration plan should not block the deepening. The port actors accepted the integrated approach of the Development Outline, but they never embraced it. They were concerned with the coupling of nature restoration, safety and deepening. Since deepening would not have negative effects on nature, the deepening should not be the culprit and should not be delayed. The port actors wanted to have certainty of finishing the procedures in time. The port actors feared for delay due to the resistance against the nature restoration plans. Again, they reminded the environmental actors of their right to deepen and suggested the adoption of a *lex specialis* that would accelerate the approval of the deepening. The Dutch actors rejected a *lex specialis* as it would undo the desired integrated approach. The port actors in their turn pointed out that the current deepening scenarios were based on outdated insights and wished to discuss further deepening. The environmental actors argued that given the carrying capacity of the estuary, further deepening was not desirable. The governmental actors of Zeeland also did not wish to go further than the Memorandum of Flushing provided. There was still a certain distrust between Flanders and Zeeland. The port actors suspected that the Dutch did not want to deepen and only delayed the process to give competitive advantage to the port of Rotterdam. In Zeeland there was a suspicion that with the deepening and more general the Development Outline, decisions would be imposed on them again, leaving them with all the disadvantages.

OAP's advice

At the end of the discussions, the environmental groups had a 'Yes ... if' position towards deepening and nature restoration. They only wanted to deepen if European nature legislation formed the basis for nature restoration in the estuary and if there would be a substantial and guaranteed nature restoration. A concrete filling-in of the

nature restoration programme should not be pushed as an uncertainty into the future. Financial certainty for implementation of the nature plans was required.

The Dutch regional governmental actors reached a unanimous 'Not...unless' advice on the Outline. 'No' because of the uncertainties connected to the dumping strategy and the missing conservation objectives. But they would agree if there would be a scenario to anticipate on possible negative effects of the deepening, if the benefits would be divided equally in the form of improvements in the infrastructure of Zeeland and if the province of Zeeland would become the director of the nature restoration. They also wanted to have a flanking policy for agriculture and the province needed to have a degree of autonomy in planning the nature restoration.

Flemish actors were in favour of the Outline, but only if all themes would be implemented progressively and if it would include an agricultural flanking policy.

The agriculture also agreed to the Outline because of the general nature of the advice. The advice did not contain the words de-poldering, but instead it used the word 'estuarine nature'. According to the agriculture this would also be possible by taking measures in the estuary (ZLTO, 2009).

The OAP resulted in a unanimous end advice. The advice was not all positive and it contained conditions that had to be satisfied first. It also contained a section stating that some actors felt the cost benefit ratio was uneven. The advice contained a list with points of attention: economic benefits for Zeeland, solid flanking policy for agriculture, making the nature plans concrete and ensuring progress (OAP, 2004). If deepening appeared to have no negative effects, all arguments opposing deepening were invalid. It was also clear that some nature had to be developed. With the term 'estuarine nature', the specifics how this nature would be developed were avoided. The Province of Zeeland received money for infrastructural projects and thus received economic benefits and a flanking policy for agriculture was agreed upon. The flanking policy included support for relocation of agricultural businesses and a fund for agriculture.

The province of Zeeland was given the director's role to develop the required number of Dutch estuarine nature. For this purpose, the province organised a steering group involving the environmental and agricultural actors. However, the stakeholders kept disagreeing on how the nature should be developed, by means of de-poldering or by means of alternative ways. The environmental actors were willing to compromise. They suggested developing 300 hectares of estuarine nature by means of measures taken in the estuary, but the Hertogin Hedwige polder had to be de-poldered. Yet, de-poldering was no option for the agriculture; they only wanted voluntary de-poldering. The agreement left room for expropriation and thus the agriculture withdrew, followed by the nature organisations. However, the contents of that agreement were used by the province for a plan how to develop 300 hectares of estuarine nature (ZLTO, 2009; ZMF, 2009). Now it was up to parliament to decide on the Development Outline.

In Flanders, the nature restoration was decided on differently. Flanders had immediate interest in deepening and increasing the safety against flooding. In addition, in Flanders the conservation objectives for the Flemish part of the Scheldt Estuary were already determined. The agricultural organisations did not oppose deepening and the conservation objectives were not up for discussion. They decided to start talks with the Flemish nature organisations to come to a solution. The nature organisations had

to come up with a nature restoration plan and the agriculture would assess the effects these plans would have on agriculture. Then they decided to choose for de-poldering, because this implied the smallest land claims. 700 hectares of agricultural lands could be saved in that way. The nature got the measures they desired most. The individual farmers were not included in this decision in favour of de-poldering. The agricultural organisations went to explain to their constituency why they chose the option of de-poldering. It helped that there was a flanking policy for agriculture. Such a flanking policy was priority unknown in Belgium. Farmers had never gotten any support for relocation of their business before. These factors contributed to the much smaller resistance and trouble with nature restoration in Flanders (Vlaamse Boerenbond, 2009).

The House of Representatives discusses the Scheldt Treaties

On the 21st of December 2005, the Scheldt treaties were signed. These treaties include decisions on the Development Outline and the de-poldering of one polder. The Dutch procedure for national spatial projects would make expropriation of land possible for the purposes of de-poldering. The Flemish and Dutch parliaments had to ratify these treaties. A motion dating from 1998, that stated there would be no future de-poldering, set the tone of the debate.

The CU and SGP were in favour of nature restoration but opposed de-poldering for the same reason as before. De-poldering represented destruction of capital and was against the history of Zeeland. They argued that de-poldering would only create a different type of nature. Instead they promoted finding alternatives to de-poldering. The VVD and CDA did not understand why nature restoration had to take place when the deepening itself did not have negative effects on nature. They believed the Habitats Directive to be interpreted too strict. If de-poldering had to take place, the CU, SGP, VVD and CDA wanted it only to happen voluntarily, however unlikely such a scenario was.

All parties focused on the Commissions Maljers to find alternatives. When this was not successful, more research on alternatives was requested. The VVD, SGP and CU kept trying to have a legally binding promise that there would be no expropriation and forced de-poldering. But in the final debate on this bill, the CDA, VVD, SGP and CU wanted to ratify the treaty based on the argument of being a good neighbour. In their opinion, the deepening should not be postponed too long. But de-poldering remained unacceptable to these parties.

The PvdA and D66 did not turn down de-poldering so strongly. The PvdA wanted to keep the door for expropriation open. Groenlinks supported the Outline as it was. The scenario of 600 hectares of nature restoration was in the opinion of Groenlinks the minimum amount of nature that should be developed. De-poldering was in their opinion still the best way to develop the 600 hectares of estuarine nature.

As a compromise, the minister decided to allow for the search for alternatives until 2010. In the mean time there would be no expropriation. When there would be no alternatives and no voluntary de-poldering, the House of Representatives would be consulted again. In December 2007, the CDA, PvdA, CU, D66 and Groenlinks ratified the treaty, the VVD and the SGP voted against because the possibility of forced de-poldering was not excluded from the treaty (Kamerstukken II 2005/06, 26 980, nr. 25, pp. 1-11; Kamerstukken II 2005/06, 26 980, nr. 27, pp. 1-7; Kamerstukken II 2006/07, 26 980, nr. 31, pp. 1-7; Proceedings II 2006/07, 9 pp. 554-558; Kamerstukken II 2006/07, 30 862, nr. 4, pp. 1-9; Kamerstukken II 2007/08, 30 862, nr. 17, pp. 1-29; Kamerstukken II 2007/08, 30 862, nr. 18, pp. 1-19).

In July, 2008 the Dutch Upper House ratified the Scheldt Treaties. After continued debate and fierce public and political resistance to de-poldering the Dutch Cabinet finally decided, in April 2009, to restore nature by means of measures in the Estuary itself instead of de-poldering. The environmental actors were deeply disappointed, while the agriculture was very satisfied. The ball is now in the court of the European Commission as it has to judge the nature restoration plans.

4.4 Testing the hypotheses

4.4.1 Hypothesis 1: Why conflict arises in interactive processes

Hypothesis 1: When different actors with different worldviews are brought together in an interactive process, this will lead to disagreement and conflict between the different worldviews.

This hypothesis tests whether the conflicts that arose in the interactive processes, are also conflicts between worldviews. The worldview approach assumes that the conflict that takes place in an interactive process, given that the actor's worldviews can be determined, is a conflict between A and B worldviews. First, the narrative of section 4.3 is repeated shortly. The conflicts that arose are pointed out. Not all of these conflicts remained unsolved. Then the parties are assigned a worldview. In annex VI this characterisation is discussed more elaborately. This characterisation occurs based on the arguments, positions and perceptions of the parties. These arguments, positions and perceptions are compared to the labels of the worldviews (as described in annex IV). Subsequently one can conclude if there was in fact a conflict between A and B worldviews or not. Each interactive process is discussed separately and at the end an overall conclusion is drawn thereby testing hypothesis one.

Conflict in the BOWS

During the BOWS process the main conflict focused on the de-poldering and the inland measures. The decision to deepen had already been made. The BOWS had to come up with a nature compensation plan. On the surface the main conflict regarded the method of compensation. The actors could be divided in two groups; one in favour of de-poldering and one opposing de-poldering. But the underlying conflict regarded the interpretation of the compensatory principle forming the basis of compensation and the fundamental question 'what is nature?'

The first group, that sees de-poldering as the best way to compensate nature, consisted of experts, environmental organisations, the Dutch government and some citizens. They argued that de-poldering was the only effective measure and mainly used ecological criteria to assess different options of compensation. The experts concluded that the deepening would negatively affect the morphological dynamics in the Western Scheldt. They believed that they were able to determine the thresholds in which the dynamic estuarine system could function 'properly'. Based on their expert knowledge they believed they could tell what the best management strategy was. This points to a B1 worldview (B1 labels: Expert knowledge; Management needed; Risks taken by experts). Both the environmental organisations and the Dutch government embraced the findings of the experts. They viewed the ecosystem as stable within the boundaries the experts had determined (B1 label: Expert knowledge). They repeatedly pointed out the international importance of the estuarine nature of the Western Scheldt. To them this international significance had more priority than the loss of

agricultural lands (B1 label: nature conversation). The experts, environmental organisations and the central government mainly used ecological criteria to weigh projects. According to them the ecological status of the Estuary made an ambitious Nature Compensation Plan necessary. This may not only point to a B1 desire for nature conservation, but also may point to a B2 fear of collapse, which would explain the strong focus on ecological criteria. Thus the first group consists of actors with a B(1) worldview.

The second group, that opposed de-poldering, consisted of municipalities, water boards, agriculture, the province of Zeeland and many citizens. The municipalities acknowledged the need for nature compensation, but not by means of de-poldering. The municipalities mainly opposed de-poldering because of the claim de-poldering put on their territory, the restrictions de-poldering posed to some businesses and village expansion and the negative public opinion. They didn't deem de-poldering feasible. By opposing, the municipalities mainly wanted to protect their own (and their citizens') interests (A2 label: Protection own interests). The water boards of Zeeland were mainly concerned with the decrease of safety levels and the increased maintenance costs as a result of longer stretches of dykes. According to them de-poldering constituted destruction of capital. The water boards took an economic stance towards de-poldering. De-poldering represented a waste of good dykes and the benefits did not outweigh the costs (A1 label: Efficiency). In a similar line of thought many citizens thought that de-poldering was a destruction of capital and worried that the taxes would be raised to pay for the projects. Citizens also worried about decreased safety.

Agriculture strongly opposed de-poldering. Much land was already converted to nature. Agriculture claimed to need more land to remain competitive. They also feared damage to adjacent agricultural lands, which would lower productivity. They didn't feel that nature was a necessity while (agricultural) economic growth was necessary (A1 label: Economic growth; Competition). The farmers saw a solution in financial nature compensation that would lead to better nature elsewhere. They threatened to use every means to block de-poldering which is a typical A2 solution (A2 label: Protection). During the BOWS farmers and citizens had a strong distrust and fear that de-poldering was part of a done deal between the government and environmental organisations (A2 label: Distrust). This second group thus consists of A (1 and 2) worldviews. All actors of the second group questioned the effectiveness of de-poldering. Measures that had to be taken in the estuary were seen as sufficient when combined with sufficient financial compensation to create nature elsewhere.

In essence this conflict revolved around a definition of nature, nature conversation and nature compensation. The first group wanted to conserve a certain phase of succession, namely salt marshes and mud flats. The interrelations of the ecosystem are complex and therefore they wanted to preserve this specific type of nature for its role in the complexity of ecosystems, thus (expert) management is needed (B1 labels: Nature conservation; Expert knowledge; Management needed). The compensatory principle according to them meant that the same type of nature had to be created that had been lost. In this way the balance would not be disturbed too much (B1 label: Nature conservation). The second group believed that nature could take better care of itself, that nature is more stable than the first group believed and that one type of nature should not have priority. According to this group of actors the compensatory principle also includes a possibility to compensate elsewhere or financially when compensation is otherwise impossible, for example because of public resistance and

loss of agricultural lands. Nature is thus not seen as one specific habitat type (A1 label: Stable ecosystem).

During the BOWS process the province of Zeeland used arguments from both the first and the second group of actors and only took up a position at the end of the process. The province mainly tried to find a middle way (B1 label: Solution: Cooperation). At the end of the discussion they joined the A worldviews, despite the fact that the province could be characterised as B worldview (see appendix IV).

Thus not only was there conflict between actors in the BOWS process, but this conflict could also largely be reduced to a conflict between A and B worldviews. The B1 experts, environmental organisations, the Dutch government and some citizens conflicted with the A1/A2 municipalities, water boards, agriculture, the province of Zeeland and many citizens. Only the Province of Zeeland having mainly a B1 worldview teamed up with the A1/A2 worldviews and opposed other B actors.

It is interesting to note that all the actors opposed the deepening, no matter whether they had an A or B worldview. The municipalities, environmental organisations, water boards, farmers and citizens all felt that the deepening was imposed on them and that Zeeland was left with all the disadvantages. Zeeland would not benefit from the deepening, only Flanders would. All these parties displayed a fear that institutions higher in the hierarchy were imposing risks on them (A2 label: Risks are imposed). Thus both A and B worldviews teamed up and jointly opposed the deepening from an A2 fear of imposed risks.

Conflict in the OAP process

The main conflicts that arose in the OAP were the conflicts regarding deepening and nature restoration. The conflict regarding deepening was a conflict between the Province of Antwerp and the port of Antwerp on the one hand and the environmental organisations, agriculture and small businesses, the municipalities and province of Zeeland on the other hand.

The economic position of the port was priority to the Antwerp actors. They argued that the deepening was needed for the competitive position of the port of Antwerp and that the deepening would drive regional welfare (A1 label: Competition; Economic growth). The associated economic growth would reduce unemployment rates in the Antwerp region (A2 label: Problem: unemployment). Both actors often referred to the time path as agreed in the Memorandum of Flushing and to their 'right' to deepen according to the treaty of 1839. A threat to enforce this right hung in the air (A2 label: Solution: protection). A speedy deepening was top priority and the port actors kept emphasising the strict time path of the deepening. The port actors tried to prove that Zeeland would also benefit from the deepening. They assumed that these A1 oriented arguments would convince the actors from Zeeland.

The environmental organisations, agriculture and small businesses and the municipalities and province of Zeeland opposed the deepening as a solution to the accessibility issues. They viewed the deepening as a problem. The deepening would lead to a deterioration of the Estuary and would imply compensation and much resistance. The governmental actors of Zeeland and the environmental actors wanted the deepening to depend on conditions that would ensure safety and protect nature (B1 label: Sustainability). Port cooperation was suggested as a solution (B1 label: Solution: Cooperation). The environmental actors connected the deepening to a strong focus on nature compensation and development. They wanted to determine the morphological play the estuary had in relation to interventions in the estuary (label

B1: Stable ecosystem). The governmental actors of Zeeland and the agriculture worried about the compensation that would accompany the deepening. They feared that their interests would be jeopardised due to land claims (A2 label: Protection own interests). None of the actors expected at the start of OAP that the deepening would take place, as the disadvantages were large and the burden for Zeeland was high. The necessary compensation would be expensive and the port of Antwerp would conclude they would have to be nearer to the North Sea to survive. This points to an assumption that the cost benefits weighing would be negative for the port of Antwerp (A1 label: Efficiency). But then the port of Antwerp presented the alternative dumping strategy. By using this dumping strategy there would be no negative effects on the estuary due to the deepening. This solution marked a technical approach to the estuary (A1 label: Solution: Technological development). This strategy took away the concern and burden of compensation and the conflict on deepening diminished.

The second conflict was on the nature component of the Development Outline. At the start the discussion on nature was connected to the deepening. Nature was primarily seen in the light of compensation for negative effects of the deepening. But during the early discussions it got clear that nature restoration had to take place apart from a possible compensation. This nature restoration claim was based on the LTV; the estuary was deteriorating and European legislation required nature restoration.

Agriculture and the small businesses were opposing the amount of nature restoration suggested. They questioned the point of reference used. They wondered if this point of reference could be achieved and should be achieved in the current situation. According to them the Estuary was improving and not deteriorating (A1 label: Stable ecosystem). The argument that the EU regulations required the amount of nature restoration did not satisfy. According to them the EU regulations gave room for the weighing of other interests than nature. They also argued that the European Directives did not require de-poldering as means of nature restoration. The Directive would not prescribe the means by which the nature conservation objectives are met. They used arguments of an economic nature and argued that by taking measures in the estuary itself the conservation objective could also be met. De-poldering for nature purposes was not supported (A1 label: Economy before nature; A1 label: Solution: Technological intervention). When the agriculture felt that it was not able to discuss the amount of nature restoration or stop it, they decided to ask for flanking policy for agriculture. The Flemish agricultural organisations had a different starting point which will be discussed later on.

The governmental actors of Zeeland accepted the research on which the nature restoration claims were based (B1 label: Expert knowledge). They also accepted the argument that the EU regulations required an ambitious nature restoration (B1 label: Government regulations). They did want to create a win-win situation with nature restoration, but not at all expenses. They emphasised the feasibility of the plans and the wish for support (B1 label: Sustainability). The municipalities accepted the need for nature restoration, but did oppose de-poldering implicitly. Their position had not changed since the discussion on the second deepening. These arguments contained A2 aspects (see page 52).

The environmental actors supported the claim for nature restoration and repeatedly pointed out that the estuary was in an unfavourable conservation status. They interpreted the EU regulations more strictly and with more emphasis on the interests of nature (B1 label: Government regulations; Nature conservation). They even wanted to have more nature restoration and de-poldering to ensure that unexpected negative

effects of the deepening would not lead to a further deterioration of the estuary. They promoted the use of the precautionary approach (B2 label: Fragile ecosystem; B2 label: Risks are unacceptable). Only de-poldering would meet the requirements of the European Directives. They referred to expert judgements stating that de-poldering was needed to prevent the ecosystems from shifting (B1 label: Stable ecosystem within boundaries; Expert knowledge). They feared that the nature restoration would be delayed. They pointed out that the deepening couldn't take place before a decision on nature restoration was made. The threat of a law suit lingered (A2: Protection). The Antwerp actors were in favour of nature restoration, but they were only in favour of a win-win approach when a slow nature restoration would not delay the deepening. There were no conflicts on the safety against flooding component of the Outline. Safety was hardly an issue in Zeeland, where the safety levels are sufficient. In Flanders safety was an issue because in Flanders safety levels are insufficient. All actors agreed that the safety had to be improved. The external safety was a point of discussion for the municipalities of Zeeland, but this concern was acknowledged and solved between Zeeland and Flanders.

In the OAP the conflict regarding deepening was not a conflict between A and B worldviews. The conflict on deepening was a conflict between Flemish actors and actors from Zeeland. The actors from Zeeland had both A and B worldviews. They teamed up to oppose the deepening, but had different reasons to oppose deepening. The conflict regarding the nature restoration was a conflict between A and B worldviews. The agriculture and small businesses (A) opposed the amount and manner of nature restoration. The environmental actors (B1/B2) were in favour of an ambitious nature restoration. The governmental actors of Zeeland (B1) and the Antwerp actors (A1) took up an intermediate position. They accepted the nature restoration claims, but were also reluctant towards the consequences these claims might have with regard to public support, land claims and the deepening.

Conflict in the Dutch House of Representatives

The conflicts in the BOWS and OAP were reflected in the Dutch House of Representatives. With regard to the second deepening the conflicts in the Dutch House of Representatives focused on the desirability of deepening the Western Scheldt and the means of compensating for the negative consequences of this deepening.

The VVD, CDA, PvdA and D66 agreed to the deepening from the argument of being a good neighbour because this would mean progress in other bilateral projects (B1 label: Solution: Cooperation). They did not feel that the deepening should be delayed at the detriment of the competitive position of Antwerp (A1 label: Competition). The CU, SGP and Groenlinks opposed deepening. The CU and SGP opposed because of the large economic (A1), spatial and environmental (B1) disadvantages for the Netherlands. For Groenlinks a compensation plan which included de-poldering was a precondition before the deepening could start. According to Groenlinks only de-poldering would lead to the type of nature that had to be compensated according to the European Birds and Habitats Directive. According to experts de-poldering would prevent the ecosystems from shifting (B1 label: Stable ecosystem within boundaries; Expert knowledge; Government regulation; Nature conservation). Groenlinks argued that the lack of public and political support for de-poldering was proof that the necessary compensation would never take place.

Even though the PvdA and D66 were in favour of the deepening, they did believe, like Groenlinks, that the compensation plan had to meet EU regulations and thus involve some de-poldering or other substantive measures (B1 label: government regulation). They believed that having a compensation plan is the responsibility of the national government, public support is thus not a requirement in their eyes (B1 label: Solution: Government intervention). Groenlinks, D66 and the PvdA requested additional compensation measures.

The VVD, CDA, CU and SGP opposed de-poldering. De-poldering would be destruction of capital (dykes) and would have negative financial consequences for agriculture and business in Zeeland (A1 label: Economic growth; Efficiency; Competition). They suggested taking measures in the estuary itself to prevent negative consequences from happening (A1 label: Solution: Technological intervention). The lack of public support for de-poldering was also a very important ground for opposition.

With regard to the Development Outline the conflict focused on de-poldering. De-poldering of the Hertogin Hedwige polder was part of the Scheldt treaties that the Dutch House of representatives had to approve. Approval meant that there would be a possibility to expropriate land for the purpose of de-poldering.

The VVD, CDA, CU and SGP found de-poldering unacceptable. De-poldering would be destruction of capital, had negative economic effects (A1 label: Efficiency) and de-poldering would be against the nature of the people of Zeeland (A2 label: Valuing regional interests). The VVD, CDA, CU and SGP believed that the Birds and Habitats Directives were interpreted too strict. They did agree that 600 hectare nature compensation had to take place, but in their opinion the Directives left room for alternatives to de-poldering. Finally, the de-poldering of the Hedwige polder would destroy a valuable culture landscape (B2 label: Quality regional environment). According to these parties de-poldering could only take place when this is voluntary (A1 label: Problem: Government intervention).

The PvdA and D66 preferred voluntary de-poldering, but did allow for the possibility of expropriation (B1 label: Cooperation; Government intervention).

To Groenlinks the international importance of the estuarine nature in the Scheldt estuary was far more important than the natural values of the Hedwige polder (B1 label: Global environment). In addition they found 600 hectares the minimum amount of nature that should be developed. In their eyes more hectares were needed to achieve a good quality nature restoration. This points to a B2 idea of a fragile ecosystem which is on the verge of collapse and to make sure this nature isn't lost, much nature should be developed. According to Groenlinks de-poldering remained necessary to restore nature.

In the Dutch House of Representatives the conflicts took place between changing groups of political parties. With regard to the second deepening the VVD, CDA, PvdA and D66 were in favour and formed an alliance with A and B characteristics. The CU, SGP and Groenlinks opposed the second deepening and also formed an alliance with A and B characteristics.

With regard to the nature compensation and specifically de-poldering the conflict was more clearly a conflict between A and B worldviews. Groenlinks, D66 and PvdA were in favour of de-poldering and used predominantly B arguments, while VVD, CDA, CU and the SGP opposed de-poldering and used predominantly A arguments. This conflict regarding nature was also reflected in the discussion on the Development

Outline. Again VVD, CDA, CU and SGP opposed (forced) de-poldering, using mainly A arguments. While Groenlinks, D66 and PvdA were in favour of de-poldering, using mainly B arguments. However, the PvdA and D66 did prefer voluntary de-poldering and found public support an important pre-condition for de-poldering.

Conclusion hypothesis 1

Hypothesis 1: When different actors with different worldviews are brought together in an interactive process, this will lead to disagreement and conflict between the different worldviews.

In the case of the Scheldt Estuary we have seen that when actors are brought together in an interactive process, conflicts arise.

The conflict regarding the deepening took place between Flemish actors and actors from Zeeland. These conflicts did not take place between A and B worldviews, but rather took place between mixed alliances. The alliance against deepening that was formed in the OAP between the actors of Zeeland, represented both A and B worldviews. A similar alliance existed in the BOWS. In the BOWS all actors, consisting of actors with A and actors with B worldviews, opposed deepening.

Also the House of Representatives showed mixed alliances when it came to deciding upon the deepening of the Western Scheldt, but these alliances were not regionally determined as was the case in the OAP and BOWS. This conflict took place between parties who felt that the deepening had unacceptable consequences and those parties who felt that the relation with Flanders was more important.

The conflicts regarding the deepening did never represent a typical conflict between A and B worldviews. The areas of disagreement were not based on diverging perceptions of nature or diverging problem perceptions. Instead the conflict was based in distrust. The Flemish actors feared that the Netherlands did not want to deepen and the actors from Zeeland saw only disadvantages in the deepening. They feared Zeeland carried all the burdens for the deepening. In the House of Representatives the conflict was about bilateral relations and the division of burdens.

The conflicts regarding nature compensation and nature restoration and restoration did take place between actors with A and B worldviews. In the BOWS the proponents of de-poldering all had a B worldview. The opponents of de-poldering all had an A worldviews except for the Province of Zeeland, which had a B1 worldview. For the province the lack of public support was an important factor to oppose de-poldering.

In the OAP a similar pattern arose. Only the environmental actors (B1/B2) wanted de-poldering and demanded a guarantee that full nature restoration would take place. Agriculture (A1) opposed the set targets and the means of reaching these targets. The governmental actors of Zeeland (B1) took up an intermediate position. They wanted to have nature restoration, but the lack of support worried them. Also in the House of Representatives the opponents of de-poldering used mainly A arguments. While the proponents of de-poldering and strong nature restoration used mainly B arguments.

The conflict regarding nature restoration displayed typical areas of disagreement. Agriculture (A) perceived nature as stable and saw the strict interpretation of nature legislation as problem. They were not against nature, but believed that other measures were sufficient to restore nature. They proposed a technological measure, to make more salt marshes within the Estuary itself. The environmental actors (B) perceived the Estuary as fragile and being in an unfavourable conservation status. They saw

careful management and giving more space to nature processes as solution. The measures to be taken in the estuary were seen as insufficient. The governmental actors often took up an intermediate position. They realised nature restoration had to take place. But the lack of support made them oppose de-poldering as measure. These actors felt split in two; they were accountable to their constituency and had to carry out governmental policy. An important factor besides the worldviews was the emotions de-poldering invokes. De-poldering is seen as contrary to the culture and history of Zeeland, which is characterised by a fight against the water.

In conclusion, the first hypothesis can be neither accepted nor falsified completely. The discussion about deepening was a regional or geopolitical discussion. This discussion bridged conflicts between worldviews and was focused on international and historical relations; (dis)trust was an important aspect in this conflict. The discussion about nature restoration was a discussion between economy and nature. In these types of discussions the worldviews are more important in taking up positions. In those cases the conflict did represent a conflict between worldviews. Hence, the hypothesis is amended. The new hypothesis is:

When different actors with different worldviews are brought together in an interactive process, this will lead to disagreement and conflict between the different worldviews when the discussion is a thematic discussion between nature and economy.

4.4.2 Hypothesis 2: Why true consensus is difficult to achieve

Hypothesis 2: When one tries to create a consensus between different worldviews, these attempts will founder on underlying differences in perceptions.

The second hypothesis states that conflict becomes deadlock and consensus-building fails when the different perceptions of different worldviews can't be bridged.

The conflict in the BOWS focused on how nature compensation should take place. After the public meetings the BOWS issued an advice on nature compensation. The BOWS advised to implement two inland measures and one measure to be taken in the estuary itself. De-poldering was not included in the advice. This advice was supported by the municipalities (A), water boards (A), agriculture (A) and the province of Zeeland (B1) and represented a consensus between these actors. This consensus came about by means of convergence after the public meetings when it got clear that there was a lack of public support for de-poldering as measure. The A actors and the B1 province were brought together because they believed that compensation could take place by other means. Because of the strong public opposition and the costs de-poldering would bring, de-poldering was not seen as acceptable and realistic. For the province of Zeeland the lack of support was an important reason to oppose de-poldering despite the fact that they recognised the need for nature compensation.

The views of the environmental actors, central government and experts were excluded from the consensus. All of these excluded actors had a B worldview. These actors were not compelled by the lack of public support. The consensus was thus largely a consensus between actors with similar worldviews. However, note that the province of Zeeland had a deviating worldview, namely a B1 worldview.

The consensus-building attempt between environmental actors, agriculture, citizens, municipalities and the province did founder on differences in perceptions between A and B worldviews. The consensus had not bridged the difference in perception on

how the compensatory principle should be interpreted and what compensation should entail.

The conflict in the OAP focused initially on the need for further deepening, but shifted to a conflict about nature restoration. The OAP resulted in a unanimous though not entirely positive advice. The advice contained both A and B worldviews. The advice contained conditions that had to be fulfilled to ensure the support of all OAP actors. The actors all agreed to the deepening when it got clear that the effects of deepening would be mitigated by means of an alternative dumping strategy.

It was clear to all actors that some nature had to be developed, but how the nature restoration would look like remained vague. With the term estuarine nature the specifics of how this nature would be developed were avoided. This term gave room for different interpretations. The advice mentioned that the Estuary was subject to the Birds and Habitats Directive and thereby satisfied the environmental actors, who felt that this had to include de-poldering. The term estuarine nature was seen by agriculture as a possibility to take measures within the Estuary itself, instead of de-poldering. Agriculture would be involved in the further development of the nature restoration plan. The concern that Zeeland would have the entire burden was solved by giving money to the Province of Zeeland for infrastructural projects. The agreement on a flanking policy for agriculture gave some 'benefit' to agriculture. Clearly the advice of the OAP represents a compromise in which all actors settled for a general, abstract plan. The avoidance of the word de-poldering and the vague nature restoration plan gave room for different perceptions to persist. The consensus-building attempt had not failed, since a unanimous advice was the result, but the advice had not bridged the differences in perception on how nature restoration should look like.

The conflicts in the House of Representatives also focused on the deepening and nature restoration or compensation. The House of Representatives had to ratify the treaties on deepening and the Development Outline and had to accept the proposal on nature compensation by means of majority voting.

With regard to the second deepening of the Western Scheldt only Groenlinks (B) voted against ratifying. All other parties, representing both A and B worldviews, voted in favour of the deepening treaty. All parties recognised the downsides of deepening in the form of burdens for Zeeland, but the argument of being a good neighbour to Flanders weighed heavier. Also for the SGP and CU the desire to be a good neighbour weighed heavier than their opposition to a possible de-poldering. By ratifying the deepening treaty, cooperation was expected in other bilateral dossiers. Groenlinks did not want to agree to the deepening when there was no nature compensation plan yet. This ratification did not reflect agreement on how nature compensation would have to take place.

Subsequently, the House of Representatives had to debate on the compensation plan as proposed by the Western Scheldt Commission. At the end of the debate all parties agreed to this plan. The VVD, CDA, SGP and CU agreed because the plan still did not include de-poldering, but instead used financial compensation. These parties had a predominant A worldview. Groenlinks, PvdA and D66, who had a B worldview, mainly agreed because the plan meant that some compensation would take place. Their request for additional measures was accepted. Also in this case the result was a compromise that encompassed A and B worldviews.

The final treaties that the House of Representatives had to ratify were the Scheldt Treaties. These treaties included decisions on the Development Outline and de-poldering. Again a mixture of A and B worldviews ratified the Scheldt Treaties. Their motivation to ratify ranged from: being a good neighbour; the agreement that the Netherlands would have until 2010 to come up with alternatives for de-poldering; to the fact that the Treaties included some de-poldering. The VVD (A) and SGP (A/B) did not ratify the Scheldt treaties, because the treaty still contained a possibility of expropriation and because de-poldering of the Hertogin Hedwige polder was included in the treaty. In this case there is also clearly no common perception between all parties. The ratification was a compromise between those desiring de-poldering or strong nature restoration and those opposing de-poldering.

In conclusion, we can say that consensus-building did not always founder on differences in perception. Agreements were reached. In the BOWS the consensus included almost exclusively actors with an A worldview and did not include all actors. In the OAP the advice was very general and left room for diverging interpretations and perceptions. The political parties in the House of Representatives had voted in favour of the different proposals for different reasons and differences in perception persisted. Thus, it was possible to come to an agreement. The differences in perception did not result in deadlock. But none of these agreements represented a consensus including all worldviews. Either some actors were excluded from the agreement or the agreement was of a general nature which allowed for different perceptions to persist and thus did not reflect a common perception. The second hypothesis is therefore accepted.

4.4.3 Hypothesis 3: How agreement is reached

Hypothesis 3: When one tries to create agreement between actors in an interactive process, consensus arises when (a) the interactive process is exclusive, and only includes one worldview (b) actors change their worldviews and as a result there is only one worldview present (c) alliances are formed between two worldviews within the interactive process.

This hypothesis states when agreement between different worldviews is possible. As we have seen in the previous sub section in all cases agreement was possible. But how did these agreements come about? Nearly all of these agreements represented a compromise. Only in the BOWS consensus was reached. The consensus reached in the BOWS, represented an A worldview. An exception in this case was the province of Zeeland who took the lead in making the advice, but who had a B1 worldview. The consensus was thus more or less exclusive. However, the interactive process was not exclusive. The consensus just did not include all BOWS parties. As a result, the environmental actors and central government were not satisfied with the BOWS advice. Why did the province of Zeeland take part in the advice while being a B1 actor? Did an alliance form or was there a change of worldview?

It is unlikely that the province of Zeeland changed its worldview or that a typical alliance was formed between A worldviews and a B1 worldview. Rather the province excluded de-poldering because of the lack of public support and because of the room it had to make a weighing of interests. The province did not contend the need for nature compensation, but the weighing of different interests and arguments led to a different conclusion. After all, the province of Zeeland had to execute the plan and thus was sensitive to the opinion of its constituency. The compensation principle gave

room to the province to make such a weighing. The compensation principle is less strict than the precautionary principle implied in the Birds and Habitats Directive. The other B1 actors did not carry the burden of having to execute the plans and feared the lack of public support less.

The OAP was more inclusive than the BOWS process. Because the OAP also had to advise on the deepening, the representation in the OAP included Flemish actors. All these actors were able to agree to the OAP advice. The advice did not represent a common perception but was a compromise between mainly A1 and B1 worldviews, with elements of A2 and B2. This compromise had formed because for most parties there was something to gain from the Development Outline. The Antwerp actors would have their desired economic growth, deepening and better protection against flooding, the province of Zeeland would get money for infrastructure improvements and also the external safety, an important point for some municipalities, was improved. The B actors had asked for safety nets and stricter management, but this was combined with a strict time path for the deepening and thus did not impede economic growth too much. This win-win situation was not based on giving in, but resulted from connecting several issues. With regard to the nature restoration the actors could not agree. The environmental actors saw in the combination Habitats Directive and estuarine nature a need for de-poldering, while agricultural actors felt that this meant that measures could also be taken in the Estuary itself. Thus, agriculture and the municipalities did not want de-poldering and the environmental actors did want de-poldering. Both sides saw the possibility to get what they wanted from the agreement. Thus for most parties there was something to gain from the whole process. Only for agriculture there were also losses. The flanking policy was a true gain for the Flemish farmers, who had never known anything like that before. But for the farmers in Zeeland, the flanking policy was something that was a balm for wounded feelings. De-poldering was to their nature. An important factor why all parties agreed to the advice is because at the end of the process it was clear that the deepening would continue and also nature restoration would have to take place. That part of the agreement which was most contested, was also most abstract.

The decisions to ratify the Deepening Treaty and the Scheldt Treaties and the decision to accept the advice of the Commission Western Scheldt were also examples of compromises. The ratification of the Deepening Treaty was interesting because the reason for ratification was being a good neighbour. Ratification meant progress in other bilateral dossiers. Thus the ratification was coupled to other dossiers. Only Groenlinks did not ratify.

The approval of the nature compensation plan of the Commission Western Scheldt and the ratification of the Scheldt Treaties was unanimous. However, D66, PvdA and Groenlinks only agreed because otherwise there would still be no nature compensation plan. They agreed on the condition that additional compensation measures would be taken. This does not reflect an alliance between worldviews; it is a compromise that rose from other practical concerns.

The Scheldt Treaties were ratified by all political parties, except for the VVD (A1) and SGP (A2/B1). Each political party ratified for different reasons. The minister had promised to keep looking for alternatives to de-poldering until 2010. The Scheldt Treaties were ratified on the condition that de-poldering would not take place by means of expropriation, thus the opponents of de-poldering were satisfied. But the Treaties also included the de-poldering of 300 hectares in the Hertogin Hedwige

polder and thus the proponents of de-poldering were also satisfied. The VVD and the SGP voted against because the possibility of forced de-poldering was not excluded from the treaty. Being a good neighbour was again a reason to ratify. The deepening was also a part of the Scheldt Treaties. A further delay of the deepening was not deemed acceptable. The difficult discussion of nature restoration was pushed into the future. The reasons to form these alliances in the House of Representatives are not the typical reasons to form alliances.

In conclusion, the interactive processes were not exclusive nor did any actor change its worldview. The first two parts of hypothesis 3 did not apply in this case.

Instead, compromises were made that included both A and B worldviews. However, in these compromises the concessions that were made were not the typical concessions that are expected to occur between worldviews. For example, in the case of the second deepening the ratification was a strategic step in bi-lateral negotiations. It is interesting to note that in all cases, compromises are generally made by covering difficult discussions up with a general and vague agreement and by pushing difficult discussions into the future.

4.4.4 Hypothesis 4: Why compromise is actually halfway compromise

Hypothesis 4: When consensus is reached between actors with different worldviews this will lead to problems in a succeeding (implementation) phase because: (a) the outcomes of the interactive process in which not all worldviews are involved have typical pitfalls or blind spots and may therefore be seen as halfway compromise; (b) the (general) agreement is interpreted differently by the actors; (c) in the grassroots support the underlying areas of disagreement are still reflected.

All the interactive processes discussed in this chapter have led to agreements, but these agreements were always followed by problems in the implementation phase.

It started with the ratification of the Deepening Treaty on the second deepening of the Western Scheldt. This treaty was ratified because the Netherlands wanted to be a good neighbour to Belgium. There was not really a different interpretation of the Deepening Treaty, but the nature compensation plan was pushed into the future and led to a difficult debate in the BOWS. The grassroots support of the political parties, at least in Zeeland, did not want the deepening. They felt that the deepening and disadvantages were imposed on them. The BOWS advice excluded the views of the environmental actors, expert and central government. Public support was the most important criterion for selecting the nature compensation measures. The central government did not accept the proposal of the BOWS because it did not represent sufficient nature compensation. The Commission Western Scheldt had to come up with a new proposal. Even though the proposal of the Commission Western Scheldt also did not include de-poldering, it did lead to much more land claims than anticipated. After all, D66, Groenlinks and PvdA had demanded additional measures to go on top of the proposals of the Commission. Thus, one might say because of the exclusion of some actors and their insights, the advice had some blind spots; it did not meet the criteria of the central government. As a result a new proposal was made that laid much more claims on agricultural lands than would have been the case when some de-poldering would have taken place. However, the blind spot of the BOWS advice did not represent a typical worldview blind spot.

The advice of the OAP was a package deal. But with regard to nature restoration the agreement was very abstract. The term estuarine nature was open to opposing

interpretations. Clearly, the advice was interpreted differently by different actors, most notably the environmental actors and the agriculture. Because the development of a concrete nature restoration plan was pushed into the future problems arose in the implementation phase. It proved to be very difficult to agree on a nature programme. The environmental actors desired some de-poldering. But at the moment that the nature restoration plan became more concrete and the possibility of de-poldering was articulated, much resistance arose among agriculture and a group of citizens. The province of Zeeland had to come up with a proposal for nature restoration and established a steering group. The environmental actors were willing to compromise and would agree to alternative measures for part of the nature restoration if the agriculture would not start procedures against the de-poldering of the Hedwige polder. But the agriculture wanted to acquire the Hedwige polder by means of voluntary de-poldering and the environmental actors wanted to keep the possibility of expropriation. In the end the agricultural organisation distanced itself from the plans and started organising protest. Because of the continued debate and opposition the municipal councils adopted motions against de-poldering. The discussion continued in the Dutch House of Representatives. The House of Representatives had ratified the Scheldt Treaties, but on the condition that de-poldering would not take place by means of expropriation. The ratification of the Scheldt Treaties was a compromise. Most parties felt that after all the delays, they could not delay the third deepening any longer. With regard to the de-poldering a compromise was found in the demand for voluntary de-poldering instead of expropriation and more time to look for alternatives. Again a clear decision on nature restoration was pushed into the future. The search for alternatives proved to be slow. Both the Commissions Maljers and Nijpels could not find satisfactory alternatives to de-poldering. But the demand for voluntary de-poldering made it impossible to acquire the Hedwige polder. No de-poldering took place. Opponents of de-poldering kept bringing up possible alternatives. The Cabinet finally decided to develop nature by means of these alternatives and thus rejected de-poldering. It took six years to reach a decision and the final decision is not at all satisfactory to the environmental actors. It remains to be seen if the European Commission will agree to the decision of the Cabinet and the suggested alternatives. The opposition that arose from the grassroots support of the agricultural organisation and from the wider public were important factors in the reluctance to include de-poldering in the nature restoration plans. This opposition could be explained by a lack of understanding the necessity of de-poldering. Many people and farmers in Zeeland did not understand why de-poldering had to take place. They had seen an improvement of the Estuary over the past decades. In addition, they oppose de-poldering from a cultural-historical perspective; in Zeeland people have fought against the water for centuries, giving land back to the water is unimaginable to many people.

In conclusion, the fourth hypothesis is accepted. Most problems arose because the agreements on nature restoration were interpreted differently and because decisions on how nature restoration would have to take place were pushed into the future. The protest from the grassroots support and from citizens was an important factor why the discussions kept being pushed into the future. Exclusion of actors from the advice led to agreements that did not last and in the end were not as beneficial to actors as cooperation could have been and can therefore be seen as halfway compromises. However, this exclusion did not lead to typical pitfalls or blind spots. Part 4a of the hypothesis should therefore be turned down.

5. Case study: The mechanical cockle fisheries in the Wadden Sea

5.1 Introduction

The Wadden Sea is an inter tidal area which is situated in the Netherlands, Denmark and Germany. The Wadden Sea is a highly dynamic area with tidal flats, salt marshes and barrier islands. The Wadden Sea is an area of ecological importance; it is an important resting and foraging area for birds and seals. Besides its ecological importance, the Wadden Sea is an area in which many other (economic) activities take place, such as: recreation, tourism, fisheries, gas and oil mining, extraction of sand and military use (Verbeeten, 1999; Van Nieuwaal, forthcoming). Some of these activities, such as shellfish fishery and gas mining, have been under increasing scrutiny in the past decades. From the 1990s onward shellfish fishery and especially mechanical cockle fishery are criticised for their ecological effects. The gas mining in the Wadden Sea was also a contested issue due to its suspected morphological effects. In 2004 the discussions climaxed. The mechanical cockle fisheries were banned from the Wadden Sea and gas mining was allowed under strict conditions (Verbeeten, 1999; Swart & Van Andel, 2008; Runhaar, 2009). This case focuses at the discussions surrounding the mechanical cockle fisheries. Since this discussion is linked to the discussions on gas mining and mussel fishery, these discussions will also at times be included.

The ordering of this case is based on publications, interviews and to some extent policy documents. Due to the time it took to get access to different archives, it was not possible to get access to all policy documents. It was also not possible to interview all parties. The events are largely ordered chronological. Due to the limited number of pages, a selection of the most important events is made while trying to be as complete as possible.

This chapter applies the worldview theory to the case of the Wadden Sea. Section 5.2 gives an overview of the key events of the case and section 5.3 elaborates on the interactions surrounding these events. In section 5.4 the hypotheses are tested. The key assumption is that conflicts between worldviews can't be resolved and lead to deadlock and halfway compromise. This assumption can be tested by means of four hypotheses. The first hypothesis discusses to what extent conflicts between actors are in fact conflicts between worldviews (section 5.4.1). According to the worldview approach conflicts arise in interactive processes because conflicts are based in a difference in perception between worldviews. Conflicts can be useful, but when conflicts lead to deadlock, conflicts can become problematic. According to the second hypothesis, conflicts can't be bridged and consensus building will fail due to differences in perception between worldviews (section 5.4.2). Agreement between worldviews is possible, but only between similar worldviews or when a package deal is made (section 5.4.3). In both cases these agreements are problematic and encounter problems in the implementation phase. According to the fourth hypothesis agreements between similar worldviews exclude other worldviews and lead to partial solutions and protest, while package deals fail due to different interpretations and protest from grassroots support (section 5.4.4).

5.2 Case overview

5.2.1 The beginning: little regulation

For long the shellfish fisheries, both mussel and cockle fisheries, took place in the Wadden Sea on a small scale with little disturbance. Since 1950 the intensity of the shellfish fisheries increased due to mechanical harvesting techniques. In the early 1960s mechanised suction-dredge cockle fishing technology was introduced. The shellfish fisheries were getting increasingly large scale and commercial in character. Until the 1960s, there were hardly any regulations concerning the exploitation of resources of the Wadden Sea. The main issue at that time was land reclamation in the Wadden Sea. This was also the main focus of nature organisations. Shellfish fishery was not yet seen as problematic. Due to the sharp increase of cockle fisheries in the 1970s, a permit system for cockle fisheries was introduced, 37 permits are issued. This permit system was initiated by the cockle sector to limit the increasing competition and to protect the cockle stock. The permits did not include rules as regards the size of the catches (Verbeeten, 1999; Van Nieuwaal, forthcoming; Swart & Van Andel, 2008).

In 1980 the first Key Spatial Planning Decision (PKB) on the Wadden Sea (*Nota Waddenzee*) was adopted. A Key Spatial Planning Decision is a tool for the national government to coordinate spatial planning in a specific area and has a strong legal basis. With this policy the protection, conservation and recovery of the Wadden Sea as nature reserve became one of the main goals of governmental policy regarding the Wadden Sea. But in practice the PKB Wadden Sea 1980 did not pose many limits to either the mussel or cockle fisheries. The PKB Wadden Sea 1980 raised questions on the admissibility of gas mining in the Wadden Sea, which took place since the 1960s. In 1984 a ten year moratorium on gas mining is established (Verbeeten, 1999).

5.2.2 Designing a policy for shellfish fisheries in the Wadden Sea

At the beginning of the 1990s the effects of the shellfish fisheries, especially the mechanical cockle fisheries, were questioned for the first time. The cockles were caught by means of suction dredging. This type of fisheries stirred the sea floor. In addition the amount of cockles present in the Wadden Sea varied strongly year by year. The cockles (and mussels) serve as food supply to birds, especially for the Eurasia Oystercatcher (*Haemaphysalis ostralegus*) and the Common Eider (*Somateria mollissima*). In years of cockle shortage the birds and fishermen competed for cockles. In 1990, 1991 and 1992 a low cockle stock coincided with high mortality of shellfish-eating birds, especially the Common Eider. From that point onwards the mechanical cockle fisheries were criticised for their alleged ecological effects. The media blamed the mechanical cockle fisheries for the high bird mortality (Verbeeten, 1999).

In 1991, a trilateral conference on the Wadden Sea was held in Esbjerg, Denmark. The Netherlands declared that a significant part of the Wadden Sea would be closed to shellfish fisheries. This came as a shock to the fishery sector. As a reaction the shellfish fisheries started regulating the fisheries by making yearly fishing plans. In the mean time the government prepared a policy for shellfish fisheries in the Wadden Sea. In 1993 the Sea and Coastal Fisheries Policy (SCFP) (*Stuatuurnota zee- en kustvisserij*) was implemented. The SCFP aimed to integrate nature and fisheries. It resulted in a shared responsibility between fisheries and government. At the same time the PKB Wadden Sea of 1980 was revised. The PKB Wadden Sea 1993 designated the whole Wadden Sea as nature reserve. The main aim of the Wadden Sea

policy was changed into ‘the sustainable protection and *development* of the Wadden Sea as a nature reserve’ (Steins, 1999; Verbeeten, 1999; LNV, 1993).

The SCFP resulted in a closure of 26% of the Wadden Sea to shellfish fisheries. Furthermore, 60% of the calculated mean food demand of birds was reserved for the birds. If less than this 60% was available there would be no shellfish fisheries. These measures were deemed to fit the aim of the PKB Wadden Sea 1993. The cockle and mussel fisheries continued to take measures to regulate the fisheries further. The most important measures were the introduction of fish quota, a black box on ships and a reduction of the fleet (Steins, 1999; Verbeeten, 1999; LNV, 1993).

In 1994 the moratorium on gas mining ends and the mining companies wish to start mining. The government decided to allow trial drillings in the Wadden Sea, much to the dislike of the nature organisations. Due to law suits initiated by nature organisations the trial drillings are delayed (Verbeeten, 1999).

5.2.3 Evaluating the shellfish fisheries policy in the Wadden Sea

In 1998 the SCFP was evaluated. The evaluation is known as EVA I. In spite of the measures taken, recovery of nature had not taken place. But because of strong fluctuations in cockle stocks and bird mortality and a short period of study, definitive conclusions could not be drawn. The SCFP was slightly adapted in 1999 (*Beleidsbesluit Schelpdiervisserij Kustwateren 1999-2003*). The nature organisations felt the measures were insufficient and started law suits against fishing permits (Swart & Van Andel, 2008; Verbeeten, 1999). A second and more elaborate evaluation (EVA II) had to result in definitive conclusions on the ecological effects of shellfish fisheries in the Wadden Sea. In the mean time the discussion on gas mining also continued. The nature organisations started several law suits and lobbied for a ‘no’ to gas mining in the Wadden Sea. In 1999 they succeed and the House of Representatives issued an other moratorium on gas mining in the Wadden Sea.

The debate on whether or not additional measures to limit shellfish fisheries should be taken intensified. It turned into a public debate in which scientists also took up positions. Scientific findings were disputed and a pro nature and a pro fisheries coalition had formed (Turnhout et. al., 2008). The discussion polarised and nature organisations and some experts called for the use of the precautionary principle and the banning of mechanical cockle fisheries. Increased mortality of the Common Eider in the winters of 1999-2000 and 2000-2001 raised public concerns even more (Swart & Van Andel, 2008). In 2002, the pressure group, Wild Cockles (*Wilde Kokkels*) was established with the aim of banning the mechanical cockle fisheries from the Wadden Sea. This polarised the discussion further. Yearly law suits were filed to suspend the fishing permits. Even though the shellfish fisheries won each time the planning of the law suits was such that the time that is left for fishing was shortened (Waddenvereniging, 2009; PO Kokkels, 2009).

5.2.4 A polarised debate and the final evaluation

The second evaluation of the SCFP, EVA II, started in 1999. EVA II was designed as an interactive process with a key role for science as fact seeker. The idea was that scientific consensus could bring parties together and could end the polarised debate. In June 2003, as part of the EVA II process, a policy advisory group was established to advise on the new shellfish fisheries policy. However, the discussion remained polarised. Nature organisations wanted to ban the mechanical cockle fisheries.

The results of EVA II were published in December 2003. EVA II stated that the cockle and mussel benches did not recover. The number of Eurasia Oystercatchers

and Common Eiders were less than in the period of reference, despite the good control and enforcement of rules by the fisheries sector. But uncertainties remained about the harmfulness of the mechanical cockle fisheries. The nature organisations demanded closure of the whole Wadden Sea, while the shellfish fisheries saw EVA II as proving that they did not cause structural significant negative effects. On January 29, 2004 a scientific symposium was held on the results of EVA II. Many scientists believed that mechanical cockle fisheries in the Wadden Sea had significant negative effects, but it remained unclear to what extent this damage was structural and irreversible (Hanssen et. al., 2009; Van Nieuwaal, forthcoming: 184).

Meanwhile, Wouter van Dieren, director of the environmental research and consultancy company IMSA, described the situation in the Wadden Sea as inconsistent. The, in his eyes, harmful shellfish fisheries were allowed, while the gas mining that was not harmful was forbidden and meanwhile the ecosystem kept deteriorating. He started an interactive process in which mining companies, nature organisations, scientists and politicians were included. The shellfish fisheries were not included. A meeting on the barrier island Terschelling on the 6th of January 2003 ended with a common declaration that the Wadden Sea was deteriorating and that a commission should be established that would look at the gas mining, nature and shellfish fisheries in an integrated manner. In September 2003, the commission Meijer (*Adviesgroep Waddenzeebeleid*) was established. The Commission Meijer presented its advice on the April 1, 2004. The Commission concluded that gas mining without ecological damage was possible and that shellfish fisheries could only operate within the natural boundaries and limits of the European Birds and Habitat Directive. In order to continue fishing the mechanical cockle fishery had to make a sustainable transit within seven years, the mussel fishery gets fifteen years (Runhaar, 2009; Van der Linde, 2007).

In February 2004, the European Court of Justice gave a first answer to questions of the Dutch Council of State on how to interpret article 6 of the European Habitat Directive. The final judgement followed in September 2004. The cockle fisheries were not existing use and thus each year an appropriate assessment had to be made based on article 6 sub 3 Habitat Directive. It meant a reversal of the burden of proof in which the mechanical cockle fisheries had to prove that the fishing had no significant negative effects. On June 28, 2004 the Dutch cabinet decided to ban the mechanical cockle fisheries from the Wadden Sea, the mussel fisheries had to become more sustainable and gas mining was allowed. Part of the gas revenues would be invested in the restoration of the Wadden Sea and part of it was used to buy the cockle fishermen out. In November 23, 2004 the House of Representatives accepted the Cabinet's proposal (Van Nieuwaal, forthcoming; Runhaar, 2009). The nature organisations filed a law suit against the cockle fishing permits of 2004 because the cockle fishermen could not proof beyond reasonable doubt that the fishing had no negative effects. In line with the latest ruling of the European Court of Justice the Dutch Council of State ruled that in 2004 no cockles could be fished.

Part of the discussion lingered. In 2006 the relation between nature organisations and mussel fisheries polarised. Nature organisations filed a law suit against the permits of the mussel fisheries. The nature organisations were called 'the green lie' and were accused of killing the mussel business. At present an agreement has been signed between the mussel fishery and nature organisations.

5.3 The interactions surrounding the mechanical cockle fisheries

5.3.1 The interactive processes

Several interactive processes have taken place in which the shellfish fisheries were discussed. These interactive processes were characterised by the fact that the outcome or advice was a common responsibility of the participants. All participants had a say in the advice resulting from the interactive process.

From 1999 until 2003 the second phase of the evaluation of the Dutch shellfish fisheries took place, EVA II. EVA II was designed as an interactive process. The government took on a facilitating role. A scientific team was established consisting of three research institutes that had to conduct an elaborate study of the ecological effects of shellfish fisheries. The scientific team was guided and monitored by the Steering Committee made up of government officials and representatives from the nature organisations, shellfish fisheries and the scientific team. In June 2003 a Policy Advisory Group (PAG) was established to advise the minister on the new shellfish fishery policy based on the scientific results. Also in the PAG representatives of the nature organisations and the shellfish fisheries were present (Hanssen et. al., 2007).

Around the same time another interactive process took place, the IMSA process. IMSA organised a consultation process. The process was meant to find support for a social process, based on scientific research that had to result in the improvement of the Wadden Sea as nature area. Several stakeholders were involved at the invitation of IMSA, such as businesses, the government, scientists and nature organisations. The shellfish fisheries sector was not present, nor was the Birds Protection Agency (*Vogelbescherming*) (Meijer et. al., 2004; Runhaar, 2009). In addition, parliament discussed the shellfish fisheries policy and the gas mining on several occasions.

Consultation processes have also taken place. During these processes several stakeholders are consulted, but it is up to the consultant whether this perception or opinion is taken into account, discussions between actors do not take place. The process surrounding the SCFP, the commission Meijer and the cabinet's decision are examples of consultation.

5.3.2 Mechanical cockle fisheries in the Wadden Sea 1990-1999

A strained start of the debate

The concerns that mechanical cockle fisheries might be damaging for the Wadden Sea and could be a prime cause in bird mortality arose in the early 1990s when bird mortality in the Wadden Sea was high during several years. In 1990 the fishermen fished up many cockles. The fishermen were at that point primarily concerned with their job. They did not feel that they were the cause of the high bird mortality. The cockle stocks were known to have large variations. The variations are part of the dynamics of the ecosystem. Cold and stormy winters were seen as the reason why cockle stocks declined. The fishermen were fishing cockles for decades already and the birds were still there. The fishermen argued that they manage the cockle stock by fishing the largest cockles. The Wadden Sea was seen as a traditional fishing ground. All fishermen agreed that they needed a sustainable ecosystem to secure their livelihood, but they also felt they could harvest from nature. Effects of the harvesting were not seen as structural damage. The fishermen were concerned about the high bird mortality. In case of pollution or disease the cockles might be affected too (PO Kokkels, 2009).

Nature organisations accused the shellfish fisheries of destroying rare eelgrass (*Zostera marina*), causing bird mortality and destroying mussel beds. The nature organisations saw the Wadden Sea as one of the last wildernesses in the Netherlands and as a nature area of international importance. The Wadden Sea serves as a breeding ground for fish, but is also a resting site for migratory birds that fly across continents. The fisheries were seen as disrupting the natural processes in the Wadden Sea. The media was mobilised and painted an especially negative picture of the mechanical cockle fisheries with headlines such as ‘the great cockle robbery’ and ‘Massive deaths among Eiders’. The cockle dredging devices left visible trails on the tidal flats, which resulted in the picture of ‘ploughing up the entire Wadden Sea’. The DANF closes the whole Wadden Sea to shellfish fisheries in 1991 because there were hardly any cockles and mussels left (Verbeeten, 1999; Steins, 1999; PO Kokkels, 2009; Waddenvereniging, 2009; Vogelbescherming, 2009a).

It was scientists who spoke of an ecological disaster first and who pointed out the problem. Some scientists actively sought media attention. These ‘political biologists’, as Steins (1999) calls them, tried to get media attention and were convinced of the negative ecological effects of mechanical cockle fisheries on the Wadden Sea. These scientists pursued conservation ends and stressed their social responsibility, instead of merely delivering facts (Steins, 1999; Swart & Van Anandel, 2008; Van der Linde, 2007). The political biologists felt that they were not heard and accused the nature organisation of not taking enough action to address the shellfish fisheries in the Wadden Sea (Van der Linde, 2007). Because of the political scientists it was often unclear whether scientists were speaking as scientists, citizens or stakeholders. Because of this, relations within the research communities also got strained (Steins, 1999; Swart & Van Anandel, 2008). The start of the discussion was thus a strained one.

Drawing up a policy for Sea and Coastal Fisheries

The ministry decided that a policy for Sea and Coastal Fisheries (SCFP) had to be drawn up. The nature organisation and shellfish fisheries were consulted. The nature organisations and shellfish fisheries remained on speaking terms with regard to the self-regulation and yearly fishing plans. The nature organisations saw the mechanical cockle fishery as unsustainable, partly due to the large scale character of the fisheries. The discussions on the SCFP focused on the closure of areas and food reservation. The positions of the nature organisations and the shellfish fisheries diverged. The nature organisations wanted to close 70% of the Wadden Sea, food reservation would not be needed. The fisheries sector wanted to close a maximum of 15% of the Wadden Sea. Closing a larger part of the Wadden Sea would have unacceptable economic consequences. The fishery sector believed that their self-regulation and fishing plans offered enough possibilities to protect nature. At first it seemed as if the ministry wanted to close 15%, but after the Esjberg conference 26% of the Wadden Sea was closed, with a possibility of 40% closure in a second phase. In addition, the DANF wanted to reserve 70% of the shellfish for shellfish eating birds. The House of Representatives adjusted this to 60% (Verbeeten, 1999; Steins, 1999; Waddenvereniging, 2009). Although the positions of the fisheries and nature organisations diverged, personal contacts were still possible. The nature organisations did not yet wish to ban the mechanical cockle fisheries. But the self regulation was viewed with some distrust. In the opinion of the nature organisations the DANF did little to protect the Wadden Sea. Some nature organisations developed a two track approach. On the one hand they kept participating in consultations, but on the other hand the activities were increasingly seen as violating the European Birds and Habitat

Directive. A legal track had to result in a judgement on the interpretation of the Birds and Habitat Directives. (Waddenvereniging, 2009; Vogelbescherming, 2009 a & b). To a certain extent the fishermen realised they had to limit their impact. Partly this was based on their fear of additional closure of areas for fishing, partly on the negative image the media painted of the fisheries sector and partly to protect the Wadden Sea. After all the Wadden Sea was the foundation of their livelihoods. The fishing plans included measures that reduced the fleet, forbade the fishing in eelgrass, set fishing quotas and obliged the installation of black boxes on ships. By means of this self regulation the fishery sector showed that it was willing to take responsibility and to limit their impacts (Verbeeten, 1999; PO Kokkels, 2009).

Increasing tensions between nature organisations and shellfish fisheries

The nature organisations remained sceptical with regard to the self- regulation. They appreciated the efforts taken to limit the impacts of the shellfish fisheries but they still felt that the efforts were insufficient. Nature organisation went into appeal against the fishing permits. Rumours about non-compliance with the SCFP kept the distrust alive. Due to the black boxes these rumours could be set straight. Publications of Piersma et al. (1997) that the mechanical cockle fisheries had large long term effects and prevented the recovery of the shellfish stock put the discussion on edge again. This put the question on the table to what extent the mechanical cockle fisheries belonged in a nature area such as the Wadden Sea. This was the start of the polarisation of the discussion on mechanical cockle fisheries. In 1997 the positions shifted to more extremes and the nature organisations openly opposed mechanical cockle fisheries in the Wadden Sea. The media strengthened the negative image of the cockle fisheries (Verbeeten, 1999; Steins, 1999; Waddenvereniging, 2009).

As the moment of the first evaluation of the SCFP came closer, the tensions increased. The cockle sector wanted to continue the policy. The compliance rate with the fishing plans was very high, which proved that the sector could regulate themselves. Additional closure of parts of the Wadden Sea was thus unnecessary. The cockle fisheries argued that their fisheries only took place in 3.3% of the Wadden Sea. The cockle sector had suffered significant economic losses because for several years they could either fish less due to the food reservation or they could not fish at all. The fishermen wanted to exchange closed for open areas. Rotation of fishing grounds would enable fishermen to only catch the largest cockles. The birds could eat smaller cockles that were commercially unattractive (Steins, 1999; PO Kokkels, 2009).

The nature organisations desired stricter measures. They argued that the goals had not been met; mussel banks had not recovered and birds were still confronted with food shortages. The nature organisations wanted to have a food reservation of 100%. The Wadden Sea was seen as a nature monument where natural processes should not be disturbed by human activities. Rotation or exchange of closed areas would disturb the entire Wadden Sea (Steins, 1999).

After the first evaluation the policy was only slightly adapted, not to the likings of the nature organisations. A second, more comprehensive evaluation had to result in definitive conclusions on the harmfulness of the mechanical cockle fisheries.

Discussing the first evaluation of the SCFP in the Dutch House of Representative

The evaluation of the Sea and Coastal Fisheries Policy was also discussed in the House of Representatives. There the discussion was basically divided into two groups. Groenlinks, SP and D66 were worried about the damage the shellfish fisheries might cause to the Wadden Sea. They wanted to have demonstrable proof that the fisheries

would not jeopardise the nature goals of the Wadden Sea. These parties would like to apply the precautionary approach. They did appreciate the effort the shellfish fisheries took to limit their impact on the Wadden Sea, but they invoked research that claimed that the food reservation of 60% was insufficient. They demanded a 100% food reservation. D66 and Groenlinks were in favour of a stricter fisheries policy and suggested to phase out the cockle fisheries. They compared the cockle ships to vacuum cleaners. The Wadden Sea had to be protected. Closed areas should remain closed to fisheries. They viewed the policy as sub optimal and argued that the Wadden Sea was only there for nature, not for economic activities.

The VVD, CDA and SGP felt that the shellfish fishery should be possible within the limits posed by nature. These parties viewed the mortality of birds in the Wadden Sea as something that is in part caused by storms and other natural variations. These parties questioned the set nature goals. Especially the amount of mussel beds that had to be developed was seen as unrealistic. The fisheries were seen as a sector that depends on nature and that support nature. These parties emphasised the importance of employment and business continuation. They wanted to interweave and balance nature and fisheries. They saw the measures already taken as proof that interweaving is possible. They didn't believe there was a direct causal link between shellfish fisheries and bird mortality. Instead of focusing on mechanical cockle fisheries as the sole culprit, research should find the real cause of the bird mortality and low cockle stocks. It is suggested to spread cockle brood over larger areas when there is an over supply. In addition, these parties wanted to exchange open and closed areas.

The PvdA and CU took up an intermediate position. The PvdA argued that the policy has led to improvement and that the fisheries are not the sole culprit of bird mortality and other damage. The PvdA wanted to give the (cockle) fisheries space to prove that they can coexist with nature, but if after five years the nature goals are still not met, the PvdA wanted to have the possibility of banning the cockle fisheries. The CU also wanted to combine nature and fisheries, but compared the mechanical harvesting of cockles to the deforestation of the rainforest; 3% of the tidal flats were ploughed by the cockle fisheries, which was in their eyes a large percentage. They proposed a closing of the Wadden Sea except in certain areas that may be shifted around as a form of shifted cultivation. Both groups of parties quoted scientific reports that seemed to support either a position that calls for the phasing out of the cockle fisheries or the position that fisheries and nature can be combined in a win-win situation. There was hardly any shifting of positions during these debates.

The DANF decided to continue the SCFP. In ecologically vulnerable areas fishing was no longer allowed. The first evaluation did not prove a causal relation between cockle fisheries and damage. Hence, the cockle fisheries still had a right to exist. This meant that cockle fisheries were still possible from 1999 until 2003 (Kamerstukken II 1997/98, 25 600 XIV, nr. 62, pp. 1-11; Kamerstukken II 1998/99, 26 200 XIV, nr. 51, pp. 1-12; Kamerstukken II 1998/99, 26 200 XIV, nr. 65, pp. 1-7; Proceedings II 1999/00, 95, pp. 5499-5503).

Discussing the gas mining 1993-1999

The shellfish fishery was not the only discussion about Wadden Sea policy that took place. The policy on gas mining in the Wadden Sea was discussed as well. During the 1990s the discussion on gas mining and the discussion on shellfish fisheries were relatively unrelated. However in 2004 these discussions started to intermingle. Therefore the discussion on gas mining from 1993 till 1999 is shortly summarised.

In 1993 trial drillings in the Wadden Sea were allowed. However, due to law suits lodged by the nature organisations the actual drillings were delayed for years. Much of the discussion surrounding gas mining was about the uncertainties on the effects of gas mining. The government and the Dutch Mining Company (the NAM) believed these uncertainties were minor. The nature organisations felt the uncertainties were too large. The social necessity of gas mining was also disputed. The government argued that the financial benefits of gas mining were large and the effects on the environment would be minor. In addition, mining in small gas fields would prolong the lifespan of the large Dutch gas field underneath Slochteren. The nature organisations argued that gas mining was not needed because there was still enough gas underneath Slochteren and thus there was no necessity to mine gas in the Wadden Sea. Also with regard to gas mining the science was disputed. A report initiated by the NAM was not seen as objective. The report of the NAM proved the effects of mining were minor and thus gas mining should be allowed in the eyes of the NAM. But Greenpeace issued a report about the 'real' costs of gas mining in the Wadden Sea. This report was based on a hypothetical situation but was embraced in the House of Representatives (Verbeeten, 1999; Van der Linde, 2007).

In 1999 the House of Representatives decided against gas mining in the Wadden Sea. All political parties opposed the granting of new concessions for gas mining in the Wadden Sea. Generally the Wadden Sea was referred to as a unique and ecologically valuable area requiring protection. The CDA, CU, SGP and the PvdA didn't see an economic necessity to mine the gas and proposed a new ten year moratorium on gas mining in the Wadden Sea; as long as long term effects are uncertain there should be no mining. Groenlinks, SP and D66 wanted a definitive no to gas mining in the Wadden Sea. They argued that mining is ecologically unacceptable, legally questionable and socially unnecessary. They feared that when economic need would arise, the government would decide to mine the gas. They repeatedly pointed to the precautionary principle, and claimed that certainty is required before mining would be even a possibility. The Wadden Sea should not be put at risk.

The VVD was the only party that was less opposed to gas mining. They pointed out that drilling from the shore would have little effects on the Wadden Sea. Research of subsidence of the soil looked promising in their eyes. There were still uncertainties but the insights in the effects of mining increased. The VVD argued that when enough knowledge would exist and when it would not have long term negative effects mining should be allowed.

Minister Jorritsma had a similar line of reasoning. She pointed out that the economic necessity for gas mining would increase over time. Mining should thus be allowed when it would not have lasting negative effects on Wadden Sea. With monitoring and a situation of reference controlled mining might take place in future. The result of these discussions was a moratorium for another ten years. But research to limit the uncertainties surrounding gas mining in the Wadden Sea could proceed (Proceedings II 1998/99, 96, pp. 5576-5580; Proceedings II 1999/00, 33, pp. 2564-2586).

5.3.3 Mechanical cockle fisheries in the Wadden Sea 1999-2003

Increased polarisation of the debate

By 1999 the discussions between nature organisations and the cockle sector were polarised. The increasing polarisation was caused by several factors. A publication of the Royal Netherlands Institute for Sea Research (NIOZ) (Piersma et. al., 2001) was a reason for Piersma to conclude in the media that it has been scientifically proven that

mechanical cockle fisheries was harming the Wadden Sea ecosystem. In addition increased Eider mortality between 1999 and 2002 gave additional negative publication. The social support for mechanical shellfish fisheries decreased because of the negative media coverage and the visible trails this type of fisheries leaves after fishing on tidal flats. The newly established nature group Wild Cockles (*Wilde Kokkels*) criticised the vested nature organisations for not doing enough to ban the mechanical cockle fisheries from the Wadden Sea. The aim of Wild Cockles was to ban the mechanical cockle fisheries from the Wadden Sea. The Wild Cockles only trusted the scientific data of the NIOZ. This data showed that shellfish fisheries and especially mechanical cockle fishery were harmful and lead to bird mortality. This new interest group caused the nature organisations to become more critical of mechanical cockle fisheries. The nature organisations teamed up. The Nature organisations kept accusing the shellfish fisheries of the starvation of birds and called for a ban on mechanical cockle fisheries in the Wadden Sea. The shellfish fisheries argued that the starvation was the result of fluctuations in nature. They pointed out that they were developing more sustainable fishing methods according to the triple P concept. However, permits to try out new, possibly more sustainable techniques were denied in anticipation of a new fisheries policy. Due to the uncertain situation investments in more sustainable techniques were postponed (Swart & Van Anandel, 2008; Waddenvereniging, 2009; ODUS, 2001; PO Kokkels, 2009).

The nature organisations still saw the governmental policy as a large risk to the Wadden Sea. They suggested that the birds would only find part of the cockles and that the food reservation needed to be higher. The cockle fisheries argued that the birds switch to other shellfish (like razor shells or *Ensis*) when there are fewer cockles (LNV directie Visserij, 2001).

Because of higher bird mortality at the end of 1999 and 2000 the ministry decided to have a 70% instead of a 60% food reservation. For the purpose of recovery of mussel beds the so called additional 5% areas were closed. Not all fishermen agreed to this, but the mortality of birds could not be justified in the eyes of the DANF and they felt the pressure to take action (Kamerstukken II 2001/02, 26 431, nr. 48, pp. 1-73).

Steering group EVA II

Surrounding the second evaluation of the shellfish fisheries policy (EVA II) a steering group (SG) and a Policy Advisory Group (PAG) were established. The SG had to give direction to the research that was conducted to base the evaluation on. The PAG, had to advise on a new shellfish fisheries policy. The DANF, who initiated the EVA II process, wanted the interactive processes to be open and thus interested parties were invited to participate on equal terms. The scientific team⁹ had to provide the facts, and had to end scientific uncertainty. The interactive process had to create support for both the research and the new policy that would result from EVA II. The first evaluation had been carried out within the traditional network of the ministry and lacked support from nature organisations (Hanssen et. al., 2007; IJlstra, 2009).

The steering group was established in a relatively calm period, although polarisation of the debate had started by then. The nature organisations wanted to keep the possibility to go into appeal against permits for shellfish fisheries. This was seen as a motion of no-confidence. Most discussions in the steering group focused on the

⁹ The scientific team consisted of the research institutes Alterra, the National Institute for Coastal and Marine Management (RIKZ), the Institute for Inland Water management and Waste Water Treatment (RIZA) and the Netherlands Institute for Fisheries Research (RIVO)

effects of mechanical cockle fisheries on the soil. It was sometimes difficult to put aside interests and perceptions; to draw conclusions often meant to take up a position. Policy related statements were at times included in scientific reports and statements. In this respect the different parties took up predictable positions regarding the conclusions or interpretation of results. Differences persisted in interpretation of research results, also between involved research institutes (Hanssen et. al., 2007; Steins, 1999-2003).

The NIOZ was not involved in the scientific EVA II team. Scientists of the NIOZ had publicly declared themselves opposed the mechanical cockle fisheries in the Wadden Sea. Their neutrality was questioned and the shellfish fisheries did not want to have them involved. However by excluding the NIOZ from EVA II the public discussion polarised further after publishing EVA II because NIOZ questioned the results of EVA II (Hanssen et. al., 2007; LNV, 2009; Waddenvereniging, 2009). The scientists and stakeholders outside the scientific EVA II team were able to mobilise the public interests through the media (Swart & Van Andel, 2008). In 2000 the Birds Protection Organisation demanded a ban of the mechanical cockle fisheries. The nature organisations had lodged appeals against the fishing permits for years, but so far the cockle fisheries had always won the law suits due to the lack of conclusive research and proven damage. The nature organisations participated in EVA II because the research trajectory of EVA II had to prove the harmfulness of the mechanical cockle fisheries. The nature organisations indicated that they rejected the policy of that time, but EVA II would render new research results. Besides, participation also met being kept informed of the contents of the debate (Steins, 1999-2003; Waddenvereniging, 2009; Vogelbescherming, 2009a).

The Policy Advisory Group EVAII

The Policy Advisory Group (PAG) was established in June 2003. At that time the discussion was much polarised. In a review of the process most members of the PAG were of the opinion that they had not succeeded. The polarised discussion proceeded in the PAG. It was very difficult to discuss the shellfish fisheries policy and the effects of shellfish fisheries on the Wadden Sea in an open manner because the positions in the debate were already taken.

The shellfish fisheries wanted to get the time and space to develop a sustainable mechanical cockle fisheries and to conduct further experiments. The breeding and re-sowing of cockles was presented as the way to make the mechanical cockle fisheries more sustainable. The sector argued that in this way they could manage and even increase the cockle stock. Furthermore, the area needed for fishing would be smaller. The sector stressed that it needed room and certainty to switch to this new method of fishing (ODUS, 2003 & 2004a, b, c). The fishermen emphasised that the banning of the mechanical cockle fisheries from the Wadden Sea would have large consequences for the processing industry and employment.

The nature organisations were united in the Broad Consultation Shellfish fisheries (*Breed Overleg Schelpdieren*). The general position of the joined nature organisations was that the mechanical cockle fisheries could never develop a sustainable fishing technique. Banning the mechanical cockle fisheries from the Wadden Sea was seen as the only solution. The nature organisations only wanted to agree on measures concerning sustainable mussel fisheries when the mechanical cockle fishery was banned. The mechanical cockle fisheries were an issue beyond discussion, regardless of the results of EVA II. The cockle sector felt that they had no business in the PAG, there was nothing left to talk about for them. The mechanical cockle fisheries were

placed last on the agenda and on this issue unanimous advice was impossible. The actors did discuss the mussel fisheries. The mussel fisheries had to become more sustainable. On the 8th of June 2004 the PAG published their advice. The PAG process ended in a deadlock with regard to the mechanical cockle fisheries (Hanssen et.al., 2007 & 2009; PAG, 2004; PO Kokkels, 2009; Waddenvereniging, 2009; Steins, 2003).

IMSA and the commission Meijer

In 2002 IMSA decided to initiate an interactive process that had to review the policy on gas mining, shellfish fisheries and nature in the Wadden Sea. IMSA saw itself as an intervening actor that would withdraw after an advice had been issued. In the eyes of Van Dieren, director of IMSA, the shellfish fisheries were responsible for the deterioration of the Wadden Sea, while gas mining would have few negative effects. There was scientific consensus on the (absence of) effects of gas mining in the Wadden Sea, but there was no such consensus on the effects of shellfish fisheries. The publications of Piersma support Van Dieren's vision. IMSA approached the NAM and suggested a new approach to open the debate again. The NAM had realised that their technocratic approach had not worked in 1999 and joined the process. They believed that with the new technology they could stand the test of the Birds and Habitats Directive. IMSA started talks with different interested parties. The starting hypothesis was that the Wadden Sea was deteriorating and that the government couldn't address this problem. This hypothesis was shared by many parties, but they did not all agree how the situation should be changed. IMSA also gathered a group of scientists that had a similar view on the Wadden Sea, ecology and morphology. On November 15, 2002 IMSA issued a report, *Win, win and the (Dutch) Wadden (Win, win en het Wad)*. In this report they envisaged a solution to the problem: gas mining would be allowed, and the benefits of the mining would be used for nature conservation. The envisaged end situation for shellfish fisheries remained unclear. With regard to shellfish fisheries the data needed to be reviewed and a decision had to be made. A commission had to be established that could address all these issues. IMSA viewed the prevailing paradigm 'Hands off of the Wadden Sea' of nature organisations as an obstacle to address the deterioration of the Wadden Sea. The broad hypothesis had to create room for different parties to participate and commit to a solution. Shared goals would create a group of actors that had a common view. IMSA involved nature organisations, the mining company, public servants, scientists, politicians and journalists (Van der Linde, 2007). They failed to involve the shellfish fisheries and the Birds Protection Organisation. The shellfish fisheries felt they could already predict the outcome of the IMSA process based on the people involved. The Bird Protection Organisation felt that both gas mining and shellfish fisheries had significant negative effects because the Wadden Sea was deteriorating. Every additional burden would be too much. In this line of thinking it was expected that both activities would not pass the test of article 6 of the European Birds and Habitat Directive and thus these activities would have to stop anyway (Vogelbescherming, 2009 a & b).

At the barrier island Terschelling on January 6, 2003, the parties are brought together. This meeting ended with a common declaration that the Wadden Sea was deteriorating and that a commission should be established that would look at the gas mining, nature and shellfish fisheries in an integrated manner. How the deterioration should be reversed remained implicit. EVA II was not expected to bring a breakthrough in the polarised shellfish fisheries debate (Van der Linde, 2007).

The Wadden Association were not in favour of gas mining in the Wadden Sea. There was internal discussion about gas mining. After the victory of the 1999 ban on mining, it was tough for some to open the debate again. It was those that were more pragmatic and rational that were willing to open the debate on gas mining again. Those that were more emotional and idealistic still held on to the Hand off of the Wadden Sea paradigm (Waddenvereniging, 2009). In September 2003 the commission Meijer was established. In this commission the three main political parties (VVD, CDA, PvdA) were represented. The commission Meijer had to advise on an integrated Wadden Sea policy regarding gas mining, shellfish fisheries and nature. The establishment of the commission Meijer complicated the discussion surrounding EVA II further and built up the tension (Hanssen et. al., 2007). There were linkages between IMSA and the commission Meijer. At the commission Meijer's request IMSA initiated two scientific meetings on shellfish fisheries and gas mining. The conclusions were that mussel fisheries were less harmful than cockle fisheries. In the meantime, IMSA had developed a model in which activities in the Wadden Sea could be ranked according to harmfulness. During a meeting on January 25, 2004 a number of actors gathered to rank activities in the Wadden Sea using IMSA's model. Cockle and mussel fisheries, climate change and a shipping disaster were seen as harmful whereas gas mining was not seen as harmful. Some participants did not vote because they felt their data did not match the data of the IMSA model. Criticism on this model was that the outcome depended on those that vote. This model was used by the commission Meijer to base their advice on (Van der Linde, 2007).

The Commission Meijer presented its advice on April 1, 2004. The Commission concluded that gas mining without ecological damage was possible and cockle and mussel fisheries could only operate within natural boundaries and the limits of the European Birds and Habitats Directive. In order to continue fishing the shellfish fishery had to make a sustainable transit. The cockle fisheries got seven years to develop sustainable fishing techniques, the mussel fishery got fifteen years (Runhaar, 2009; Van der Linde, 2007).

The cabinet's decision

On June 28, 2004 the Dutch cabinet presented their decision on shellfish fisheries, gas mining and nature in the Wadden Sea. The cabinet wanted to ban the mechanical harvesting of cockles in the Wadden Sea. Minister Veerman argued that the cockle fisheries couldn't make a shift towards sustainable practices in seven years. EU Directives and the results of EVAII made a larger food reservation necessary and the political and social pressure to ban the cockle fisheries from the Wadden Sea increased. Within the increasing restrictions the sector itself confirmed that it would not be able to remain profitable and make a sustainable shift within seven years. The EVAII in itself did not provide enough basis for a ban, but the ruling of the court pointed out that the precautionary principle had to be used. The mussel fisheries would be allowed to develop sustainable fishing methods within 15 years, but without clear conditions (Hanssen et. al., 2009).

The cockle sector was obviously unhappy with the result. They argued that EVA II did not conclude that mechanical cockle fisheries had long term harmful effects. They agreed that innovations were needed to diminish the effects of mechanical cockle fishery. Within the limit of seven years and with the increase of closed areas there was not enough room to apply the new fishing methods. Furthermore, if the cockle sector would not succeed in their plans after seven years, they would be banned without financial compensation. The investment climate would be very uncertain and the new

fishing method had never been applied before. The cockle sector thus agreed to be bought out. They did oppose the decision but felt forced to agree. Within the sector there was a strong feeling that the cockle fishery had to be sacrificed in order to allow gas mining. With regard to the ruling of the Court of Justice, they argued that balancing nature and economic activities is a good thing, but that with the use of the precautionary principle this balance is lost (Productschap Vis, 2004; ODUS, 2004a, b, c). The nature organisations were pleased with the ban of the mechanical cockle fisheries. But the nature organisations are not pleased with the allowance of gas mining. Within the Wadden Association some still opposed gas mining. The Wadden Association was involved in the drawing up of the permits for gas mining. The Birds Protection Organisation kept opposing gas mining and even started a law suit.

Interactions in the Dutch House of Representative 2004

With regard to shellfish fisheries there was probably still support to continue the mechanical cockle fisheries. In his first reaction on EVA II the minister of DANF saw possibilities for the cockle sector, but the commission Meijer drew a line of seven years to make a sustainable transition. According to the VVD, CDA, SGP and CU the plans of the cockle sector would open the possibility for a sustainable cockle fishery, but not within the limits of the commission Meijer. The parties pointed out that the ban would result in loss of employment also in the processing industry in Zeeland. According to the VVD the economic costs of a ban were large while the ecological benefits were contested. Still, the CDA, SGP and CU felt that the cabinet's decision was somehow unavoidable given the scientific uncertainties that still surrounded the cockle fisheries and the ruling of the Court of Justice which led to the application of the precautionary principle. They did emphasise the need for multiple years of certainty for the mussel fisheries.

For D66, Groenlinks and the SP it was now both scientifically as legally proven that there was no future for the mechanical harvesting of cockles. The scientific uncertainties proved to be too large. They emphasised that the precautionary principle should have been used sooner.

The PvdA, SP and Groenlinks kept opposing the gas mining. They questioned the predictability of the ecosystem. They feared that despite the suggested 'hand on the tap' principle the soil subsidence would linger longer than expected. Mining would only be acceptable when there is 100% certainty that it has no negative effects.

Interesting enough D66 made a switch from opposing gas mining to supporting gas mining. D66, CDA, VVD, CU and SGP believed that by using the hand on the tap principle the mining of gas should be possible. There was scientific consensus that mining is possible and that the risks are negligible. These parties claimed that the gas was needed (Proceedings II 2004/05, 23, pp. 1377-1387; Kamerstukken II 2004/05, 29 684, nr. 20, pp. 1-8; Kamerstukken II 2004/05, 29 684, nr. 26, pp. 1-22). Thus the majority in the House of Representatives accepted the cabinet's advice.

There were different opinions on what the decisive advice or event was that led to the cabinet's decision. The Birds and Habitats Directive and the judgement of the European Court of Justice are seen as most influential, followed by respectively the advice of commission Meijer, the minister of DANF Veerman, the discussions in the house of representatives, media, the PAG and EVA II results (Hanssen et. al., 2007).

5.4 Testing the hypotheses

5.4.1 Hypothesis 1: Why conflict arises

Hypothesis 1: When different actors with different worldviews are brought together in an interactive process, this will lead to disagreement and conflict between the different worldviews.

Like in the previous chapter this hypothesis aims to test if the conflict that arose in the interactive processes is also a conflict between worldviews. One would expect that the conflict that takes place in an interactive process, given that parties can be characterised as A or B worldviews, is a conflict between A and B worldviews. However, from the previous chapter it appeared that sometimes the conflicts are not divided along the lines of worldviews, but along the lines of regions.

The first part of this section repeats which conflicts arose between which parties. The actors are then assigned a worldview based on arguments, positions and other statements of the actors. Worldviews are awarded by the researcher and are based on interviews, publications and policy documents. In annex VIII the characterization of actors according to a worldview is more elaborate. Subsequently one can conclude if there was in fact a conflict between worldviews and if these conflicts are typical disagreements that are expected to rise in interactions between worldview (see section 2.6). This section will end with testing the first hypothesis.

Conflict in the EVA II process

The main conflict that took place in the 1990s was about the harmfulness of the mechanical cockle fisheries and the strictness of the measures taken. Scientific findings were contested. A first evaluation (EVA I) was unable to conclude how damaging the mechanical cockle fisheries and mussel fisheries were. A second evaluation (EVA II) had to give an answer to this question. The DANF assumed that if there would be consensus on the scientific facts, the controversy would be solved (B1 label: expert knowledge).

The Policy Advisory Group (PAG) had to advise the minister of DANF on a new shellfish fisheries policy. The conflict in the PAG was very polarised and mainly focused on the long term harmfulness of the mechanical cockle fisheries. The conflict took place between the nature organisations and the fisheries. The ministry took up a neutral position as the initiator of EVA II.

By the time EVA II was initiated the nature organisations were already convinced that the mechanical cockle fisheries had long term effects and were preventing a recovery of the Wadden Sea. A shift in the ecosystem was feared (B2 label: Fragile ecosystem). The mechanical cockle fisheries had to be banned, so that recovery would be possible. The nature organisations concluded from the EVA II results in the steering group that the mechanical cockle fisheries were indeed harmful. They used uncertainties in the conclusions to invoke the precautionary principle (B2 label: Fragile ecosystem; Risks unacceptable). The nature organisations did not want to discuss the possibilities for mechanical cockle fisheries, but demanded a ban (A2 label: Solution: Protection). A polarisation had taken place because the nature organisations were disappointed in the measures taken by the DANF and decided to start a legal track that would lead to a decision of the European Court of Justice on the interpretation and use of the Habitats Directive. They expected that after such a ruling the precautionary principle had to be applied to guarantee protection of the Wadden Sea (A2 label: Solution: protection). The nature organisations were willing to talk about measures concerning sustainable

mussel fisheries. This type of fisheries was also considered harmful, but a sustainable transit was considered to be possible for mussel fisheries.

The cockle sector had realised that they had to try and diminish the effects of fishing. They did research and tried to develop other fishing methods (A1 label: Solution: Technological development). But they did not believe that the cockle fishery in itself was harmful. They saw themselves as managers of the cockle stock, contributing to the growth of the cockle stock. The variability in shellfish stock was due to natural variability and winter storms (A label: Ecosystem either stable and at time beyond control). The breeding and re-sowing was seen as was to make the mechanical cockle fisheries sustainable (A1 label: Nature as production factor). The fisheries sector wanted to have room to develop this new method and wanted to make a sustainable transit by means of self regulation (A1 label: Solution: Self-regulation). In the EVA II results the cockle sector saw the proof that they did not have long term effects. The causal link still had not been proven. But the nature organisations did not want to discuss a sustainable transition of the mechanical cockle fisheries. Cockle fisheries would always remain harmful because cockles grow a few centimetres deep in the soil. The large scale cockle fisheries would always pose a risk. Besides, they trusted that a court ruling would eventually lead to banning the fisheries from the Wadden Sea.

The DANF saw the problem in the disputed science. Both the nature organisations and the fisheries referred to different studies that would prove that shellfish fisheries were or were not harmful. If a scientific team would study the effects and if the stakeholders would be involved in the planning of this research, the facts could be found and would be used to determine the boundaries and in between the boundaries a compromise might arise (B1 label: Expert knowledge; Ecosystem stable within boundaries). The DANF did not feel that the results of EVA II proved that the mechanical cockle fisheries were very harmful. But there were many forces working against the mechanical cockle fisheries.

The conflict in the EVA II process was about the harmfulness of the mechanical cockle fisheries and the possibility for the fisheries to make a sustainable transit. The nature organisations had a B2/A2 worldview, and focused on a legal track that would make the fisheries subject to article 6 of the Habitats Directive, thereby invoking the precautionary principle. The fisheries (A1/A2) and the DANF (B1) believed there was enough room for human activities in the Wadden Sea and did not believe the mechanical cockle fisheries was incompatible with the nature aims. The scientific research of EVA II could not bring these diverging positions together. The conflict in EVA II was a typical conflict between B2 and A1/B1 worldviews. Uncertainties and precaution were key terms in this conflict. The B2 nature organisations fear that the Wadden Sea is strained too much and the fisheries feel impeded in their business.

Conflict in the IMSA process

The conflict in the IMSA process focused on the desirability of gas mining. The harmfulness of the shellfish fisheries, especially the mechanical cockle fisheries was not a point of conflict. The shellfish fishery was not involved in the IMSA process, nor was the Birds Protection Agency. The Wadden Association took part in IMSA, as did the Dutch Mining Company (NAM), a group of scientists and civil servants.

IMSA noticed a deterioration of the Wadden Sea. IMSA felt that gas mining had little effects on soil subsidence. They felt there was a scientific consensus on the effects of gas mining; it did not have significant effects (B1 label: Expert knowledge). At the

publications of the NIOZ showed that mechanical cockle fisheries was harmful. IMSA saw the deterioration of the Wadden Sea in the light of the shellfish fisheries that took place. The government policy was seen as insufficient, while it allowed the harmful fisheries and banned the not harmful gas mining. IMSA envisaged a solution to the deteriorating Wadden Sea: gas mining is allowed and the benefits of gas mining are used for nature conservation. The gas mining was not harmful and would provide revenues (A1 label: Economic growth; B1 label: Nature conservation). The solution for the shellfish fisheries remained unclear, but the IMSA did perceive the fisheries as harmful. IMSA wanted that a commission would look at the issues of fisheries, nature and gas mining in an integrated manner (B1 label: Sustainability).

The NAM was willing to try the new approach IMSA had suggested. The NAM was convinced that the gas mining would have no significant negative effects. They had conducted much research (B1 label: Expert knowledge). They believed they could stand the test of the Birds and Habitats Directive and therefore the precautionary principle did not have to be applied. They had waited so long to mine the gas and they were willing to take their responsibility towards nature and not mine at the expense of the Wadden Sea (A1 label: Stable ecosystem; B1 label: Sense of responsibility). The NAM did not take up a position on the fisheries.

The Wadden Association opposed the gas mining. The uncertainties associated with mining were too large (B2 label: Risks unacceptable). In 1999 they had managed to lobby for a new moratorium for gas mining in the House of Representatives. Many people from the Wadden Association were reluctant to start a new discussion on gas mining in 2003. Within the Wadden Association there was much discussion on gas mining. They had opposed gas mining since the early 1990s and emotionally they felt that gas mining did not belong in a nature reserve like the Wadden Sea (B2 label: Small scale). More pragmatic voices in the Wadden Association were willing to discuss gas mining. They recognised some activities within clear boundaries would still be possible in the Wadden Sea (B1 label: Thresholds). The Wadden Association mainly participated in the IMSA process, because they recognised the debate was stuck and the Wadden Sea was deteriorating (B1 label: Nature conservation). Gas mining was a sensitive issue.

The scientists involved in IMSA had more sympathy with nature than with fisheries. They had similar views of ecology and morphology. They held the opinion that the mechanical cockle fisheries was damaging. However, concerning the gas mining them all felt that the effects were small. The scientists involved did not represent all scientific opinions on the fisheries.

The shellfish fisheries did not participate in IMSA. The cockle sector felt that there was no room in the process for a positive view on the mechanical cockle fisheries. It was seen as the culprit by IMSA and its scientists already. The Birds Protection Agency did not participate because they felt that both gas mining and shellfish fisheries were harmful given that the Wadden Sea was in a bad shape and ecologically very vulnerable and they were still waiting on a ruling of the European Court of Justice. They did not deem this discussion interesting, because both activities would not stand the test of the Birds and Habitats Directive (B2 label: Fragile ecosystem; A2 label: Protection).

The conflict in the IMSA process focused mainly on how the deterioration of the Wadden Sea had to be stopped. All actors present agreed that the Wadden Sea was deteriorating and that something had to be done to address this. All parties also agreed to the establishment of a commission that would review gas mining, nature and

fisheries in an integrated manner. But IMSA, the NAM and the scientists wanted to allow gas mining and use the benefits for a Wadden fund for nature conservation. The Wadden Association opposed the allowance of gas mining. This conflict was a conflict between B1/A1 actors and more B2 actors. The conflict mainly focused on the uncertainties and how much uncertainty is allowed. IMSA and the NAM found that the uncertainties were small, but the uncertainties were still too big for the Wadden Association. In addition, the Wadden Association wanted to test both fisheries and gas mining to the Birds and Habitats Directive, whereas IMSA and the NAM wanted to make a package deal and felt that the gas mining could stand the test of the Habitats Directive. Thus, one can conclude that the conflict in the IMSA process was a typical conflict between B1/A1 worldviews and a more B2 worldview with A2 aspects. Also here the B2 nature organisations feared further deterioration of nature, while the B1/A1 IMSA and NAM felt that the uncertainties were very small and gas mining would not cause deterioration, rather the revenues could be used to pay for nature conservation. They believed that they could determine the thresholds.

Conflict in the House of Representatives

The House of Representatives discussed the SCFP in 1999, 2002 and 2004. The main conflict in the House of Representatives focused on the harmfulness of the shellfish fisheries, specifically the mechanical cockle fisheries, and the possibility to make a sustainable transit. With regard to gas mining the conflict focused on the damage of gas mining and especially the risk of soil subsidence.

Groenlinks, SP and D66 wanted to apply the precautionary principle (B2 label: Fragile ecosystems). According to them the mechanical cockle fisheries was damaging; they compared the mechanical cockle fishery to vacuum cleaners. The Wadden Sea was seen as the last Dutch wilderness and they emphasised the international importance of the Wadden Sea. Nature should outweigh other interests (B2 label: Immaterialist). They referred to studies that showed that mechanical cockle fisheries had long term effects (B1 label: Expert knowledge). Every round of fisheries was seen as causing more damage. These parties felt that the current policy did not lead to recovery. These parties wanted to give priority to the protection of the Wadden Sea as one of the last nature reserves of the Netherlands (B2 label: fixed nature; B1 label: Nature conservation). They suggested buying out the mechanical cockle fisheries. After EVA II again they invoked the uncertainties surrounding the effects of the mechanical cockle fisheries to ban the sector from the Wadden Sea (B2 label: Risks are unacceptable). The ruling of the European Court of Justice was seen as a back up of the position they had. They didn't believe that the mechanical cockle fisheries could become more sustainable.

The VVD, CDA, PvdA, SGP and CU felt that fisheries should be able to take place within certain limits (B1 label: Management needed). They emphasise that there was no direct causal link between mechanical cockle fisheries and bird mortality and cockle stock. They wanted to balance the different interests in the Wadden Sea (B1 label: Sustainability). They emphasised the employment related to the shellfish fishery sector (A2 label: Problem: Unemployment). They argued that the self-regulation worked, and believed that the cockle fishery could manage the stocks (A1 label: Solution: Self-regulation). These parties felt that the EVA II did not conclude that mechanical cockle fisheries had significant negative effects. The VVD, CDA, PvdA, SGP and CU saw the ODUS vision as a start to make the fisheries more sustainable (B1 label: Sustainability). The VVD believed the economic costs of the ban are large and the ecological gains uncertain.

With regard to the gas mining in the Wadden Sea only the VVD always was in favour. The VVD referred to the report of the NAM on soil subsidence and said that gas mining would have few effects with the use of the latest drilling techniques (A1 label: Solution: Technological development; A1 label: Nature as production factor; B1 label: Expert knowledge).

Groenlinks, SP, D66, CDA, PvdA, SGP and CU all opposed gas mining in 1999. They argued that there was no economic necessity to mine the gas and the effects were too uncertain. These uncertainties were seen as persistent, research could never take away these uncertainties. The precautionary approach had to be used (B2 label: Risks are not acceptable). The Wadden Sea is a valuable nature area and should not be put at risk (B1 label: Nature conservation). They wanted a new moratorium on mining. Groenlinks, SP and D66 went a little further and wanted a permanent ban on gas mining in the Wadden Sea. Also when there would be a need for gas. The protection of the Wadden Sea against soil subsidence is more important. They did not want to risk the ecologically vulnerable Wadden Sea (B2 label: Risks are unacceptable).

The conflicts in the House of Representatives were conflicts about allowing mechanical cockle fisheries and gas mining or ban it.

Groenlinks, SP and D66 wanted to ban both the mechanical cockle fisheries and the gas mining in the Wadden Sea and formed a B2 coalition that was very concerned about the uncertainties and the possible damage both activities might cause.

VVD, CDA, PvdA, SGP and CU formed an A1-B1 coalition. All these parties recognised that the Wadden Sea had to be protected, but all felt that there was still room for human activities. They wanted to balance nature protection with human activities. They believed that Groenlinks, SP and D66 impeded necessary developments. This represents a typical B1-B2 conflict.

It is interesting to note that with regard to gas mining, the CDA, PvdA, SGP and CU had much more B2 characteristics and had a similar opinion as Groenlinks, SP and D66. They conflicted with the A1/B1 VVD. Thus in the House of Representatives there was a conflict which could be reduced to a conflict between the A1 - B1 and the B2 worldviews.

Conclusion hypothesis 1

Hypothesis 1: When different actors with different worldviews are brought together in an interactive process, this will lead to disagreement and conflict between the different worldviews.

The conflict surrounding the mechanical cockle fisheries in the Wadden Sea was mostly a conflict between the nature organisations (B2/A2) and the mechanical cockle fisheries (A1/A2). This conflict persisted for over a decade. The DANF tried to balance the two opposing views, but for long was of the opinion that human activities such as fishing were possible in the Wadden Sea, while at the same time protection nature. The self-regulation was seen as a solution by the fisheries and DANF, but was seen as problematic by the nature organisations. The conflict mainly focused at the extent to which interweaving of nature and human activities were possible. The fisheries and DANF saw the Wadden Sea as a stable ecosystem, while for the nature organisations the deterioration led to an unstable situation which was increasingly vulnerable to shifts. As a result the nature organisations wanted to have strict

regulations and eventually a ban. The mechanical cockle fisheries felt impeded in their efforts to make a sustainable transit. They wanted to become more sustainable, but by means of self-regulation. The nature organisations felt this transit would put too much strain on nature. This is a typical disagreement between actors with a B2 worldview and actors with an A1 or even B1 worldview who have a more stable vision of nature.

In the IMSA process the conflict was about allowing gas mining. This conflict was a conflict between the B2 nature organisations and the B1/A1 IMSA and NAM. This conflict was similar as the conflict between the fisheries and nature organisations. Again the nature organisations did not want an interweaving of functions and felt that the uncertainties justified the use of the precautionary approach. The IMSA and NAM wanted to interweave gas mining with nature. The remaining uncertainties surrounding gas mining could be controlled and the money could be used for nature conservation. This was also a typical disagreement between A1/B1 worldviews and B2 worldview.

Also in the House of Representative the conflict concerning both gas mining and mechanical cockle fisheries was about the extent to which interweaving of nature with human activities was possible. This conflict was mainly a conflict between B1 and B2 worldviews. The B1 worldview wanted to balance different interests and saw room for human activities. After all, the ecosystem is stable within boundaries. The B2 worldview believes that the ecosystem is much more fragile and thus human activities that might negatively influence the ecosystem have to be banned.

In conclusion, we can see that the conflicts were conflicts between worldviews. It was a discussion about to what extent human activities are allowed in a nature area. The A1 and B1 worldviews see possibilities for human activities, but the B2 worldview does not. This conflict was hard to bridge and a legal track was seen as a back up solution that had to prove the nature organisations right.

5.4.2 Hypothesis 2: Why true consensus is difficult to achieve

Hypothesis 2: When one tries to create a consensus between different worldviews, these attempts will founder on underlying differences in perceptions.

The second hypothesis indicates that conflicts can't be resolved and consensus-building fails, because the different perceptions of worldviews can't be bridged.

The conflicts during EVA II revolved around whether or not the mechanical cockle fisheries should be allowed to take place in the Wadden Sea nature reserve and whether or not the shellfish fisheries were able to make a sustainable transition. The advice of the PAG was split. The nature organisations did not want to discuss the mechanical cockle fisheries and wanted a ban. They felt the mechanical cockle fisheries was harmful and could not be turned into a sustainable fishery. In addition, after the 1990s they had turned their hopes to a judgement of the European Court of Justice on the interpretation of the European Habitats Directive and the use of the precautionary approach to the shellfish fisheries. For the mechanical cockle sector being banned from the Wadden Sea was of course not an option. They had plans to make a sustainable transition and needed time for such a transition. The advice on the mechanical cockle fisheries was split in two. The fisheries (A1) advised to give room and time for the sustainable transit they had in mind. They argued that banning the mechanical cockle fisheries from the Wadden Sea would have large consequences for the processing industry. The nature organisations (B2) advised to ban the mechanical

cockle fisheries from the Wadden Sea. They argued that EVA II showed that the mechanical cockle fisheries were not sustainable and the sector could never become sustainable. During the PAG there was no convergence of positions with regard to the mechanical cockle fisheries. Each party interpreted the EVA II results in his own way. It is clear that in the case of EVA II consensus-building foundered on differences in perceptions of A1 and B2 worldviews. It has to be noted that the personal relations between the actors were wasted and the polarisation was very large. There was no intention to make concessions, the nature organisations waited on the results of the legal track. This could have contributed to the failing of consensus-building. The parties did reach an agreement on the mussel fisheries, which could make a sustainable transition. This agreement on the mussel fisheries contained general provisions on where to fish and where not to fish. But it did not contain a detailed plan of how to make a sustainable transit and how to enforce this agreement.

The conflict during the IMSA process focused on whether gas mining in the Wadden Sea should be allowed. It was a conflict between A1/B1 worldviews and a B2 worldview. The IMSA process resulted in a common declaration that stated that the Wadden Sea was deteriorating and that a commission had to be established that would address nature, fisheries and gas mining in the Wadden Sea and advice on an integrated policy. The declaration did not say anything on how the deterioration should be stopped and what should be allowed and what should not be allowed in the Wadden Sea. This declaration represented a compromise. The Wadden Association wanted to test both the gas mining and fisheries to the Birds and Habitats Directive, but realised that the debate about a new policy was stuck. Something had to happen. Within the Wadden Association there were also people who had a more pragmatic stance towards gas mining. IMSA and the NAM wanted to allow gas mining. The fisheries were seen by all parties as harmful. The differences in perception concerned the gas mining, not the fisheries. The differences in perception on gas mining had not been bridged. The declaration did not contain anything on either gas mining or fishing except that a commission would be established that had to advise on an integrated Wadden Sea policy with regard to gas mining, shellfish fisheries and nature. Signing the declaration did not mean committing to the advice of the desired commission; it was thus safe to sign.

The House of Representatives had to decide on the gas mining and shellfish fisheries in 1999 and 2004. The conflict in the House of Representatives was between parties with a B2 worldview and parties with a B1/A1 worldview. The conflict was about allowing human activities in the Wadden Sea or not and about accepting or not accepting uncertainties.

With regard to the shellfish fisheries in 1999 the parties with the B1 and A1 worldviews wanted to allow the mechanical cockle fisheries, while the parties with a B2 worldview wanted to ban them from the Wadden Sea. The majority voted in favour of the mechanical cockle fisheries and continuation of the SCFP. However, in the fall of 2004, the CDA, PvdA, SGP, CU agreed to the decision of the Dutch cabinet to ban the mechanical cockle fishery from the Wadden Sea and decided to buy them out. This acceptance did not represent a consensus. The ruling of the European Court of Justice and the resulting reversal of the burden of proof had made the buying out unavoidable in their eyes. It could not be proven that the mechanical cockle fisheries were harmful, nor could it be proven that it wasn't harmful. Also the commission Meijer had advised to give the mechanical cockle fisheries seven years to make their

sustainable transit, but the fishermen had made clear this was impossible and turned down this offer. The conditions for this sustainable transit were strict and the risk of failure had to be carried by the sector. There was little choice left. The cabinet had decided already and had talked with all parties. The CDA, PvdA, SGP, CU never believed the mechanical cockle fisheries to be very harmful. In the first reaction to EVA II, the minister of DANF saw possibilities for the mechanical cockle fisheries. The political parties decided that the buying out should be accompanied by a proper compensation. These parties also asked for more room and certainties for the mussel fisheries.

With regard to the gas mining the VVD (B1/A1) was the only one in favour of gas mining in 1999, all other parties (B1 & B2) opposed. The B1 political parties used much more B2 arguments with regard to the gas mining. The risks of gas mining were seen as too large. However, in 2004 only Groenlinks (B2) and PvdA (B2) still opposed. All other parties had made a switch and believed the 'hand on the tap' principle offered a possibility to manage the uncertainties. They argued that there was an economic need to mine the gas. Most interesting is the switch of D66 that always had a B2 worldview and now wanted to allow gas mining. Some believe this was a political deal that D66 was willing to shift on gas mining, but that the mechanical cockle fisheries had to be banned. There was a scientific consensus that gas could be mined without significant negative effects and the gas constituted economic gains.

In conclusion, the second hypothesis is accepted. Creating a common perception between the B2 actors and B1 or A1 actors was difficult during the entire process. In the case of the PAG EVA II it was not even possible to make a compromise concerning the mechanical cockle fisheries; the differences in perception were too large. In the IMSA process the fisheries had been excluded and the common declaration represented a compromise, leaving room for different opinions about gas mining. Also the final decision of the House of Representatives represents a compromise that was almost forced upon them. Consensus could not be formed, because the differences in perceptions could never be bridged, not even at the beginning of the discussion. The polarisation of the debate worsened the situation.

5.4.3 Hypothesis 3: How compromise is reached

Hypothesis 3: When one tries to create agreement between actors in an interactive process consensus arises when: (a) the interactive process is exclusive and only contains one worldview, (b) actors change their worldview and as a result there is only one worldview present in the interactive process, (c) alliances are formed between two worldviews within the interactive process.

This hypothesis indicates when agreement between worldviews is possible. During the EVA II process there was neither consensus nor compromise possible. The discussion during EVA II included fisheries and nature organisations, but differences in worldview made sure the perceptions could not be bridged. In addition the discussion was polarised and personal relations had deteriorated. The nature organisations had taken their resort to law suits. This contributed to the failing of the consensus-building of EVA II.

In the IMSA process not all actors and worldviews were included. IMSA took up the role of process manager, but had a clear vision of the problem and solution. IMSA tried to bring the NAM together with the nature organisations in order to come to the

win-win situation IMSA had envisaged. The fisheries with their A1/A2 worldview were not involved in the IMSA process. This made it much easier to come to a common declaration. However, the conflict on the gas mining between the NAM and the nature organisations was not immediately solved. Internally, the Wadden Association was divided with regard to gas mining in the Wadden Sea. The Wadden Association contained a mixture of B1 and B2 worldviews. On the one hand they felt that gas mining did not belong in a nature reserve such as the Wadden Sea, but on the other hand they realised that the gas mining might not be as harmful as they believed it to be. A part of the Wadden Association was willing to discuss gas mining and determine boundaries in which this activity could take place. The Wadden Sea signed the declaration because they realised that the policy development surrounding the Wadden Sea was stuck. In addition, the declaration was very general and mainly stated their common concern that the Wadden Sea was deteriorating. Agreement that shellfisheries were a cause of deterioration existed in the IMSA process. The Wadden Association took the chance that the commission they had asked for would issue a positive advice on gas mining. The gas mining was not brought explicitly under discussion in the IMSA process. When the Commission Meijer advised to allow gas mining and to give the mechanical cockle fisheries seven years to make a sustainable transit, the Wadden Association opposed. But at that time the perceptions of the Wadden Sea with regard to gas mining had started to shift to a B1, less risk adverse position. The scientific arguments for opposing gas mining had disappeared. Only the moral opposition against gas mining was left. The Wadden Association was involved in the elaboration of the 'hand on the tap' principle, whereas the Birds Protection Agency initiated a law suit against gas mining. The more pragmatic B1 view of a part of the Wadden Association won in the end. They realised that gas mining would stand the legal test, but the internal division had never been bridged completely.

An important factor in the final cabinet decision was the linking of two previously unrelated debates by IMSA. The Wadden Association had participated because the policy development surrounding the Wadden Sea was stuck. The linking brought gas mining back into the discussion and created more room for manoeuvre in politics. The linking also made it possible to review the shellfish fisheries once more, but the shellfish fisheries themselves had little or no role in this process. Because of this exclusion it was easier to create a common perception on the harmfulness of shellfish fisheries. The vision of the mechanical cockle fisheries on sustainable fishery was not considered much. The Commission Meijer concluded that the mechanical cockle fisheries had to make a sustainable transit in seven years while closing additional areas and advising on a higher (ecological) food reservation for birds. This advice did not leave much room for the mechanical cockle fisheries to develop their sustainable fishery vision.

In 1999 the House of Representatives voted by means of majority voting in favour of continuing the SCFP, but against gas mining. The CDA, PvdA, SGP and CU had a B1 position with regard to fisheries, but a B2 position with regard to mining.

In 2004 the House of Representatives accepted the cabinet's decision to ban the mechanical cockle fisheries and allow gas mining. This acceptance was almost unavoidable. The cabinet had decided already and had talked with all parties, including the fisheries. Because of additional closure of areas, higher food reservation and a time period of seven years to make a sustainable transit the mechanical cockle had to agree to the suggestion of a buying out, they did not feel they had enough room

to bring their sustainable plans into practice. An important factor in this decision was also that if the sustainable transit would fail, there would be no buying out or compensation. In addition, the pre-judgement of the European Court of Justice would mean a reversal of the burden of proof. It was very hard for the mechanical cockle fisheries they were not harmful, all though the opposite could not be proved either. Thus the mechanical cockle fisheries had agreed to a buying out before the decision was discussed in the House of Representatives. Furthermore, the linking of the gas mining and shellfish fishery debate created room for political manoeuvring that made a deal possible. A majority of the House of Representatives would have been in favour of continuing and making the mechanical cockle fisheries more sustainable, but because this was no longer a possibility, these parties asked for more room and certainty for the mussel fisheries, they also wanted to have more money for the buying out than planned.

To summarise; the PAG EVA II was an inclusive process. But because the debate had polarised, alliance could not be formed and since none of the actors were open to each other's arguments a change of worldviews was also unlikely. The PAG did not reach agreement on the mechanical cockle fisheries. The IMSA process was the starting point for a shift in the dominant worldview within the Wadden Association. Together with an exclusion of the shellfish fisheries and the connecting of two previously unconnected debates this led to the possibility to come to a common declaration and to finally come to a solution of the debate. The 2004 decision of the House of Representatives represented a forced alliance, but was not an alliance as envisaged by the CT. In conclusion, the third hypothesis can't be accepted. All though the exclusion of actors in the IMSA process had played a crucial role in the climax of this debate, the linking of the gas mining debate and the shellfish fisheries debate was more important.

5.4.4 Hypothesis 4: Why compromise is actually halfway compromise

Hypothesis 4: When agreement is reached between actors with different worldviews this will lead to problems in a succeeding (implementation) phase because: (a) the outcomes of the interactive process in which not all worldviews are involved have typical pitfalls or blind spots and may therefore be seen as halfway compromise; (b) the (general) agreement is interpreted differently by the actors; (c) in the grassroots support the underlying areas of disagreement are still reflected.

This hypothesis states why agreements lead to problems in the implementation phase and eventually halfway compromise. To what extent did problems arise in the implementation phase after the cabinet's decision? And could this decision be seen as halfway compromise?

The cabinet's decision was the final decision that brought together the different advices. The mechanical cockle fisheries were bought out, gas mining was allowed and mussel fisheries had to become more sustainable. The buying out of the mechanical cockle fisheries was decided in consultation with the sector itself, they had unwillingly agreed to it. They wanted to continue fishing and felt they could become more sustainable, but the techniques they planned on using had never been tried before. If they would fail there would be no financial compensation. In addition, the food reservation would be increased and additional areas would be closed. There was no room to do experiments and to make a sustainable transit.

In subsequent years the mechanical cockle fisheries was bought out and gas was mined by using the 'hand on the tap' principle. There seemed to be no major problems in the implementation phase. The whole debate was sealed with a cabinet's decision. This decision could be enforced and was not up for discussion again.

The main problems occurred with regard to the mussel fisheries. The mussel fisheries were allowed to make a sustainable transit in accordance with the advices of the PAG EVA II and the Commission Meijer. But how exactly this sustainable transit had to take place was not clear. These general agreements were interpreted differently by the fisheries and nature organisations.

The House of Representatives had given much space for the mussel fisheries as a 'compensation' for the decision to buy out the mechanical cockle fisheries. This decision of the House of Representatives was motivated by the fact that a majority was still in favour of shellfish fisheries taking place in the Wadden Sea. Their position had not shifted, but they were confronted with circumstances that made it impossible to continue the mechanical cockle fisheries. They could make sure the mussel fisheries could keep fishing. At that time there were scientists that claimed that the mussel fisheries had more negative effects than previously thought. The mussel fisheries were reluctant to come to a shared perspective on the future of the mussel fisheries with nature organisations. They feared that this would lead to many impediments. The nature organisations initiated law suits and they won in 2006. Fishing permits were denied. The relation between nature organisations and mussel fisheries rapidly deteriorated again. Currently there is an agreement on the future of mussel fisheries and nature recovery.

These problems arose because of a combination of factors. The linking of the gas mining and shellfish fisheries debates gave room for new assessments of both gas mining and shellfish fisheries. The exclusion of the fisheries from the IMSA process made it possible to create a common perception of the harmfulness of the mechanical cockle fisheries. The plans for a sustainable mechanical cockle fishery were left out of the debate. The majority in the House of Representatives still had sympathy for the fisheries. They gave room to the mussel fisheries. However, the general agreements on the mussel fisheries had been interpreted differently. Within the nature organisations the idea persisted that the shellfish fisheries could not stand the test of the Habitats Directive. This was enforced when scientists claimed that the mussel fishery was more harmful than previously thought. The Wadden Sea was only deteriorating and the precautionary principle should thus be applied. The fisheries wanted to take measures, but also wanted to have a profitable business and were reluctant to embark on future perspectives and agreements.

In conclusion, the fourth hypothesis can be accepted. All though it is difficult to indicate why separate advices or decisions led to a halfway compromise, the overall process did lead to halfway compromise with regard to the mussel fisheries. After a decade of discussions and uncertainties for the shellfish fisheries, there seemed to be a final decision and a new policy. However, this decision and the new policy were interpreted or seen differently by the actors. Again part 4a of the hypothesis did not apply. Exclusion of the shellfish fisheries from the IMSA process did not result in a solution with typical blind spots or pitfalls.

6. Conclusion: The role of worldviews in interactive processes and the scope for reaching consensus

6.1 Introduction

The aim of this research was to examine if worldviews were an important explanatory factor to explain why in some interactive processes deadlock and halfway compromise occurred. After the two case studies, the main question of this research can be answered: to what extent can the involvement of different worldviews in the interactive process explain the occurrence of deadlock and halfway compromise in the selected interactive processes?

The worldview approach assumes that conflicts between worldviews can't be resolved and lead to deadlock and halfway compromise. This assumption was tested by means of four hypotheses in two case studies. Section 6.2 discusses these hypotheses based on the findings. Thereby the worldview approach is tested. In section 6.2.1 we'll see to what extent conflicts between actors are indeed conflicts between worldviews (hypothesis 1). According to the worldview approach these conflicts between worldviews arise in interactive processes because of differences in perception between worldviews. These conflicts between worldviews can't be bridged. In section 6.2.2 we'll see if indeed consensus building failed for this reason and whether the interactive process leads to deadlock or compromise (hypothesis 2). Section 6.2.3 discusses how agreements were reached (hypothesis 3). Was consensus only possible between similar worldviews and could worldviews overcome their conflict by making a package deal or compromise? Finally, in section 6.2.4 we'll see if the agreements indeed led to problems in implementation and halfway compromise and why this halfway compromise arose (hypothesis 4). Section 2.6.5 will sum the above up in a brief answer to the main question.

Section 6.3 contains the discussion. In section 6.3.1 the worldview approach itself is discussed based on the findings of the case studies. Section 6.3.2 discusses the methodology used in this research. Section 6.3.3 takes stock of the usefulness of the worldview approach. What is the value of the worldview approach as applied in this thesis and under which conditions can this type of analysis be conducted? Finally, section 6.3.4 answers the second question of this research: What lessons can be learnt for interactive policy-making in general from the insights in the role worldviews played in causing deadlock and halfway compromise?

6.2 Conclusions

6.2.1 Hypothesis 1: why conflict arises in interactive processes

To what extent are worldviews an explanatory factor in the occurrence of conflicts in interactive processes?

The Scheldt Estuary case showed that the conflicts that occurred in interactive processes were not always conflicts between worldviews. Whether worldviews are an explanatory factor in conflict depends on the type of discussion. The conflict on the deepening was a conflict between regions and was primarily a discussion determined by cultural-historical factors. In these types of discussions the differences between worldviews do not cause conflicts to arise, instead different worldviews in one region

unite in a common opposition to the other region. Distrust, international relations and historical factors are factors that better explain conflict in this type of discussion.

The conflicts on the nature compensation and nature restoration in the Scheldt Estuary and the discussions on the mechanical cockle fisheries in the Wadden Sea were conflicts that took place between different worldviews. This discussion was determined by socio-economic and ecological factors. The conflicts that arose were typical disagreements one would expect to arise between different worldviews and arose mainly from different perceptions of nature and the problems and solutions actors perceived based on their perception of nature. Conflicts did not arise from different perceptions of human nature.

It is interesting to note that with regard to the discussions on nature restoration and de-poldering in the Scheldt Estuary, conflict did not only arise from a difference in worldviews, but also from a cultural-historical background relating to the century long fight against the water.

The worldviews do not contain cultural and historical factors and are therefore ill equipped to explain conflicts that are mostly determined by (contextual) factors, such as historically grown relations and culture. Rather according to the Cultural Theory ways of life or worldviews transcend culture, hence different contexts still give rise to similar conflicts. However, the Scheldt Estuary showed that the worldviews do not always transcend culture and historic context. At times these cultural and historic (and possibly other) factors are more important for the content of conflict and the possibility to solve the conflict than worldviews are. This raises questions as to how and when a worldview approach should be applied. Are cultural and historical factors merely other factors that also may explain conflict, or is it an omission in the worldview approach? Section 6.3.1 discusses this issue further.

Thus the worldviews explain to a large extent the conflict that arises in interactive processes when the discussion has a socio-economic and ecological background. Furthermore, cultural and historical aspects can add an extra dimension to conflicts between worldviews. When the discussion has a clear cultural-historical or geopolitical background the worldviews don't explain the conflict that arise, rather power struggles, international (or interregional) relations, historical and cultural factors play a larger role in the conflict than the worldviews do.

Thus hypothesis 1 has to be amended:

When different actors with different worldviews are brought together in an interactive process, this will lead to disagreement between the different worldviews when the discussion is a socio-economic and ecological discussion.

When conflicts between worldviews arise, between which worldviews is conflict most likely to arise? Theoretically, conflicts could arise between any of the four worldviews. Intuitively one would expect A and B worldviews to conflict more often. The case studies showed that in the case of the discussion on nature in the Scheldt Estuary the conflicts arose mainly between A and B worldviews, while in the case of the mechanical cockle fisheries in the Wadden Sea the conflicts arose mainly between B2 actors and a coalition of B1 and A1 actors. This difference might be explained by the role uncertainty played in both cases, which is related to the different roles science fulfilled in both cases.

In the case of the Wadden Sea science had been disputed from the start. Because science was disputed and because uncertainties persisted, the main question was how much uncertainty on the harmfulness of shellfish fisheries and gas mining was allowed. This question was also posed in the light of testing the human activities to the European Birds and Habitats Directive and the precautionary principle. The B2 worldview is risk avert, while the B1 and A1 worldviews are more tolerant towards risks and uncertainties.

In the case of the Scheldt Estuary science was used to provide objective data. There were uncertainties in the Scheldt Estuary case too, but the models used to predict the effects were not questioned. The discussion in the Scheldt Estuary focused on whether nature could be restored by means of measures taken in the Estuary or whether depoldering was necessary. This discussion did not revolve around uncertainties but around diverging perceptions of nature and the importance of nature.

Conflicts thus do not necessarily have to take place between A and B worldviews only. When uncertainties play a large role in the discussions the conflict will likely take place between B2 worldviews and A1 and B1 worldviews.

6.2.2 Hypothesis 2: Why true consensus is difficult to achieve

When conflicts took place between worldviews, to what extent could these conflicts be solved or to what extent did consensus-building fail and conflicts became deadlocks? Could the failing of consensus-building and the occurrence of deadlock be explained by the differences in perception between worldviews?

This research shows that consensus-building failed because of the differences in perception between worldviews. In the case of the Wadden Sea this even resulted in deadlock in the EVA II process. But this study also shows that in many cases agreement could be reached despite the conflicts that took place between worldviews. However, these agreements did not represent a consensus entailing a common perception. The agreement was either a compromise covering underlying differences up or it was an agreement between similar worldviews. Differences in perception often persisted underneath the surface of the agreements. These conflicts resurfaced in a later planning phase. Achieving true consensus appeared to be a step too far.

In the case of the mechanical cockle fisheries it proved to be almost impossible to reach an agreement between the cockle fisheries and the nature organisations. The EVA II process resulted in a split advice and deadlock. It was impossible to bridge the conflict between nature organisations and cockle fisheries. In the IMSA process the fisheries were excluded, which reduced the potential for conflict.

The differences in worldview and perceptions of nature between the fisheries and the nature organisations were too large and could not be bridged. But the conflicting worldviews were not the only factor that caused the deadlock between fisheries and nature organisations. The deteriorated personal relations between representatives and the decision of the nature organisations to start a legal track to be put in the right on the use of the precautionary principle put a heavy additional strain on the discussions.

In the case of the Scheldt Estuary a similar potential for conflict existed between nature organisations, the port of Antwerp and agriculture. But the interactive process (OAP) did not end in deadlock, but rather ended in a unanimous advice and part of the conflict could be bridged. In the OAP advice the conflict on the accessibility of the port of Antwerp could be bridged and the conflict on nature restoration was covered

up by using the term 'estuarine nature' and leaving it undecided how 'estuarine nature' would be developed. Why could agreement be reached in the case of the Scheldt Estuary and not in case of the Wadden Sea?

First of all because the OAP discussion took place at a higher, more abstract level, while the discussion on shellfish fisheries was about the admissibility of the mechanical cockle fisheries. Therefore, the difficult discussions could and were pushed into the future in the OAP, but they could not be pushed into the future in the case of the mechanical cockle fisheries. It was harder to cover up the differences in worldview with a general agreement in the case of the Wadden Sea. The OAP could push the discussion of how and where 'estuarine nature' would be developed into the future. This discussion would prove to be most discordant and resurfaced later on.

Second, the Scheldt Estuary has a history of economic use. Interweaving of economic and ecological functions may be more accepted in the Scheldt Estuary than in the Wadden Sea. In the case of the Wadden Sea, an important part of the resistance to the fisheries and gas mining, was because such commercial activities should not take place in a nature reserve in the first place. The discussion on the third deepening of the Western Scheldt was less discordant because the navigational function of the Scheldt Estuary was more accepted. The discussion surrounding the deepening was not about whether the Western Scheldt should have a navigational function, but was about the negative effects deepening would have and about Zeeland feeling they had to carry the burden of the deepening while Flanders would benefit.

The conflicts in the House of Representatives also represented compromises. Differences in perception between political parties persisted despite ratification or acceptance.

The second hypothesis assumes that the possibility to solve conflicts in interactive processes is related to the presence of different worldviews. In case the debate was an ecological debate the possibility to solve the conflict was related to the presence of different worldviews. More importantly the possibility to solve the conflict was related to the differences in perception between different worldviews. Differences in perception between worldviews made it hard to bridge the conflicts that arose. General agreements could be made between different worldviews, but these agreements represented compromise and not a common perception. Thus hypothesis 2 is accepted:

When one tries to create a consensus between different worldviews these attempts will founder on underlying differences in perception.

6.2.3 Hypothesis 3: How agreements are reached

How are the agreements reached? According to the CT, agreement is only possible between similar worldviews, in which case it represents a consensus. Otherwise agreement is possible in case of compromise when different worldviews form an alliance. According to the CT, worldviews form alliances because they realise they are stronger together. The other worldview would make up for their own blind spots.

This research shows that despite conflicts between worldviews, agreements are formed on multiple occasions. Most of these agreements were compromises. These compromises were enabled in different ways; actors formed an alliance with actors with a different worldview, actors were excluded from interactive process and, perhaps most importantly, debates were connected that were previously unrelated, thereby creating a situation in which benefits arose for multiple actors.

On more than one occasion compromise arose because an alliance between different worldviews formed. In the BOWS an alliance arose between A1 actors and a B1 actor. In the case of the mechanical cockle fisheries alliance were formed between A1 and B1 actors as well. The alliances or coalitions that enabled these compromises did not represent typical alliances between different worldviews. In a typical alliance between different worldviews, actors form the alliance because it would make up for their weaknesses. In practice alliances (*gelegenheidscoalities*) are not formed because actors feel their plans have weaknesses, rather the alliances are formed for different reasons.

The BOWS process showed that public support can be a very important reason to form an alliance with different worldviews. Public support is especially important for actors that have to implement a plan or that represent an electorate. The importance of support can also be seen in the decision of the House of Representatives to develop estuarine nature by means of other measures than de-poldering. In such a case the actor who looks for support adjusts its own perceptions a little, so that it matches with the popular view.

An other important reason to form an alliance is that for most parties a so called win-win situation is possible, as happened in the OAP. Burden-benefit appraisals are made. However, some actors may benefit more than other actors. The wish to be included in decision-making, when an issue seems to be unavoidable, and the connecting of different topics in a discussion are also important factors that will foster agreement.

The coupling of debates proved to be important in both the case of the Scheldt Estuary and the mechanical cockle fisheries in the Wadden Sea.

In the case of the Scheldt Estuary, nature, safety and accessibility of the port of Antwerp were all under discussion at once. Because of this package, the possible benefits for actors were much larger and a package deal was easier to make. The nature discussion was no longer on its own, as was the case in the BOWS, but was part of a whole package. The underlying differences concerning how nature should be developed could not be bridged, but because of the package, an agreement could be made which pushed the real discussion on how and where the 'estuarine nature' should be developed into the future.

In the case of the mechanical cockle fisheries in the Wadden Sea the coupling of debates was also an important strategy to make progress and come to an agreement. In the PAG EVA II, which discussed the shellfish fisheries in the Wadden Sea, the nature organisations and mechanical cockle fisheries could not agree. The IMSA process contributed to the final resolution by connecting the debates on shellfish fisheries and gas mining. Connecting the debates on shellfish fisheries and gas mining was crucial in the IMSA process. It gave room to assess both gas mining and shellfish fisheries once more. This led to the conclusion that the mechanical cockle fisheries would be harmful. Because the shellfish fisheries were excluded the discord on this debate had disappeared. The agreement between actors on the harmfulness of the shellfish fisheries gave room to open discussions on gas mining, even though differences in opinion on gas mining persisted. This led to a new win-win situation for certain parties, while others were excluded.

Also in the House of Representatives the connection of debates was an important factor in decision-making. In the case of the Scheldt Treaties several parties decided to ratify these treaties, despite the fact that they contained some de-poldering, because otherwise it would mean that the deepening would be delayed even more.

International relations and the promise of the minister to look for alternatives to de-poldering led the majority of the political parties to ratification of the Scheldt Treaties. In the case of the mechanical cockle fisheries the linking of the gas mining debate and the shellfish fisheries debate gave room for a package deal at the political level.

Hypothesis 3 was not accepted. Once agreement was formed by means of excluding an actor, but this did not mean exclusion of other actors with different worldviews. A change of worldview did not really occur. Agreements did come about by forming alliances, but these alliances were formed for other reasons than the CT envisaged. Public support, changing cost-benefit appraisals, and the connection of unrelated debates fostered the reaching of compromises.

6.2.4 Hypothesis 4: Why compromise is actually halfway compromise

Why did the agreements or compromises lead to problems in the implementation phase and thus halfway compromises?

In both case-studies problems occurred in the implementation phase. Most problems stemmed from general agreements that were in the end interpreted differently by different actors (with different worldviews).

In the case of the Scheldt Estuary the main problem in the implementation phase of the Development Outline was the disagreement on how and where 'estuarine nature' had to be developed. Because of the conscious use of the term 'estuarine nature' in the OAP advice this difficult discussion was deliberately pushed into the implementation phase. And although agriculture had some gains from the OAP advice, such as a flanking policy, the discord on what the term 'estuarine nature' meant remained. Agriculture saw in the term 'estuarine nature' a possibility to take measures *in* the Estuary, but according to nature organisations 'estuarine nature' could only be developed by means of de-poldering. This different interpretation of the term estuarine nature and the fact that the grassroots support of agriculture, and many citizens of Zeeland more generally, also did not want de-poldering and also interpreted 'estuarine nature' similarly as agriculture did, caused the storm of protest against de-poldering. The cultural-historical aversion to de-poldering contributed to the strength of the protest. The strong protest from grassroots support caused the House of Representatives to become very reluctant towards de-poldering and made them turn down de-poldering in the end because 'de-poldering was not wanted by the people of Zeeland'.

In the case of the mechanical cockle fisheries there were few problems with regard to the banning of the mechanical cockle fisheries from the Wadden Sea or with the allowance of gas mining. Questions about the fairness of the process and whether it was justified to close down the mechanical cockle fisheries or to compensate them will not be discussed nor answered in this thesis. The status of the final decision, being a cabinet's decision, ensured that the implementation of the decision with regard to gas mining and the mechanical cockle fisheries went rather smooth. There didn't seem to be a typical pitfall because the mechanical cockle fisheries were excluded from this decision.

The problems occurred with regard to the sustainable transit of the mussel fisheries. The advices of the PAG EVA II and the Commission Meijer contained agreements that the mussel fisheries had to make a sustainable transit. These advices were not very specific as to what the sustainable transit exactly entailed or what aims it had to meet. The Commission Meijer gave the mussel fisheries fifteen years to make this

transit. The nature organisations read in these agreements that the mussel fisheries would also have to meet the precautionary principle. The fisheries saw this as a possibility to implement the plans they had on sustainable mussel fisheries. The expectations of a sustainable transit diverged.

Part of these problems also occurred because the cabinet's decision was forced upon a number of political parties. These parties did not want to ban the mechanical cockle fisheries, but felt obliged because of circumstances, not in the least because the mechanical cockle sector had reluctantly agreed to the buying out. In exchange the House of Representatives gave more room to the mussel fisheries. This upset the nature organisations.

Thus the compromises that were reached were in fact halfway compromises. Because of differences in interpretation of the agreements and because of grassroots protest, it was exceedingly difficult to implement the agreement. However, halfway compromises did not arise due to blind spots of agreements as a result of exclusion of some actors. Hypothesis 4b and c are accepted, hypothesis 4a is not accepted. The fourth hypothesis will be amended as follows:

Hypothesis 4: When agreement is reached between actors with different worldviews this will lead to problems in a succeeding (implementation) phase because:

(b) the (general) agreement is interpreted differently by the actors;

(c) in the grassroots support the underlying areas of disagreement are still reflected.

6.2.5 Worldviews as explanatory factor for deadlock and halfway compromise

Then finally to answer the main question of this research: how and to what extent can the progression of interactive processes be explained by the different worldviews of involved parties?

In a discussion on socio-economic and ecological aspects the conflicts that arise are conflicts between worldviews. Differences in perception between worldviews are the basis of the conflicts that arise in these types of discussions. The differences in perception between worldviews could not be bridged. Differences in perception persisted underneath the surface of the agreements. Consensus did not occur between different worldviews.

The agreements mostly came about because of the coupling of previously unrelated debates and a resulting changed benefit-burden appraisal. Win-win situations and public support were reasons for different worldviews to come to a compromise. But conflicts persisted. Conflicts were covered up with general agreements. The conflicts resurfaced in the implementation phase because the actors interpreted the worldviews differently and because they feel supported by their grassroots support.

6.3 Discussion

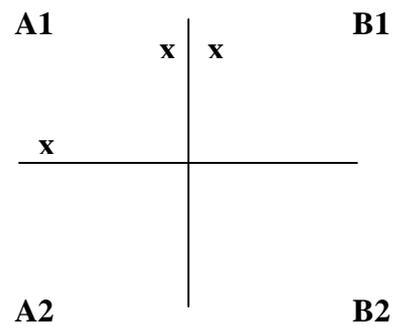
6.3.1 Discussing the worldview approach

What do the findings of this research mean for the worldview approach and Thompson's Cultural Theory?

One of the main points of contention between the Cultural Theory and the MNP's worldview approach was about whether or not the worldviews, or ways of life, are mutually exclusive. The Cultural Theory states that the worldviews are mutually exclusive and therefore does not place the worldviews on a scale. But according to the

MNP, worldviews are not mutually exclusive. The MNP positions worldviews on two axes. This would mean that worldviews that are positioned on either side of an axis (and thus having a different worldview) may have more in common than those positioned within the same worldview, as showed in figure 6.1. This research assumed that the worldviews were mutually exclusive, because it would be easier to work with. However this research showed that the boundaries between worldviews are not as clear as they seemed. In addition, actors can have characteristics of multiple worldviews. This seems to point out that the worldview might not be so mutually exclusive and that the MNP's approach is more realistic. Would this mean that conflicts between worldviews are easier solved than previously thought? The findings of this research suggests otherwise. The implications of placing the worldviews on axes and the idea that there might be gradations of worldviews need to be thought trough.

Figure 6.1: worldviews placed on scale



Not only are there differences in opinion on how mutually exclusive worldviews are, but in the literature on Cultural Theory and worldviews there are also different opinions on how stable worldviews are. The interpretation of Mary Douglas is that worldviews are hegemonic and apply to all domains in life. Thompson and Wildavsky see the worldviews as more context dependent and thus the worldview of an actor may vary depending on the context. The answer might lie in the middle. The worldview to some extent depends on the context. For example the perception of nature is not as predetermined as Mary Douglas might seem to think. Depending on the area and the activity taking place there, an actor may have a different view of how stable that specific nature reserve is and how much it can take in terms of human interference. This might influence the worldview an actor takes in that discussion. But the findings of this research also show that all though actors may change worldviews a little, they do not change worldview radically. This means that some change of nuance is possible, perhaps as a shift on the axes of figure 6.1, but one should not expect actors to radically change worldview in an interactive process. This also fits the notion that there are gradations of worldviews. This does not make the use of the worldview approach easier, but it does put it in perspective.

Interesting to note with regard to nuances is the role the A2 worldview played in the case studies. Chapter 2 noted that actors with an A2 worldview were likely to avoid interactive processes and would not participate because of their distrust. In this research characteristics of the A2 worldview, or fatalists, as they are called in the Cultural Theory, were present in a variety of actors. These A2 characteristics were mainly related to the lodging of appeals, threats of law suits, distrust and a protection of own interests. The presence of such characteristics are a nuance to the main worldview that indicates dissatisfaction with the discussions and mainly form a threat to give their position extra strength. Perhaps it is true that real fatalists or adherents to the A2 worldview do not enter into the discussions. But the A2 solutions, such as law suits or threatening with law suits, are frequently employed by other worldviews and are not exclusive to A2 worldviews. Distrust in the discussions brings up these A2 aspects easily.

The worldviews as categories have been discussed sufficiently now. But the worldviews on their own do not form a theory. The Cultural Theory envisaged how these worldviews would interact, form alliances and break up. Based on this, four hypotheses were designed. A part of these hypotheses could be accepted based on the findings of this research, but part of them did not match the findings of this research. Worldviews indeed were an important factor in explaining conflict in nature-economy discussions. The differences in perception between worldviews were a reason why it was difficult to bridge this conflict. But still compromises could be made between actors with different worldviews. The Cultural Theory could not explain very well why these agreements and compromises did arise; this part of the theory is rather general and theoretical. Hypothesis 3, stating how compromise or agreement could be reached was not accepted. Especially with regard to the alliances the worldview approach could not sufficiently explain why certain alliances and agreements came about. The reason for forming alliances and making compromises found in practice did not match the reasons as mentioned in the Cultural Theory. In practice the desire for public support, real-politik, the existence of win-win situations, the connection of unrelated debates and room for an own interpretation were reasons to form an alliance or to come to a compromise. However, despite the compromise, difference in perception persisted.

Hypothesis 4 indicated why according to the Cultural Theory halfway compromise arises. The worldview approach showed that the compromises that were formed ran the risk of hiding conflict and being interpreted differently. The compromises in this research indeed led to problems in the implementation phases. However, the halfway compromise did not result from blind spots in the agreement because not all worldviews were included. Hence, this part of hypothesis 4 (4a) was not accepted. It was hard to see how the cabinet's decision to ban the mechanical cockle fisheries and to allow mining contained blind spots. This decision did not encounter major implementation problems, all though one might debate on whether this decision was necessary. The implication of both Cultural Theory and the worldview approach that a solution is flawed when not including all worldviews seem to be more normative. Who determines what the flaws of a decision are? And when all worldviews and solutions have a portion of the 'truth', but when they can never really agree, then this would imply that many decisions and agreements are flawed. Yet these decisions may still be effective.

In the conclusions it became apparent that the worldviews are ill equipped to explain conflicts that are geopolitical or culturally and historically determined. Hence one might ask, based on the findings of this research, how applicable or suitable the worldview approach is to all types of discussions? The worldview approach appeared not to be suitable to explain conflict, deadlock and halfway compromise in every type of discussion. The case of the Scheldt Estuary showed us that conflicts that arise in discussions with a strong geopolitical or cultural-historic background are not conflicts between worldviews. The reason why worldviews can explain conflicts in economy-nature discussions well is that the worldviews are to a large extent based on socio-economic and ecological characteristics. Cultural and historical factors are not really included in the worldviews, but these factors can be more important in the conflict than differences in perception, for example when discussing the deepening of the Western Scheldt. One might see this is an omission in the worldview approach or one might say that there are other factors that play a role in conflict, deadlock and halfway

compromise. Section 1.4 pointed out that worldviews are not the only factor in conflicts. Other aspects such as cultural and historical aspects, personal relations, contextual factors, the political weight of the issue, economic interests involved also determine the persistence of conflict and the occurrence of deadlock. These factors have not been taken elaborately into account in this research, but they do play a role. One can conclude that the conflict is based in the different perceptions of the worldviews and that these lingering differences in perception play a large role in the implementation problems of many agreements.

Finally, the findings of this research indicate that the role of the individual in reaching consensus and in determining the worldview might be of importance. The Cultural Theory does not leave much room for elaborations on the individual, as the form of worldview is fundamentally an aggregated concept, the individual is not much considered. The role of the individual is restricted to moving in and out of worldviews or ways of life. Of course organisations will not radically change worldviews, because all other members of the organisation are also co-determining the worldview. But from interviews it became clear that the dominant worldview nuance of an organisation is largely influenced by the perceptions of (influential) individuals within the organisation. It may make much difference if a director or representative is more pragmatic or idealistic in the scope there is for discussion. This does not lead to radically different worldview, but it may change some nuances in the worldview and may give less or more space for reaching agreements.

6.3.2 Discussing the methodology

The worldview approach was not a ready to use, existing methodology. Rather the methodology had to be largely designed for the purposes of this thesis. Obviously, the process of conducting this research has raised points of discussion with regard to the methodology used.

Key to this research was the awarding of worldviews to actors. If this would have proved to be impossible, this research could not have been conducted. It was possible, but the awarding of worldviews to actors was not always straightforward. Several difficulties arose when assigning worldviews to actors.

First, the positions, perceptions and arguments of actors often pointed towards characteristics of different worldviews. Then where were boundaries drawn and how were worldviews assigned?

When an actor mainly had characteristics of one worldview and when these formed a majority, that worldview was assigned to the actor. Some characteristics were deemed more important because it was more at the centre of the actor's argumentation. That does not change the fact that the actor also had characteristics of other worldviews. These other characteristics were often A2 elements related to law suits and distrust. But sometimes it were B elements, while the actor was awarded an A worldview or vice versa. These deviating characteristics were kept in mind, while analysing the interaction between different actors, but there was no systematic way of doing so. The deviating characteristics may provide a nuance to a worldview. The role of these deviations is a topic worth to study more in depth.

At times actors were awarded two or even more worldviews. This was the case when there was no clear dominant worldview and characteristics of multiple worldviews were about equal in number. Sometimes it was possible to pinpoint more important

and less important arguments in the discussion and then the most important arguments determined the worldview of the actor.

Not all arguments, positions and perceptions could be connected as readily to characteristics of a certain worldview. For example with regard to perceptions of nature it was not always clear if a perception, position or argument pointed to the perception that nature was fragile, or that nature was stable within boundaries. Other such difficulties also arose with other characteristics of worldviews.

This was partly due to a lack of information. Sometimes, additional information was needed to determine the worldview behind some arguments, positions or perceptions. The information found in the documents was verified with information from interviews. However, due to time constraints not all parties could be interviewed and the analysis was not always finished before conducting interviews.

Partly problems with the assignment of worldview were due to the fact that the characteristics used to label the actors (as inserted in annex IV) are not necessarily mutually exclusive, gradients of worldviews might exist. This labelling system should therefore be reviewed and be made more specific, leaving less room for choices of the researcher.

To a certain extent the assignment of worldviews depended on the interpretation of the researcher. Whenever it was not clear to which worldview arguments or positions belonged, a choice had to be made. Such choices were mostly choices between A1 and A2 or choices between B1 and B2. The distinction between A and B was mostly easier to make. These choices were made based on the context of the debate and the other arguments and positions the actor used in the debate, internal consistency was sought for. However, because of this deviations from the dominant worldview might be overlooked. There is a risk that when a choice for a worldview has to be made, the choice leans towards the dominant worldview. Choices were never made at random and were always made explicit. Still, the interpretations do add a certain sensitivity to the results.

The worldviews were assigned by the researcher, participants in the interactive process had no say on them. Inquiring more explicitly after the worldview of a participant could reduce this bias. One could develop a questionnaire that would lead to the assignment of a worldview. The findings of the content analysis could be compared to the questionnaire and the worldview the actors assign themselves. Such a questionnaire should ideally be filled-in by more than one person per participating organisation. An other way of reducing the bias of interpretation is triangulation with more data and other researchers. Triangulation with other researchers would pose an opportunity to verify the choice made when awarding worldviews. Consulting an expert panel consisting of scientists familiar with the discussions at hand would be a way of triangulating results. Triangulation with more data, for example with documentation of internal debates of organisations, would give insight in strategic behaviour and hidden agendas in the interactive process and would give more insight in positions that may not be voiced in interactions.

The second crucial element of this research was the testing of the hypotheses. This research showed that other factors also played a role in the conflict that occurred in the interactive processes. Because this thesis focused on worldviews it did not take into account the other factors that might also cause conflict, deadlock and halfway compromise to arise. What is then the explanatory power of the hypotheses? Was the deadlock in the EVA II process caused primarily by the differences in perception or

also because of deteriorated personal relations and law suits and distrust? Ideally, one would set the role worldviews play in causing conflict, deadlock and halfway compromise against the role of other factors that may cause conflict and halfway compromise. This would only be possible in a comprehensive research. Such a comparison did not take place in this research. It is therefore hard to tell which factor was more important in causing conflict. It is clear that the worldviews are the basis of the conflict. But it is important to keep in mind that the testing of the hypotheses may be biased because of the focus on worldviews and by leaving other possible explanatory factors outside the analysis.

This brings us to the problem of tunnel visions and reasoning in circles. According to the theory, conflicts arise between different worldviews and not between actors with a similar worldview. Because the actors were assigned worldviews based on documents on the interactions it is likely that actors who have conflicting positions and use conflicting arguments are awarded a different (and thus conflicting) worldview. The theory is the pair of glasses used to look at the data. The danger of reasoning in circles is very real, the analysis runs the danger of becoming a self-fulfilling prophecy. However, the findings of this research did show that conflicts did not always take place between different worldviews, but that in certain types of discussion the conflict between worldviews may be bridged. This proves that by using this methodology it was possible to assess whether conflicts were conflicts between worldviews without necessarily ending in reasoning in circles. However, the danger of reasoning in circles is real and one might become blind for other configurations of actors and explanations.

Not so much a methodological issue, but very important nonetheless was the availability of information. This research depended on the information present on the interactive processes. The awarding of worldviews took place based on arguments, positions and perceptions retrieved from documents and interviews. The success of such an approach largely depends on the documentation of the policy process and meetings. Ideally, minutes of meetings have to be studied and these have to have a certain level of detail. The level of detail of these minutes is not always as great as desired and in other cases, especially regarding the cockle case, the documents of meetings were sometimes confidential or it took too long to locate them. This research depends on well ordered and well kept archives, but this is often not the case. In instances where documentation could not sufficiently be recovered, interviews were more important for gaining information about perceptions, arguments used and changes in discussions. However, such accounts of the process depend on personal perception and memory and are less objective. The account of the process is determined by the choice of those interviewed. Choosing a different representative to interview may lead to a certain degree to a different account of the process. Finally, due to job switches and full agendas it was not always possible to interview all selected participants.

6.3.3 The usefulness of the worldview approach

It is time to take stock of the pros and cons of the worldview approach. What is the value of the worldview approach and under which conditions can the worldview approach be applied?

Both the MNP and the Cultural Theory apply worldviews to discussions that take place at a high level of abstraction. In this research worldviews are applied to specific interactive processes. To the best of my knowledge, worldviews are never applied to

discussions this specific. This raises the question if worldviews can be applied to specific discussions? What is the value of this approach?

When worldviews are applied to specific discussions the conflicts between actors and worldviews become more outspoken. More importantly by applying worldviews to specific discussions the halfway compromise becomes much more apparent. Only then it gets clear that differences in perception are not side stepped but are persistent. Of course applying the worldviews to specific cases also has its difficulties, which have been discussed in the previous sections. There are some problems with awarding worldviews and the explanatory power of the hypotheses. But despite the weaknesses and difficulties, it is possible to apply the worldviews to specific discussions. This type of research renders interesting insights in conflict and consensus in interactive processes, which would be covered up when analysing the more abstract discussions. It also raises new and interesting questions for the interactive planning practice.

When conducting a similar research specific attention should be paid to other factors that play a role in conflict and halfway compromises that are not included in the worldviews. This would give more insight in the relative importance of the worldviews in conflict and halfway compromise. The findings and awarding of worldviews have to be verified and validated, triangulating with other scientists is therefore recommended. Some aspects of the approach have to be thought through further, such as why alliances form. This research can only be conducted when sufficiently detailed information on interactions is available.

Recommendations for further research are first of all the relative importance of the worldview approach. The findings of this research did show that the worldviews were not the only factor of influence in the arising of conflict, deadlock and halfway compromises in interactive processes.

Second, this research focused on conflicts and interactive processes in which conflicts took place and ended also in deadlock or halfway compromises. It would be very interesting to study the success cases in interactive planning. Did worldviews also played a role in these discussions and why were these cases considered successes? Why did implementation problems not arise in these success cases? How are they different from the problematic cases? Specific attention in such analysis should be paid to the role of the process manager. What tricks did it use and how and why did these work? This may test the conclusions of this research and it may then be better possible to formulate lessons for the interactive planning practice.

6.3.4 Lessons to be learnt for the interactive planning practice

So what lessons can be learnt for the interactive planning practice from the insights in the role worldviews played in causing conflict, deadlock and halfway compromise?

True consensus is difficult to reach. This is not an unknown problem in interactive planning. But perhaps a newer notion is that this difficulty to reach consensus lies for a large part in the fact that actors argue from different premises or worldviews. Therefore, it is difficult to bring the actors together, and to bridge the gap between the different worldviews or perceptions. This is especially the case with regard to nature-economy discussions.

Certain discussions may temporarily unite worldviews, as was the case in the discussion on the deepening, but this does not prevent these differences from rising as soon as the discussion touches upon questions of how nature should be compensated

and how nature and economy should be prioritised. So what does this mean for the interactive planning practice?

This research has shown that it is possible to come to an agreement between different worldviews, but the gap between worldviews often persists underneath the surface of the agreement and resurfaces in a later planning phase. This gap is especially strong when the discussion is about diverging perceptions of nature, for example in discussions that have a clear link to nature and economic activities. In these types of discussions a general commitment to 'stop deterioration of nature' can generally be found. Based on such general commitment an interactive process might be started, after all, there seems to be some common ground. But different perceptions of nature underlie the discussion and the aim of the interactive process may be perceived very differently. It is not that an actor with an A1 or A2 worldview believes nature is unimportant (as sometimes might be thought), but the view of what nature is, what should be done to restore or conserve it and the weighing of nature and economy differs per worldview. It is on these differences that agreement is difficult to find.

Interactive planning was designed as alternative to top-down decision-making by the government. Interactive planning is there to solve a problem. When it does not lead to agreement it is often considered to be a failure. Hence, the interactive processes are focused on achieving consensus or compromise, but often the feasibility of the compromise or consensus is not considered. Difficult discussions are often pushed into the implementation phase. This research showed that because the differences in perception persist and because difficult discussions are pushed into the future halfway compromise occurs. The strong focus of interactive processes on agreement has to be reconsidered when worldviews play a role in the discussions. The worldview approach points out that contestation and struggle are unavoidable. The focus of process managers on reaching a consensus or compromise should be replaced by a focus on the analysis and background of the conflict. Often this latter aspect is considered a given, but only with a proper conflict analysis the scope for interaction can be determined. Based on the conflict analysis a conscious decision has to be made to either use top-down decision-making or interactive planning, or a mixture of the two. Interactive planning is a valuable way of giving a platform to a variety of visions, but it is not always suitable for making decisions when differences in perceptions are persistent.

Advisory committees as interactive body might in that line of thought be useful. The decision-making power does not lie with the committee but with the government. In such a committee agreement should not be the primary focus. Contention between worldviews should be the prime objective of such committees. The full width of the issue under discussion is then discussed. These advisory committees could be in essence the clumsy institutions Thompson & Verweij talk about in their book 'Clumsy Solutions for a Complex World' (2006). Top-down decision-making may then be needed to make a final decision. It might be an illusion that full support and agreement is possible either through top-down decision-making or interactive planning. Interactive planning is not an easy ticket to public support and effective implementation.

Process-managers have the task of guiding the interactive process and facilitating a consensus or compromise. What do the findings of this research mean for the role of the process-manager? What room is there for interventions by process-managers and

what are their chances for success when worldviews play a strong role in the discussions?

The process manager has to come to terms with the fact that differences in perception, for example on what nature is, are not easily solved or changed. The process-manager might have ways of coming to an agreement, but halfway compromise is closely connected to the persistence of differences in worldviews. The process manager has to be aware of these persistent differences in perception. The vaguer an agreement is, the more chance there is that everyone interprets the agreement differently and halfway compromise is then waiting around the corner. At one point, either in the interactive process or by a governmental body, a decision has to be taken how to implement agreements. But when worldviews play a strong role in conflict, the interactive process may not be the place to make such decisions.

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- Dated February 29, 1996 in Oostburg
- Dated March 11, 1996 in Sluis
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ZLTO (2009). Interview held with Mr. De Koeijer, chair of the Zeeland department of the ZLTO, the Southern Agricultural and Horticultural Organisation. On January 19, 2009 in Goes.

ZMF (2009). Interview held with Mr. Klap former staff member of the ZMF, Environmental Federation Zeeland and coördinator of the working group Scheldt Estuary. On March 2, 2009 in Middelburg.

Annex I General interview protocol

General interview protocol in the case of the Scheldt Estuary

Introduction

- Thanking for cooperation and time
- Asking permission for recording interview
- Short explanation research
- Explain the choice for this case and the focus of the case study.
- Indicating which documents were studied and who had been interviewed.

Warming up

- At what time were you involved in the BOWS or OAP or other relevant bodies to this case?
- Why did your organisation participate in this consultation body?

Pointing the main points of discussion out

- What was the position of your organisation in these main debates?
- How did this position relate to the positions of other actors?
- Which problems and which solutions did your organisation see?
- How does your organisation view nature restoration and estuarine nature?
- How were the nature restoration and de-poldering discussed?
 - E.g. were necessity discussed, the amount of nature restoration, and the manner of nature restoration. Who took which position?
- Which main arguments did you use to support your position?
- What counter arguments were used by which actor and how did you view these arguments?

Summarising the agreement or compromise or the failure to do so

- How did the agreement come about?
 - Via convergence or divergence of actors? Which parties converged or diverged and why?
- How would you characterise the outcome or agreement, to what extent was it a consensus or compromise?
- Why was it not possible to come to an agreement in the steering group established after the OAP?
 - E.g. because of differences in perception, division burden-benefit.

Pointing out that there is still much resistance against the plans

- How do you explain that there was an advice or agreement, in the case of the OAP, which broke up afterwards?
- How was the grassroots support informed of the agreement and discussions?
- How did the grassroots support react to the discussions and agreement?
- Why is the resistance against the nature (and deepening) plans so persistent?
- How do you think this discussion will and should end?

Thank and close

General interview protocol in the case of the mechanical cockle fisheries

Introduction

- Thanking for cooperation and time
- Asking permission for recording interview
- Short explanation research
- Explain the choice for this case and the focus of the case study.
- Indicating the documents studied and who had been interviewed.

Warming up

- At what time were you involved in which discussion body in this case?
- Why did your organisation participate in [name of consultation body]
- Why did you not participate in the IMSA process?

Pointing the main points of discussion out (probing for additional info)

- What was the position of your organisation in these main debates?
- How did this position relate to the positions of other actors?
- Which problems and which solutions did your organisation see?
- How does your organisation view the Wadden nature?
- How did the position on/ perception of the harmfulness of the mechanical cockle fisheries change over time?
- Which main arguments did you use to support your position?
- What counter arguments were used by which actor and how did you view these arguments?
- When and why did the discussion on the mechanical cockle fisheries polarise?
- Probe also for positions and perceptions on mussel fisheries and gas mining.

Summarising the agreement or compromise or the failure to do so

- IF THE CASE: How did agreement come about (fishing plans and in IMSA)?
 - Via convergence or divergence of which actors? For what reason?
- How would you characterise the outcome or agreement, to what extent was it a consensus or compromise?
- Why was it not possible to come to an agreement in EVA II on the mechanical cockle fisheries, while an agreement was reached on the mussel fisheries?
- How did the final decision of the Dutch cabinet come about? And how did you feel about this final decision?
- The fisheries agreed to the buying out, under which conditions was this decision made?

Aftermath: Pointing out the current similar discussion on the mussel fisheries

- How do you explain that first the mussel fisheries were allowed to continue (a result of both EVA II and Meijer), but now there is a similar polarisation between the mussel fisheries and nature organisations as was the case with the mechanical cockle fisheries?
- How was the grassroots support informed of the agreement and discussions?
- How did the grassroots support react to the discussions and agreement?
- Why was it never convergence between fisheries and nature never an option?

Thank and close

Annex II Interviewees per case

Case of the Scheldt Estuary

- Mrs. Vermue-Vermue, chair of the Taakgroep Westerschelde, a body in which all Dutch municipalities situated at the banks of the Western Scheldt are represented.
- Mrs. Poppe-de Looff, former chair of the Taakgroep Westerschelde.
- Mr. De Koeijer, chair of the Zeeland department of the ZLTO, the Southern Agricultural and Horticultural Organisation.
- Mr. Klap, former staff member of the ZMF, Environmental Federation Zeeland and coordinator of the working group Scheldt Estuary.
- Mr. Van Bossuyt, staff member of the Boerenbond, the Flemish professional association for farmers.

Case of the mechanical cockle fisheries in the Wadden Sea

- Mr. Holstein, secretary of the PO Kokkels, the producer's organisation for mechanical cockle fishery.
- Mr. Revier, staff member and former director of the Waddenvereniging, a nature organisation aimed at protecting the Wadden Sea.
- Mrs. Tentij, staff member of the Birds Protection Agency
- Mr. Wanders, former director of the Birds Protection Agency
- Mr IJlstra, project leader of the EVAII process and staff member of the ministry of Agriculture, Nature and Food Quality.

Annex III Comparing CT and WA characteristics

	Worldview A1: The global market	The individualist's Way of life
Score dimension	Low group- low grid Self-centred – Large scale	Low group- low grid Self-centred- Large scale
View how world functions	Economic growth is the most important. Economic growth is sustained by improving performance and production. Competition, free trade and technological innovation increase efficiency and keep prices low. Economic growth is the means to improve everyone's situation.	Individualists are market oriented and perceive no boundaries. The free operation of the market mechanism increases wealth and welfare. The world is tough and by daring and skill and enterprise one can be successful and one can improve ones position. Risk is opportunity, the risks of enterprises and applications will be mitigated by future technological developments. In case of failure this is because of bad luck or incompetence.
Preferences/ interests	Economic growth, high performance, increasing income Comfortable, luxurious, stimulating life.	Success has to be measured in material terms. Power, success and performance secure his place at the top and in the middle of the economic network.
View of nature/ sustainability	Nature is a production factor its use is optimised by technological innovation. Sustainability encompasses mainly economic aspects. Only when there is demand for environmental-friendly products companies will produce them. Protection of nature may not inhibit the economy. No conservation for conservation.	Ecosystems are stable and will always return to equilibrium. Nature is controlled by the skill to convert them into raw materials. This view of nature allows for a strategy of trial and error. Raw materials are transferred into economic growth by skill, daring and knowledge.
View of human nature	Egoistic and materialistic	Humans are egoistic and a clash of interest and confrontation are therefore inevitable. Individualists are pragmatic materialists.
Perceived problems	Government intervention,	Hierarchy and limits to personal freedom.
Perceived solutions/ management strategies	Steering by market mechanisms, less government intervention. Technological development. Economic cooperation at international level.	His needs will always increase up to the limits of his skills. The market mechanism and decrease of hierarchy will solve problems most efficiently.
Blind spots	Market failure, externalities	Unable to address certain problems and solutions with the absence of government steering.
Underlying/ connected values	Desire to be admired Performance Ambition Competence Independent Intellectual Rational	-

	Worldview A2: The safe region	The fatalist's Way of life
Score dimension	Low group- high grid Self-centred – small scale	Low group- high grid Self-centred – small scale
View how world functions	The world has changed and is not recognisable anymore. We are concerned about security and welfare. There are many prejudices. This is threatened by outsiders (terrorism, open boundaries). We have to protect what we have and make out life comfortable and be non-descript. Politics has to listen to the wishes of the people and respond to the problems people perceive. Institutions are distrusted.	The world is unpredictable, there are no patterns thus people are unable to recognise, predict and control these patterns of events. Life is like a lottery. The fatalist copes with life as it comes. Life is controlled by fate.
Preferences/ interests	Conservation of own culture, values and norms.	Survival
View of nature/ sustainability	Nature is only important when it concern one's own environment. Especially health related issues are important and as far as nature affects own job. Social issues in terms of employment, migration and security are the most important aspects of sustainability.	Nature is a lottery and is unpredictable, nature can't be controlled.
View of human nature	We are incapable of helping the other. People (have to) take care of themselves and their own problems (and those of their family). People are only responsible for themselves. Distrust. People are family persons.	People can't be trusted and are unpredictable.
Perceived problems	Migration, unemployment, criminality.	Problems of own survival, can't change anything thus no reason to worry about bigger problems.
Perceived solutions/ management strategies	Protect our selves (and society) against unwanted developments. There are winners and losers. Protect our own regions and interests.	None, coping
Blind spots	Protectionism, distrust	Apathy
Underlying/ connected values	Security (for family) Obedience, Conservative, Conformist, Controlled, Polite.	-

	Worldview B1: Global solidarity	The hierarchist's Way of life
Score dimension	High group- low grid Solidarity- Large scale	High group- high grid Solidarity-Large scale
View how world functions	The quality of life is more than money and possessions. Everyone is responsible for society and the other (inter and intra generational equity). Only with solidarity and cooperation there can be a common well-being. The state has to create a regulatory framework for solidarity.	Solidarity and a strong government can ensure common well-being. The authorities act for the greater good. Only when all people have well-being hierarchy can be maintained and justified. Collective sacrifice leads to gain in the future. Differences in economic situation are justified by differences in education and specialisation.
Preferences/ interests	Solidarity, equality, responsibility for own actions, freedom and wealth important but within boundaries.	Common well-being, solidarity.
View of nature/ sustainability	Nature is important as it is a production factor, but nature has also intrinsic value and serves as source for relaxation and recreation. Nature is complex and has many interrelations, therefore conserving nature is important. Nature is common heritage.	Ecosystems are stable only up to certain thresholds, when these thresholds are exceeded a shift and possible collapse result. Therefore, careful management of resources is necessary. Both social and ecological aspects are important for sustainability.
View of human nature	People have a sense of responsibility, feel involved and are willing to limit their needs/wealth to share with others (the needy).	People are mostly interested in self-gain, but with strong rules and (forced) solidarity people can act solidary.
Perceived problems	Global problems of inequality (poverty) and the environment (climate change, biodiversity loss).	Inequality
Perceived solutions/ management strategies	The government has to ensure collective services and has to correct market failures. Civil society has also an important role in addressing societal and environmental problems. Cooperation is needed to address (global) problems. Technology has to serve the environment.	The government has to steer society and experts have to determine the best management regime and set the acceptable risks. To reach equality sufficient resources have to be available and carefully allocated.
Blind spots	Bureaucracy and lack of public support for decisions.	Stagnation and unresponsiveness. Difficult to point out where something went wrong.
Underlying/ connected values	Open-minded, Freedom Courage, Responsibility, Just, Social, Wisdom	Solidarity

	Worldview B2: The Caring Region	The egalitarian's Way of life
Score dimension	High group- high grid Solidarity- Small scale	High group- low grid Solidarity-small scale
View how world functions	Life has grown too big for us. We can't change the whole world. We have the need for more sense of community. Life has to be small scale. The own (social) environment is important. People have to have attention for each other. People need to take a step back to care for the environment and each other.	People are equal and none can make a claim to more possession or higher positions. Economic growth leads to inequality, therefore wealth needs to be redistributed. Egalitarians accentuate the risks of economic growth and technological development (for society and for nature).
Preferences/ interests	Quality of the direct environment, solidarity	Equality, small scale,
View of nature/ sustainability	Our consumption rate is too high and unsustainable. We need to focus at our own region and consume less so that the local environment can improve.	Nature and resources are fixed. Ecosystems are seen as fragile and human interference would lead to disequilibrium and collapse. Humans are in a downward spiral of depleting natural resources. Humans should only make modest demands on nature, therefore needs need to be decreased by everyone.
View of human nature	People are responsible for others. They are prudent and solidary. People are group persons.	Humans are easily corrupted by money and power and (forced) equality guard humans against this corruption.
Perceived problems	Over consumption and high levels of stress and ambition obscure our vision of what is really important: the own environment, social relations.	Depletion of natural resources, collapse and downfall. Economic growth and technological development are the source of problems.
Perceived solutions/ management strategies	Deliberation, decentralisation and non-binding instruments. Local initiatives, active citizens.	Deliberation and decreasing demands on nature. Criticising and making people aware of problems. Mobilising people.
Blind spots	Little innovation and little progress.	Lack of leadership, unable to make decisions, only deliberation. Little development.
Underlying/ connected values	Altruism Harmony, Peace, Equality, solidarity Prudence community, trust, self discipline, prudence, simplicity, helpful, honesty	Equality

Annex IV Labelling the worldviews

This annex shows the predefined labels for each worldview, which are to be used in the content analysis of the documents of the interactive processes and the interviews with participants. According to the predefined labelling parties can be classified according to the worldviews.

* Blind spots need to be voiced by the other worldviews as the worldviews are not aware of their own blind spots.

Individualist A1

Economic growth: For individualists economic growth is the most important driver for welfare and society. It needs to be sustained by improving production and performance. By means of economic growth everyone's situation improves.

Competition: Competition increases efficiency. Competition stimulates innovation and gives rise to new products according to demand. Improving ones competitive position is therefore important.

Efficiency: Efficiency needs to be high in order to limit waste. Efficiency is good for the environment and for competition.

Increasing income: Individualists are focused on increasing income, it is a measure of their success. With the increased income more needs can be fulfilled.

Increasing needs: The individualist has no boundaries. His needs will always increase with its income. This is connected to his materialist nature.

Comfortable, luxurious and stimulating life: The individualist desires this type of life and therefore needs the economic growth.

Technology: Technological innovation is important to be more competitive, but technological development also leads to solutions to societal and environmental challenges.

Stable ecosystem: The individualist perceives nature as stable. Despite the human demands on nature, nature will always return to equilibrium. There will be no collapse. This allows for a trial and error strategy.

Nature as production factor: Nature is a production factor and is there for the use of man. Nature is controlled by man's skill, knowledge and technology.

Economy before nature: Protection of nature may not inhibit economic growth. When there is a demand for nature or environmental friendly products, the market will provide it.

Materialist: The individualist is focused on a stimulating, comfortable and luxurious life. He is most interested in success, income and status. Therefore its interests focus at the material, having things.

Self centred: The individualist is self-seeking and depends on himself to achieve success. His success can be measured against the success of others. To come out of the economic game successfully, he has to play a personal game.

Clashing interests: Individualists pursue their self-interest at the expense of the interests of the larger community. Clashes of interests are therefore inevitable. The strongest wins.

Risk is opportunity: New combinations and new technologies will arise to mitigate consequences.

Problem: Government intervention: Government intervention disrupts the proper functioning of the market mechanism.

Problem: Inhibit market functioning: see above

Solution: Market mechanism: The market mechanism makes sure that all resources are used as efficiently as possible. Through the game of demand and supply people are satisfied in their needs. The market price reflects the real costs, there are thus no externalities.

Solution: Self regulation: By means of self-regulation, a business can address a problem in the way that best fits his situation.

Solution: Technological development: Technological developments will always find solutions to current (environmental) problems.

**Blind spots: Market failure/ Externalities:* The market price does not reflect all (positive or negative) effects of production or consumption. Some things, such as a nature reserve, are difficult to price and therefore difficult to include in the price of a product.

Fatalist A2

Welfare: His welfare and that of his family are important for a fatalist. Fatalists feel they are threatened by others.

Protection own interests: Because the fatalist feels threatened by many developments and by others he wants to protect his own interests. The fatalist pursues his own interests from fear of losing it to the 'others'. The individualist also pursues its own interest, but this is more from the feeling they are free to do so and can actually win the game of clashing interests. Fatalists are therefore more likely to protect their interests through lawsuits than through direct participation/ deliberation with other parties.

Distrust: The fatalist distrusts other people and their motives as well as the motives of institutions. This distrust stems from the feeling they can't control much of the developments affecting them and from the fear of losing their welfare due to 'others'.

Conservative: A fatalist prefers that life stays as they are accustomed to. The life they know is safe. Changes bring new situations that scare the fatalist.

Unable to influence: The fatalist feels powerless to exert (much) influence in either the market and especially in institutions such as politics. They see politics as something that happens in an ivory tower. They are surrounded by powerful forces of hierarchy and individualism and feel they are the plaything of these more powerful forces.

Ecosystem beyond control: The fatalist feels that ecosystems and nature in general are difficult to predict and control. They lack insight in how nature works and therefore are not concerned with it.

Own environment: The own direct environment is important to the fatalist as it represent a part of their known life. When this is threatened then fatalists may care.

Health issues: Of all sustainability issues fatalists are most concerned with health issues as it affect them directly.

Materialist: The fatalist is a materialist and is concerned with protecting what he has. He likes to have as much as is possible.

Self-centred: The fatalist believes everyone is responsible for themselves. People are not able to help others and have to use their energy to care for themselves and their family.

Risks are imposed: Fatalists do not knowingly take risks, but others impose the risks on them.

Problem: Unemployment: His job is the way the fatalist manages to make a living. Employment and the viability of his sector or company are crucial for his survival. For that reason fatalists have high interests in employment.

Problem: Directly affecting life: The fatalist can be involved and concerned about issues when they directly threaten to touch upon his welfare.

Solution: Protection: The fatalist tries to protect his welfare and life if need to be through a law suit or through the promotion of strong protective rules.

**Blind spots: Distrust:* Because of the distrust in people and institutions of the fatalist, it is difficult to cooperate with fatalists.

**Blind spots: Protectionism:* Fatalists are aimed at their own problems and protecting their own interests, but fail to see larger problems that may have an indirect effect.

Hierarchist B1

Solidarity: Solidarity ensures a common well-being. According to hierarchists everyone is responsible for society and the other.

Government regulation: The hierarchist believes a strong government is needed to create a regulatory framework to address societal problems and to ensure a common well-being.

Government acts for collective: A key believe of the hierarchist is that the authorities act for the greater good. People and the market can't provide certain collective services, only the government can.

Collective sacrifice: Collective sacrifice leads to group gain. Therefore the costs of a plan may be focused on a small group.

Equity: They believe in a just regulatory system and a just treatment of people. The hierarchist believes that certain differences between people are acceptable if they can be justified by for example education.

Stable ecosystem within boundaries: According to the hierarchist ecosystems are stable until certain thresholds are reached. When these thresholds are passed, ecosystems will *shift*.

Management needed: In order to stay within the thresholds and to maintain an equilibrium, careful management is needed.

Expert knowledge: In the management of nature (and life) experts have to determine where the thresholds are and what the best management strategies are.

Nature conservation: The hierarchist finds that nature needs to be conserved because nature is complex, and governed by many interrelations that we man are not sure of. Thus it is best not to disrupt nature too much. This is also an extra reason for careful management of nature.

Thresholds: Thresholds are key to hierarchists. The management revolves around the thresholds of nature. Science has to be focused on finding these thresholds.

Sustainability: To the hierarchist ecological and social aspects are the most important aspects of sustainability, although they are also focused on finding a *balance*.

Immaterialist: Hierarchists are immaterialists. They believe in freedom and wealth but within limits. They believe that there is more to life than just gaining more money and things.

Sense of responsibility: The hierarchist strongly believes that all should have a sense of responsibility for the consequences of their actions and for other, weaker groups in society.

Steering people right direction: But hierarchists also believe that people are easily tempted to forget about their responsibility. Therefore people need to be guided by the government in their actions.

Risks taken by experts: Risks are acceptable when set and judged by experts.

Global environment: The hierarchist acknowledges the interrelations of nature and recognises the importance of the global environment. They perceive problems at a different level and see a solution at the higher level.

Solution: Government intervention: The hierarchist believes that problems can be solved by government intervention. Many problems are the result of pursuing individual interests at the cost of the collective interest. According to the hierarchist only the government is capable of serving the collective by establishing rules and subsidies.

Solution: Correction market failure: One of the important tasks hierarchist feel the government has to fulfil, is the correction of market failures (see also blind spot individualist).

Solution: Cooperation: An important step towards solving problems is the cooperation of the stakeholders and the finding of a middle ground between different interests. It is therefore likely that interactive planning is initiated by hierarchists.

**Blind spots: Unresponsiveness:* In its needs for regulations and cooperation and its need for expert knowledge, hierarchy can become unresponsive. A hierarchy is then slow to take quick action when faced with a problem and demanding enormous amounts of research before willing to decide.

**Blind spots: Lack of public support:* With its beliefs that the government can best take care of the collective hierarchy can make decisions that are meant to benefit the collective but that lack public support.

Egalitarian B2

Equality/ Solidarity: To the egalitarians equality is very important. This equality is not only equality of opportunity, but also equality of situation. This equality is reached through a (forced) solidarity.

Small scale: Egalitarians believe that life is too much focused at economic growth and performance. They would like to see that people take a step back and have an eye for each other and the environment. The trend for globalisation has to be reversed in their opinion to regionalisation.

Decrease needs: In order to live small scale needs have to be decreased. People have to have modest needs and refocus what is important to them. The immaterial becomes more important. By decreasing their needs they can decrease demand and impact.

Immaterialist: The egalitarian is an immaterialist. They value nature for its beauty and intrinsic value. Nature is more important than economic growth.

Quality regional environment: Due to the preference for small scale the egalitarian is focused on the quality of the regional environment. This is the environment they live in and enjoy.

Limit impact: By the decrease of needs the impacts on the environment and society will be limited.

Fragile ecosystems: According to the egalitarians ecosystems are fragile. When the demands on nature are too big ecosystems will *collapse or shift*. Due to the fragile nature of ecosystems a small scale life is required.

Fixed resources/ nature: Egalitarians believe that the natural resources are fixed. Combined with a fragile equilibrium, they believe that natural resources should not be used beyond the rate of regeneration or replenishment.

Collapse: With fragile ecosystems and fixed natural resources collapse is around the corner when exploiting nature. Not only nature will collapse but this will be followed by social collapse because egalitarians believe we need nature and have little faith in technological solutions.

Responsibility for other/nature: The egalitarian feels a strong responsibility for others and nature. Because of its desire for equality, solidarity is needed and people are only solidary when they feel responsible for others (and nature).

Risks are unacceptable: Egalitarians accentuate risks of technological and economic development. A system that imposes risks can't be trusted. When there are uncertainties regarding the effect an activity has on nature, the precautionary principle should be used.

Problem: Over consumption: Over consumption is one of the largest problems egalitarians perceive. Due to the over consumption the demands on nature are too large. Furthermore, over consumption distracts from what is really important (immaterialist).

Problem: Ongoing economic growth: Ongoing economic growth is an other big problem. According to the egalitarians ongoing economic growth means ever increasing production and needs and ever growing impact on society and the environment.

Problem: Technological development: The final problem egalitarians perceive is technological development. Due to this development man can extract ever larger natural resources. Technological development also sustains economic growth.

Solution: Local initiatives: Egalitarians believe that the citizens have to be activated in local initiatives

Solution: Criticising: NGOs are important when having to put problems on the agenda. NGOs have to assess the performance of the government and market and have to criticise. In that way people are made aware that there are urgent problems. A second step is then to educate citizens on the problem and perceived solutions.

**Blind spots: Non-decision:* The second blind spot of the egalitarian is the inability to take decisions. Egalitarians don't acknowledge inequality in position. They believe none should have the position to take decisions for others. *Deliberation* is therefore preferred to talk about how each would solve the problem at hand. This deliberation runs the risk of endless talk when nobody has authority over others.

**Blind spots: Lack of innovation/ progress:* Because of the small scale focus of the egalitarian and the adversarial attitude towards economic growth progress and innovation are lagging behind.

Annex V Timeline case Scheldt Estuary

1995	Agreement 2 nd deepening, nature compensation needed
	BOWS discusses how loss estuarine nature can be compensated
	De-poldering enters debate
1996	Opposition to plan BOWS grows
	Dutch House of Representatives agrees to deepening
	Commission Western Scheldt has to find possibilities for nature compensation
1997	Commission Western Scheldt presents plan
	Start deepening
1999	End deepening
	Short term measures compensation taken
2000	Designing LTV containing a structural approach to developments in the estuary
2001	EU officially warns NL for insufficient nature compensation 2 nd deepening
2002	Signing Memorandum Flushing; designing Development Outline Scheldt Estuary
	OAP discusses contents Development Outline
2004	Development Outline finished; 600 ha needs to be de-poldered
	Signing Scheldt Treaties, but much public resistance against de-poldering
2005	Province of Zeeland establishes steering group to discuss nature restoration plans
2006	Commission Maljers concludes that there are no alternatives to de-poldering
2007	Dutch House of Representatives approves Scheldt Treaties
2008	Dutch Upper House approves Scheldt Treaties
	Commission Nijpels concludes that there are no alternatives to de-poldering

Annex VI Determining the worldviews of actors

The Scheldt Estuary

The BOWS process

The experts – B1

The experts believe that they are able to determine the thresholds for the dynamic estuarine system to function. Based on their expert knowledge they believe they can tell what the best management strategy is. This points to a B1 worldview (B1 labels: Stable ecosystem; Expert knowledge; Management needed). Furthermore, full scientific knowledge was not deemed necessary. Despite the uncertainties the experts are able to predict the system. This points to a B1 belief in their expert knowledge based on which they can handle the uncertainties (B1 label: Risks taken by experts).

Municipalities – A2

In the eyes of the municipalities the uncertainties are too large to base a management plan upon. The unwillingness to take the risk and accept the expert's judgement is linked to the strong public opposition. But it may also reflect an A2 fear that bigger institutions are imposing risks on them they do not wish to have. This distrust and request for more certainty may also point to the B2 worldview that rejects a system that imposes unwanted risks on them (B2 label: risks are unacceptable; A2 label: risks are imposed). The main opposition of municipalities arises from the restrictions the measures pose to the land use in their municipality. Furthermore, the lack of public support for the measures lead the municipality, as being the representative of the people, to oppose de-poldering and inland measures. This protection of the own municipal (and citizens') interests, points to A2 (A2 label: protecting own interest). A lack of public support is a B1 blind spot, the municipalities did foresee this blind spot. The municipalities do not believe that the nature has to be compensated near or in the Estuary but the whole of Zeeland would apply. Which points to a more stable system than the experts believe it to be, which is more an A view on nature.

Water boards – A1

The water boards oppose de-poldering and inland measures as it increases their management costs and represents large scale destruction of capital. The costs of these measures do not outweigh the benefits. This economic stance points to an A1 view (A1 label: efficiency; solution: market mechanism). In addition longer dykes decrease safety levels. The water boards are primarily there to protect the people from the water. The water boards also have a task as regards nature but request further research to ensure that effective measures are taken. They question the possibilities of creating the desired situation in the Scheldt Estuary and suggest broadening the search area to find more effective alternatives. This is an A1 stance (A1 label: efficiency). This is however not accompanied with the conviction that the technologies arise that will mitigate the consequences of de-poldering, which is also an A1 belief.

Province of Zeeland – B1

The province of Zeeland was not very outspoken in the discussions, they mainly tried to keep a neutral position. This neutrality points to a B1 approach to balance different interests (B1 label: solution: cooperation). The province rejects de-poldering solely for nature purposes, but at the same time realises that it needs to meet the

compensatory principle. In that sense the dual position of the province come to the fore.

Central government – B1

The central government didn't approve of the BOWS advice. The decision was too much guided by local emotions and too little by the objective arguments of the need for compensation. This also points to a B1 worldview (B1 label: Government acts for collective), but takes a slightly different approach than the province.

Agriculture – A1/A2

The governmental actors proved they were unreliable, because of the extra nature claims beside the Nature Policy Plan. Furthermore, the proposals were solely focused on the interests of nature. The agriculture felt that a deal was made between the government and the environmental organisations in which they did not take part. Thus the agriculture had a strong A2 distrust (A2 label: distrust). As a result the agricultural organisations threaten to stop cooperation when the plans include inland measures or de-poldering. This is an A2 solution (A2 label: protection). Agriculture also uses economic A1 arguments. The proposed measures would damage productivity. Furthermore, the lands are needed to remain competitive (A1 label: competition; economic growth). The agricultural organisations perceive nature as worth conserving, but which should not be inhibiting economic activities too much. This 'economy before nature' view is a typical A1 view.

Environmental organisations - B1/ B2

According to the environmental organisations the estuarine system is under threat and is vulnerable. The environmental organisations view the ecosystem as fragile or stable within boundaries. These boundaries are however not known yet or uncertain. This points to either a B1 or a B2 perception of nature. The environmental actors are willingness to compromise, pointing to cooperation as strategy (B1 label: solution: cooperation). However, the BOWS advice did not represent a compromise to the environmental organisations, it did not represent a good nature programme. One might say that the deliberative stance led to a non-decision (B2 blind spot).

Citizens – A1/A2/B1/B2

Among the citizens different worldview elements could be distinguished.

The A1 elements: Some people noted that the Western Scheldt can take care of itself and regenerates. If it does not regenerate it was suggested that measures had to be taken to prevent the damage. This assumes a stable ecosystem (A1 label: stable ecosystem) and a belief that technology and knowledge can manipulate the system (A1 label: nature as production factor). Much used as argument against de-poldering was the argument of capital destruction (A1 label: efficiency). An other fear was that the measures would lead to an increase of taxes. Multiple people put forward that the plans of de-poldering and inland measures would weaken the already strained agriculture and related businesses. Agriculture is an important aspect of the economy of Zeeland (A1 label: economic growth, competition). It can also be interpreted as a concern for employment in the region, which would be more A2.

Connected to this argument was a more fundamental discussion on what nature is. Nature also means that mud flats turn into salt marshes and salt marshes eventually become land. Policy only wants to conserve only one aspect or state of nature. This

reflects the view of a stable ecosystem (A1), which returns to an equilibrium in a successive stage.

A2 elements: Many people voiced the feeling that Zeeland has to bleed for the economic gains of Antwerp. There was a general feeling of having no influence on the decisions. The distrust of institutions and the fear that decisions are imposing on them (A2 labels: distrust; unable to influence).

B1- B2 elements: Some could not reconcile the measure of de-poldering with the growing global demand for food. Putting highly productive land under water would increase pressure on unsuitable lands (B1 label: Global environment).

There were also voices that agreed to the compensation plans, as they felt that nature needs to be protected. They perceive the natural value of these areas as high. They view the estuarine system as much more fragile and in need of more space (B2 label: Fragile ecosystem; B1 label: nature conservation).

The OAP process

Flemish governmental actors – A1/A2

The Flemish governmental actors repeatedly expressed their concerns for the time path as agreed to in the Memorandum of Flushing. The time path would lead to a speedy deepening which was needed to ensure a competitive position in the container shipping business (A1 label: competition). Furthermore, the deepening would lead to an increase in economic activities. The Flemish governmental actors see the port of Antwerp as the motor for regional economic development and welfare. The deepening would stimulate economic activities. By means of the economic growth in the port they feel that people's situation will improve. This is an A1 reasoning (A1 label: economic growth). This economic growth would reduce unemployment rates. This focus on unemployment points to the A2 worldview (label A2: problem: unemployment). The Flemish governmental actors more than once refer to the right to deepen. This stems from a distrust of the Dutch actors that they do not want to deepen (A2 label: distrust). They do not want the deepening to be blocked because of delays in the nature plans. The protection of nature may not inhibit economic growth. Again this points to an A1 worldview (A1 label: economy before nature). The Flemish governmental actors promote the alternative dumping strategy as a solution to ensure that the deepening does not have negative effects on the estuary. This is a technological approach to nature (A1 label: Nature as a production factor).

Governmental actors of Zeeland– B1

The governmental actors of Zeeland at first felt that the accessibility problem may be solved differently. A deepening would meet much resistance and might not be necessary. This touches upon the A2 fear of imposed troubles as happened with the second deepening, only they knowingly do take this risk. Despite the difficult issues the governmental actors of Zeeland do cooperate (B1 label: solution: cooperation). It is not about competition between different interests, but finding a middle way between different interests and finding a win-win situation. The governmental actors of Zeeland are willing to develop nature, but not at all expenses. They require support for decisions. This could also be seen as a desire to bridge different interests and come to a win-win solution (B1 label: Solution: Cooperation). But the governmental actors not only are mediating the process in order to accomplish cooperation, they are also a party in the interactions. This is expressed in the result that Zeeland received some

extra benefits. Lack of public support is a B1 blind spot, which is theoretically not spotted by a B1 actor.

With regard to nature restoration the central government has to come up with a plan that is well founded. This points to a B1 idea that the government acts for the collective and is able to come up with a well founded plan (B1 label: government acts for the collective). In this respect they also trust on expert judgement to come up with measures, e.g. Commission Maljers (B1 label: expert knowledge).

Agricultural actors – A1

The farmers need to have certainty in order to make business decisions. With the relocation of farms economic compensation is very important. This points to an A1 worldview in which the business and income are most important. Agriculture suggested that lands that are less suitable for agriculture should be used in the nature and safety plans. The economy or in this regard agriculture is more important than nature (A1 label: economy before nature). Lands with high yields should not be converted into nature (A1 label: efficiency). Agriculture also threatened to hinder the timely acquiring of lands when there will be more nature restoration and more depoldering, which is more an A2 solution (A2 label: solution: protection).

Port of Antwerp actors– A1

The prime concern of the actors of the port of Antwerp is the economic position of the port of Antwerp. The deepening is necessary for their competitive position (A1 label: competition) and will drive regional welfare. An other argument of the port actors is that there are also economic benefits for Zeeland. In their eyes these economic arguments are convincing (A1 label: economic growth). The protection of nature may not inhibit economic growth. The port actors are willing to cooperate as long as they get the deepening. When the nature restoration is delayed, they do express concern about it, but they are not willing to wait with the deepening (A1 label: economy before nature). The port actors do not wish for any delays regarding the deepening, otherwise this would have negative consequences for cooperation. They threaten with law suits and refer to their right to deepen multiple times (A2 label: solution: protection). This threat stems more from an attitude of clashing interests and negotiations and is used as lever to gain self-interests instead of an attitude of last resort rescue (A1 label: clashing interests). The alternative dumping strategy is presented as the solution to possible negative effects of deepening. This innovative strategy was initially developed by Antwerp circles, which shows that man can control nature (A1 Label: Nature as production factor).

The request or reference to a further deepening, beyond the current scenarios is a reaction to changes in the shipping industry. This request is driven by the desire to remain a competitive position (A1 label: competition).

The environmental actors – B1/B2

EU legislation and robust nature played an important role in the arguments of the environmental organisations. The estuary is deteriorating and this poses a loss of biodiversity which should be conserved. Nature needs careful management otherwise it will deteriorate further. The environmental actors see the benefits of the alternative dumping strategy, but point out that the negative effects on nature will not be stopped. To meet uncertainties they ask for extra nature projects. This stems from a use of the precautionary principle. When uncertainties are made explicit it is possible to make a well weighed decision. Experts are able to determine thresholds and include nature in

assessments by using certain weighing techniques (B1 labels: expert knowledge; management needed; nature conservation). One also might see some B2 characteristic in the idea that nature is fragile and as a precaution against deterioration robust nature must be developed (B2 label: fragile ecosystems; B2 label: Risks are unacceptable).

The EU level is seen as the appropriate level to arrange government regulations with regard to nature protection (B1 label: government regulation; government acts for collective). The environmental actors emphasise that care and quality are more important than the time path, this points to a desire for careful management. Further study must decrease uncertainties (B1 label: management needed).

The environmental actors also emphasise the importance of having a flanking policy and involve the agricultural sector. This seems to indicate that they see the blind spot typical for its own (B1) worldview, namely a lack of public support.

When delays are looming for the nature programme, the environmental actors believe the delays concerning nature and safety projects have to affect the deepening debate. Such a strong statements seems to fit less in a B1 cooperative context. The environmental actors protect the interests of nature and are less aimed at finding a middle ground the more it gets clear that nature plans are lagging behind (B2 label: Solution: Criticising).

The political parties in the Lower House

VVD – A1

With regard to the second deepening the VVD pointed towards possible economic benefits for Zeeland and was at the same time worried about the competitive position of Rotterdam. This points to an A1 worldview (A1 label: economic growth; competition). The VVD held the opinion that the deepening should not be delayed, the port of Antwerp requires a speedily deepening to remain their competitive position (A1 label: competition). But the VVD also ratified both the deepening treaty and the Scheldt treaties from the argument of being a good neighbour. Which could also be a B1 argument (B1 label: solution: cooperation). However, this argument also stems from the hope that other issues could be negotiated on. The VVD opposed de-poldering because it is capital destruction (A1 label: efficiency) and would jeopardise the safety. When de-poldering takes place it can only be voluntary de-poldering, leaving the choice to the people themselves (A1). The VVD kept emphasising to enlarge the search area and search for alternatives. This implies the belief that the Scheldt ecosystem is stable enough to not collapse when de-poldering does not takes place (A1 label: stable ecosystem). The VVD agreed to the financial compensation for the loss of nature due to the second deepening, believing that a monetisation of nature is possible (A1). The VVD wanted to have a legally binding commitment of the government that no forced de-poldering would take place. This is more an A2 desire for protection (A2 label: solution: protection). Because this commitment was missing, the VVD did not ratify the treaty.

CDA – A1/B1

The CDA also ratified both the deepening treaty and the Scheldt treaties from the argument of being a good neighbour. pointing to B1 cooperation (B1 label: solution: cooperation). However, this argument also stems from the hope that other issues could be negotiated on. In the opinion of the CDA the deepening should not be delayed, meaning economic impacts for Antwerp (A1 label: competition).

The CDA also opposes de-poldering because it is capital destruction (A1 label: efficiency) and would jeopardise the safety, but also because it would mean a loss of agricultural lands (A1 label: economic growth or A2 label: protection of own (grassroots) interests). The CDA only wants voluntary de-poldering, leaving the choice to the people themselves (A1).

The CDA wanted to wait for the BOWS advice before it would judge the nature compensation plan. It also turned to the Commission Maljers to look for alternatives for the nature restoration. The CDA believed the interpretation of the Habitat Directive was too strict. The Habitat Directive is not aimed at restoring nature, thus there is some room to fill in the nature restoration. This points to the idea of a stable ecosystem, where the experts can determine which alternatives would develop sufficient nature (B1 label: stable ecosystem within boundaries; expert knowledge). The CDA desires support for the final compensation plan, pointing to a desire of cooperation (B1 label: cooperation). Still a lack of compensation is also a blind spot of B1.

Christen Union / SGP – A2/B1

The CU and SGP emphasises the disadvantages and uncertainties of the deepening. The deepening can not match safety and nature requirements. Therefore the focus should lie at port cooperation (B1).

The CU had a distrust that the LTV would reintroduce de-poldering (A2 label: distrust). The CU and SGP kept opposing de-poldering, because it is capital destruction (A1 label: efficiency) and would jeopardise the safety. They also argued that de-poldering is against the nature of the people of Zeeland, an A2 valuing of regional interests. De-poldering may only take place voluntary, leaving it a personal or economic choice (A1). Only. According to the CU and SGP some nature restoration will have to take place, but not through forced de-poldering. Instead the commission Maljers has to look for alternatives (B1 label: expert knowledge). The SGP suggested as an alternative to intervene in the Estuary, pointing to a belief that nature can be controlled by skill and technology (A1 label: nature as a production factor).

The CU and SGP wanted to have a legally binding commitment of the government that no forced de-poldering would take place. This is more an A2 desire for protection (A2 label: solution: protection). Because the SGP did not believe there was a legally binding commitment they did not ratify the treaty. The CU did ratify both the deepening treaty and the Scheldt treaties from the argument of being a good neighbour, pointing to B1 cooperation (B1 label: solution: cooperation).

PvdA – B1/ B2/A1

The PvdA also ratified both the deepening treaty and the Scheldt treaties from the argument of being a good neighbour (B1 label: solution: cooperation). However, this argument also stems from the hope that other issues could be negotiated on. Also the PvdA did not want the deepening to be delayed, the port of Antwerp requires a speedily deepening to remain their competitive position (A1 label: competition).

The PvdA believes that the national government is responsible for nature compensation and development. Regional support is thus not required (B2 label: responsibility for nature; B1 label: government acts for collective).

For the second deepening the PvdA asked for extra nature measures, but did agree to the plan, because it took so long to agree (B1 label: cooperation). Due to the problems

with nature compensation during the second deepening the PvdA was hesitant to approve the third deepening.

Later on in the discussion the PvdA seemed to switch positions. They only wanted to de-polder when there would be support and they rejected the de-poldering of the Hertogin Hedwige polder, but on the other hand they also kept an opening for expropriation.

D66 – B1/ B2/A1

D66 did not always take part in the debates. D66 also ratified both the deepening treaty and the Scheldt treaties from the argument of being a good neighbour (B1 label: solution: cooperation). They did not feel that the deepening should be delayed much longer, the port of Antwerp requires the deepening for their competitive position (A1 label: competition). For the second deepening D66 did ask for extra nature measures, but they did agree to the plan, because it took so long to agree.

For D66 de-poldering remains a possibility, as it is needed from an ecological perspective. Also D66 believes that the national government is responsible for nature compensation and development (B2 label: responsible for nature). Regional support is not required, but still D66 only wants voluntary de-poldering, which seems to be a conflicting position.

Groenlinks – B1

Groenlinks requires full compensation. They stress that when insufficient nature is developed or compensated, the ecosystems in the Scheldt Estuary may shift. Groenlinks thinks 600 ha of nature restoration is the minimum amount of nature that should be developed (B1 label: stable ecosystem within boundaries; nature conservation). According to expert knowledge de-poldering is needed for full compensation, therefore Groenlinks is of the opinion that de-poldering needs to be included (B1 label: expert knowledge). Groenlinks often refer to the EU Directives and argue that the international value of estuarine nature weighs heavier than the cultural landscape of the Hertogin Hedwige polder. Groenlinks believes that the national government is responsible for nature compensation and development. Support is therefore not required. They always kept the possibility of (forced) de-poldering open (B1 label: government acts for the collective).

Annex VII Timeline case Wadden Sea

1960	Introduction mechanical suction-dredge cockle fishing technology
	No regulations for shellfish fisheries
1970	Introduction permit system cockle fisheries
	Nature organisations protest against gas drilling in Wadden Sea
1980	PKB Wadden Sea 1980. Aim policy: protection and recovery Wadden Sea
1984	10 year moratorium on gas mining in Wadden Sea
1990	Cockle/mussel shortages and bird mortality. Scientists warn about deterioration Wadden Sea
1991	Trilateral conference on the Wadden Sea in Esjberg
1993	Development of a new Sea and Coastal Fisheries Policy (SCFP)
	Closure of 26% of the Wadden Sea to shellfish fisheries
	Self regulation of the shellfish fisheries
1994	End moratorium gas mining: Allowance trial drilling in the Wadden Sea
1998	Polarising debate, increasing protest against mechanical cockle fisheries
	First evaluation (EVA I) of the SCFP and slight adaptation SCFP
1999	Start second evaluation SCFP (EVA II)
	House of Representatives says no to gas mining in the Wadden Sea
2002	Wild Cockles is established with the aim of banning mechanical cockle fisheries
2003	Policy Advisory Group EVA II has to advise on shellfish fisheries policy: deadlock
	IMSA process on Terschelling: discussing shellfish fisheries, gas mining and nature
	Establishment commission Meijer: advises on shellfish fisheries, gas mining and nature
2004	Pre advice of European Court of Justice on interpretation article 6 Habitats Directive
	Dutch cabinet decides to buy out the mechanical cockle fisheries and to allow gas mining
	House of Representative approves the cabinet's decision

Annex VIII Determining the worldviews of actors

The Wadden Sea

The Wadden Association – B1/B2

The Wadden Association saw the Wadden Sea as one of the last areas in which large scale natural processes occurred. The Wadden Sea is seen as original nature and this should be protected (B1 label: Nature conservation). Shifts may occur in the Wadden Sea, after which it is difficult to get to the previous state. The Wadden Sea is seen as stable within boundaries. These boundaries can be determined for some activities, but for other activities these boundaries are difficult to determine (B1 label: Ecosystem stable within boundaries; thresholds). Activities that influence these processes should not be allowed. But within the Wadden Association there are different positions on the extent to which interweaving would be possible. Some turn down any interweaving of economic activities in nature areas (B2 label: Fixed nature; risks are unacceptable), but others believe that certain activities may be possible (B1 label: Thresholds; sustainability). Thus there were two positions on activities in the Wadden Sea; a 'hands off of the Wadden Sea' and a 'activities possible within boundaries'. Accordingly, there were two worldviews present at the same time, a B1 and B2 worldview. The self-regulation was viewed with suspicion and was not seen as sufficient. Only closure of a substantial part of the Wadden Sea and later banning the mechanical cockle fisheries were seen as sufficient (B1 label: Government regulation). The Wadden Association cooperated with the Birds Protection Agency. Much of the attention of the Wadden Association was aimed at gas mining. The Wadden Association together with the Birds Protection Agency initiated law suits, because they did not feel the DANF took sufficient measures (A2 label: Solution: Protection).

The Birds Protection Agency – B2

The Birds Protection Agency felt the shellfish fisheries were harmful at an early stage in the discussions. The Wadden Sea was deteriorating and getting more vulnerable. Shellfish fisheries caused this deterioration and put extra strain on nature (B2 label: Fragile ecosystem). The DANF did not take sufficiently strict measures, while they had to protect the Wadden Sea (B1 label: Government acts for collective). Self-regulation was by far not enough to protect the Wadden Sea from deteriorating further. Therefore, the Birds Protection Agency decided to start law suits with the aim of testing the fisheries to article 6 of the Habitats Directive (A2 label: Solution: Protection). The Birds Protection Agency feels that nature is more important than economic growth (B2 label: Immaterialist). They promote the use of the precautionary approach to activities in the Wadden Sea (B2 label: Fragile ecosystems).

Wild Cockles – B2

Wild Cockles were very concerned with the deterioration of the Wadden Sea. According to the Wild Cockles the Wadden Sea was getting increasingly fragile and sensitive to changes. They observed shifts in the Wadden ecosystem already and feared a collapse (B2 label: Fragile ecosystem; Collapse). They criticised the vested nature organisations and a number of research institutes for not recognising the damaging nature of the shellfish fisheries (B2 label: Solution: Criticising). They distrusted many research institutes and believed the mechanical cockle fisheries was much more harmful than these institutes stated. They were inspired by the political

biologists. The Wilde Cockles turned down cooperation with the fisheries and ministry and preferred the legal track. They wanted to organise a block of nature organisations that would demand a ban of the mechanical cockle fisheries and that would also demand limitations to mussel fisheries and other shellfish fisheries. Law suits were seen as the most suitable way to achieve these goals (A2 label: Solution: Protection). They did not feel that economic activities belonged in a nature reserve like the Wadden Sea.

Mechanical Cockle Fisheries – A1/A2

For the cockle sector the profitability and continuation of their businesses was of course key (A1 label: Economic growth; A2 label: Problem: Unemployment). The mechanical cockle fisheries did not perceive themselves as harmful. They had always fished in the Wadden Sea and there had been no lasting collapse. The variability in shellfish stock was due to natural variability and winter storms (A label: Ecosystem either stable and at time beyond control). The fishermen saw themselves as managers of the cockle stock. Their fishing made sure the stock had increased instead of declined. The sector wanted to take measures by means of self-regulation. In that way they would be able to fit the measures into their business (A1 label: self-regulation). As the debate continued they distrusted the nature organisations more and more and even some personal contacts became strained (A2 label: distrust).

DANF – B1

The DANF often took a rather neutral position. From the position of the ministry (containing both fisheries and nature) they had to balance different interests (B1 label: sustainability). They did feel that there was room for human activities in the Wadden Sea when boundaries were determined (Label B1: Ecosystem stable within boundaries). The DANF had a strong belief in expert knowledge and gave this a key role in the EVA II process. According to the DANF the results of EVA II could not justify a conclusion that the mechanical cockle fisheries were very harmful (B1 label: expert knowledge). Still during much of the process the DANF took up a rather neutral position, but it was reluctant to take very strict measures.

Political scientists – B2

The political scientists were scientists that no longer felt satisfied with their role as provider of facts. They were very concerned with the deterioration of the Wadden Sea. According to them the shellfish fisheries had long term harmful effects and they feared a collapse (B2 label: Fragile ecosystem; collapse). They had nature conservation aims (B1 label: Nature conservation). They did not believe the measures that the government took were sufficient and believed that the DANF was on the side of the fisheries.

IMSA – B1

IMSA noticed a deterioration of the Wadden Sea. The publications of the NIOZ showed that mechanical cockle fisheries were harmful. IMSA saw the deterioration of the Wadden Sea in the light of the shellfish fisheries that took place. The government policy was seen as insufficient (B1 label: Nature protection; B1 label: Ecosystem stable within boundaries). IMSA envisaged a solution to the deteriorating Wadden Sea and the failing governmental policy: gas mining was allowed and the benefits of gas mining were used for nature conservation (A1). The solution for the shellfish fisheries remained unclear, but given the perceived harmfulness of the fisheries, this

solution is most likely strong limitations or a ban. IMSA felt that gas mining had little effects on soil subsidence. There was a scientific consensus on the effects of gas mining. Gas mining did not have significant effects (B1 label: Expert knowledge). IMSA wanted that a commission looks at the issues of fisheries, nature and gas mining in an integrated manner (B1 label: Sustainability).

NAM – B1/A1

The NAM was willing to try the new approach IMSA had suggested. The NAM was convinced that the gas mining would have no significant negative effects. They had conducted much research (B1 label: Expert knowledge). They believed they could stand the test of the Birds and Habitats Directive and therefore the precautionary principle did not have to be applied. They had waited so long to mine the gas and they were willing to take their responsibility towards nature (A1 label: Stable ecosystem; B1 label: Sense of responsibility).

The political parties in the Lower House

VVD – B1/ A1

The VVD acknowledged that the Wadden Sea is a nature reserve and that nature aims are thus important. But the VVD saw possibilities to sustain human use of the Wadden Sea. Fisheries and gas mining were possible within boundaries that can be determined (B1 label: Nature stable within boundaries). The VVD had faith in expert knowledge that would be able to determine the boundaries in which human activities may take place (B1 label: Expert knowledge). They found that self-regulation was a good instrument to regulate fisheries. The fisheries sector was best able to determine how they can decrease their impact while remaining profitable (A1 label: Solution: Self-regulation). The VVD believed that technological innovations can limit the impact of the mechanical cockle fisheries and gas mining. (A1 label: Solution: Technological development). The economic importance of these economic activities was stressed. The VVD believed the economic costs of the ban are large and the ecological gains uncertain. The Wadden Sea was seen as nature reserve and production factor (A1 label: Economic growth; Nature as production factor;).

CDA – B1 – B2 (with regard to gas mining)

The CDA had much sympathy for the fisheries, but also recognised that the Wadden Sea had to be protected as well (B1 label: Management needed). They wanted to balance nature and fisheries (B1 label: Sustainability). They did believe that self-regulation was a good instrument to achieve this balancing of interests (A1 label: Self-regulation). The CDA was very concerned about the loss of employment and the effects this would have on local communities when the fisheries would be banned (A2 label: Problem: Unemployment). With regard to gas mining CDA did not want to risk the Wadden Sea and wanted to use the precautionary approach (B2 label: Risks are unacceptable; Fragile ecosystems). However, when experts agreed on the effects, CDA followed the expert judgement (B1 label: Expert knowledge).

PvdA – B1

The PvdA was in favour of the interweaving of fisheries and nature, but believed that management was needed. Interests could be balanced (B1 label: Management needed; Sustainability). The self-regulation of the shellfish fisheries was successful in their eyes (A1 label: Solution: Self-regulation). But they do not think nature should be risked and pushed across its boundaries (B1 label: Ecosystem stable within boundaries). The PvdA is worried about the large scale of the cockle fisheries (B2 label: small scale). With regard to the gas mining the PvdA fears soil subsidence will linger despite the hand on the tap principle (B2 label: Risks are unacceptable). However, with regard to fisheries they felt that the negative effects had not been proven by the experts (B1 label: expert knowledge). In the end the PvdA did agree to the buying out of the mechanical cockle fisheries.

SGP/ CU – B1

The SGP/CU were also in favour of the interweaving of fisheries and nature (B1 label: Management needed; Sustainability). The self-regulation of the shellfish fisheries was successful in their eyes (A1 label: Solution: Self-regulation). They wanted to continue the self-regulation and not take top-down measures. With regard to the gas mining they felt that the ecosystem would not shift when using the hand on the tap principle (B1 label: Ecosystem stable within boundaries).

Groenlinks – B2

Groenlinks views the Wadden Sea as the last wilderness of the Netherlands. The Wadden Sea is deteriorating and every extra round of fisheries is seen as causing additional damage. This might lead to collapse, the Wadden Sea is seen as very vulnerable (B2 label: Fragile ecosystems; Collapse). Groenlinks emphasises the international function of the Wadden Sea. Nature is the most important and should have full protection (B2 label: fixed nature; B1 label: Nature conservation). The value of nature outweighs other interests (B2 label: Immaterialist). Any risk put on the Wadden Sea is unacceptable (B2 label: Risks are unacceptable). The precautionary principle should be applied (B2 label: Fragile ecosystems) and this would lead to a ban of both the mechanical cockle fisheries and gas mining.

SP – B2

Also the SP sees the Wadden Sea as the last wilderness of the Netherlands, which is deteriorating because of the mechanical cockle fisheries. Continued fishing would lead to collapse according to the SP. The Wadden Sea is vulnerable (B2 label: Fragile ecosystems; Collapse). Nature has to be protected and not risked. Economic activities that risk the natural quality don't belong in the Wadden Sea (B2 label: Fixed nature; Risks are unacceptable; Immaterialist). The precautionary principle should be applied to both gas mining and cockle fisheries (B2 label: Fragile ecosystem).

D66 – B2

D66 have a similar point of view as Groenlinks and the SP. D66 compared the mechanical cockle fisheries to vacuum cleaners. The fisheries are too large scale to fit in a nature reserve (B2 label: Small scale). The Wadden Sea is the last wilderness and it is deteriorating and getting more and more vulnerable. According to D66 collapse looms on the horizon. The Wadden Sea should be well protected, preferably by using

the precautionary approach (B1 label: Nature conservation; B2 label: Fragile ecosystem). Uncertainties about the harmfulness of the mechanical cockle fisheries and the gas mining are used as reason why the precautionary approach should be used. D66 does not want to risk the Wadden Sea (B2 label: Risks are unacceptable). However, in 2004 D66 made a swing and found that expert knowledge on the risks of gas mining was sufficient (B1 label: Expert knowledge).

Summary

It is important to involve different actors or stakeholders in policy-making aimed at sustainable development, because these actors have diverging perception of what sustainability is. Not including these different views in policy could lead to a lack of public support and problems in the implementation phase. Hence, the Dutch government uses interactive policy-making to address sustainability issues and make policy. The idea of interactive policy-making is that in the interactive process different views of sustainability come to the fore. Values and perceptions are important factors that determine how an actor views sustainability.

Each involved actor has different values and perceptions and thus a different view of what sustainability is. These different views clash in an interactive process. Differences in values and perceptions form the basis of conflict about sustainability. The possibility of finding a solution in such an interactive process depends on whether this conflict can be solved. When this conflict can't be solved this may result in troublesome interactive processes and deadlock and halfway compromises.

Interactive planning gets much attention in the literature on public administration, sustainability and political science. Part of the literature focuses on the question: how agreement in interactive processes can be fostered? An other part is critical of the possibilities of interactive processes. In this light the role of values and perceptions, as basis of conflicts on sustainability, should get more attention. However, in the literature on interactive policy-making only occasionally attention is paid to the role of values and perceptions. Mostly the literature analyses the role of power, resources, interests and institutions in interactive processes. The literature does not analyse how values and perceptions influence interactive process, to what extent values and perceptions are a factor in conflict and what implications this might have for the interactive planning practice. However, the values and perceptions that determine the view on sustainability form the basis of conflict in interactive processes aimed at sustainable development. Values and perceptions are key to understand how conflicts in interactive processes develop and are solved.

It is difficult to handle a pluralistic view on values and perceptions. There is simply too much variation. This research combines Thompson's Cultural Theory and the worldview perspective of the Dutch institute for strategic policy analysis and evaluation in the field of environment, nature and spatial planning (MNP) to develop an innovative worldview approach. This worldview approach enables the analysis of the role values and perceptions, intertwined in a worldview, play in causing and solving conflicts in interactive processes.

The aim of this research is:

To examine if worldviews are an important explanatory factor to explain why in some interactive processes deadlock and halfway compromise occur.

The approach of this research

The worldview approach contains four worldviews that are based on both Thompson's Cultural Theory and the MNP's worldviews. For the sake of neutrality the worldviews are termed A1, B1, B2 and A2. The A1 worldview sees nature as inherently stable, therefore nature can be used as production factor to achieve economic growth. The B1 worldview sees nature as stable within boundaries. To prevent a shift in nature, careful management based on expert knowledge is needed.

The B2 worldview sees nature as fragile. Therefore, nature should not be strained. The B2 worldview is risk averse and promotes the application of the precautionary principle. The A2 worldview has a fatalistic view of society and mainly strives for personal and family survival. He sees the world as hostile and does not believe he can exert influence on decisions. Decisions are imposed upon him. Actors are awarded a worldview based on interviews, publications and policy documents.

This research analysed the role worldviews play in interactive processes by testing hypotheses in case studies. The hypotheses offer an explanation why conflict arises in an interactive process in which different worldviews interact, why this conflict leads to deadlock, how compromises are reached between worldviews and why these compromises can be seen as halfway compromises. The hypotheses are based on the Cultural Theory and MNP's Worldview Approach. To be able to analyse worldviews in interactive processes and to test hypotheses interactive processes had to be studied. This research analysed interactive processes in two cases.

The first case study is about the discussions surrounding the Scheldt Estuary. The Scheldt connects the port of Antwerp to the North Sea, but in order to give access to the largest container ships, independent of the tide, the channel needs to be deepened. Also the natural characteristics of the Scheldt Estuary are under pressure since the natural quality of the Scheldt River Estuary has declined over time. Thus nature should be restored as well. Furthermore, the safety against flooding in Flanders needs to be improved. Interactive process had been initiated to address these issues.

The second case study is about the mechanical cockle fisheries in the Wadden Sea. The shellfish fisheries came under increasing scrutiny in the 1990s. A polarised discussion developed between nature organisations that claimed the mechanical cockle fisheries led to a deterioration of the Wadden Sea and bird mortality and the fishermen that claimed they belonged in the Wadden Sea and were not harmful. Interactive processes had to lead to a satisfactory shellfish fisheries policy that would balance economic and ecological aspects.

The findings of this research

The worldview approach assumes that conflicts between worldviews can't be resolved and lead to deadlock and halfway compromise. This assumption was tested by means of four hypotheses.

Hypothesis 1 stated that when different actors with different worldviews are brought together in an interactive process, this will lead to disagreement and conflicts between worldviews. Hypothesis 1 tests the extent to which conflicts between actors are indeed conflicts between worldviews.

The case analysis showed that when the discussion has a clear cultural-historical or geopolitical background the worldviews don't explain the conflict that arise, rather power struggles, international (or interregional) relations, historical and cultural factors play a larger role than the worldviews do. But when the discussion has a socio-economic and ecological background, in short when the discussion is an economy-nature discussion, the conflicts that arise between actors are conflicts between worldviews. These conflicts were based in the differences in perception between worldviews. However, cultural and historical aspects can add an extra dimension to conflicts between worldviews.

According to the worldview approach conflicts arise in interactive processes because of differences in perception between worldviews. These conflicts and differences in

perception between worldviews can't be bridged. Hypothesis 2 states that when one tries to create consensus between different worldviews these attempts will founder on underlying differences in perception. Consensus or a common perception can't be reached when there is indeed a conflict between worldviews, compromise may be reached. This compromise will hide differences in perception between worldviews.

The case analysis showed that in case of conflicts between worldviews, consensus-building between different worldviews indeed failed because of the differences in perception between worldviews. In the case of the Wadden Sea this even resulted in deadlock.

In many cases compromise could be formed, but these compromises covered underlying differences up. Differences in perception often persisted underneath the surface of the agreements. These conflicts resurfaced in a later planning phase.

Hypothesis 3 states when agreements between actors in an interactive process do arise. First agreement may arise when the interactive process is exclusive and only contains one worldview. Then there is no need for conflict. Second agreement may arise when actors change their worldview and as a result there is only one worldviews present in the interactive process. Again there is no need for conflict when there is only one worldview. Third agreement is formed by forming alliances between two worldviews within the interactive process.

The case analysis showed that despite conflicts between worldviews, agreements were formed on multiple occasions. Most of these agreements were compromises. These compromises were enabled in different ways. First of all actors formed an alliance with actors with a different worldview, but these alliances were formed for other reasons than the Cultural Theory envisaged. Public support, win-win situations, and the connection of unrelated debates fostered the reaching of compromises and forming of alliances.

Agreement was also formed by means of excluding one actor, but this did not mean exclusion of other actors with different worldviews. Furthermore, none of the actors changed their worldview. Therefore hypothesis 3 was not accepted.

A very important way of creating compromises was the connecting of debates that were previously unrelated, thereby creating a new situation in which new benefits arose and in which there were new incentives to participate and come to an agreement. Conflict was watered down as it were in these cases.

These compromises did lead to problems in the implementation phase.

Hypothesis 4 explains why agreement often ends in halfway compromise. According to the worldview approach consensus can only arise between similar worldviews. Such a consensus fails to incorporate other views and will therefore have typical pitfalls or blind spots and may thus be seen as halfway compromise. Furthermore, compromise hides a difference in perception between worldviews, therefore compromise will be interpreted differently by the actors and the grassroots support still reflects the difference in perception and start protests. Thus according to the worldview compromise between different worldviews will also be halfway compromise.

The case analysis shows that the compromises that were reached, were in fact halfway compromises. Because of differences in interpretation of the agreements and because of grassroots protest, it was difficult or nearly impossible to implement the agreements. Halfway compromises did not arise due to blind spots of agreements because of exclusion of some actors.

Were worldviews an important explanatory factor to explain why in some interactive processes deadlock and halfway compromise occurred?

In discussions with a socio-economic and ecological background the worldviews are an important explanatory factor to explain the rise of conflict and halfway compromise. The worldviews also explain the occurrence of deadlock in these types of discussion, but bad personal relations, polarisation and the intention of the actor are also important factors for explaining deadlock.

The key message of this research is that interactive planning and participation may have to be looked upon differently. Interactive planning was designed as alternative to top-down decision-making by the government. Interactive planning thus aims at decision-making or coming to an agreement. If it does not lead to an agreement it is considered to be a failure. This focus on agreement might have to be reconsidered when worldviews play a strong role in the discussions. In these cases conflicts will be persistent and very difficult to solve. When agreement is reached, this is likely to be a general agreement which is interpreted differently by actors with different worldviews. This research raises questions as to the possibilities to take decisions in interactive processes. In many instances it is the government who has to cut the knot. Reaching agreement should not be the prime focus of interactive processes and one has to be critical of the compromises that are reached in interactive processes.

The clumsy institutions of which Michael Thompson talks about in his book 'Clumsy Solutions for a Complex World' seem to be unavoidable. After all, worldviews play an influential role in interactive process aimed at nature-economy discussions and this should be taken into account more often in both practice and research on interactive planning.

Nederlandse samenvatting

Het is belangrijk om verschillende belanghebbenden te betrekken bij beleidsvorming gericht op duurzame ontwikkeling, omdat de belanghebbenden verschillende opvattingen hebben van wat duurzame ontwikkeling inhoudt. Wanneer deze verschillende percepties buiten beschouwing worden gelaten, kan dit leiden tot een gebrek aan publieke steun voor het beleid en kunnen problemen ontstaan in de implementatie fase. Daarom went de Nederlandse overheid zich tot interactieve beleidsvorming. Tijdens de interactieve processen komen verschillende opvattingen van duurzaamheid naar voren. Waarden en percepties zijn belangrijke factoren die bepalen welke opvatting van duurzaamheid een belanghebbende heeft.

Elke betrokken partij in interactieve beleidsprocessen heeft verschillende waarden en percepties en dus een andere opvatting van wat duurzaamheid is. Deze uiteenlopende opvattingen botsen in het interactieve proces. Verschillen in waarden en percepties vormen daarom de basis van conflict over wat duurzaamheid inhoudt. Wanneer dit conflict niet opgelost kan worden, kan dit leiden tot moeizame interacties, impasse in de beleidsvorming of disfunctionele compromissen.

De politieke en beleidswetenschappen besteden veel aandacht aan interactieve beleidsvorming. Een deel van deze literatuur richt zich op de vraag hoe en onder welke randvoorwaarden overeenstemming in interactieve processen kan worden bereikt. Een ander deel van de literatuur is kritisch over de mogelijkheden van interactieve beleidsvorming. In de literatuur zou de rol die waarden en percepties hebben als basis van conflicten over duurzaamheid meer aandacht moeten krijgen. Echter, in de literatuur over interactief beleid wordt slechts af en toe aandacht geschonken aan de rol van waarden en percepties in interacties. Meestal richt deze literatuur zich op de rol van macht, hulpmiddelen, belangen en instituties in interactieve processen. De literatuur analyseert niet hoe waarden en percepties het interactieve processen beïnvloeden, in hoeverre waarden en percepties een factor zijn in conflict en wat de implicaties daarvan zouden zijn voor de interactieve beleidspraktijk. Maar de waarden en percepties die samen de opvatting over duurzaamheid bepalen, vormen wel de basis van het conflict in interactieve processen gericht op duurzaamheid. Het begrijpen van de rol die waarden en percepties hebben in interactieve beleidsvorming is dus essentieel om te begrijpen hoe conflicten in interactieve processen ontstaan en kunnen worden opgelost.

Het is moeilijk om de grote verscheidenheid van waarden en percepties hanteerbaar en onderzoekbaar te maken. Er is simpelweg te veel variatie mogelijk. Dit onderzoek combineert Thompson's Culturele Theorie en de wereldbeelden van het Milieu Natuurplabureau (MNP) om een innovatief wereldbeelden perspectief te ontwikkelen. Dit perspectief maakt de analyse mogelijk van de rol die waarden en percepties spelen in het veroorzaken en oplossen van conflicten in interactieve processen.

Het doel van dit onderzoek is:

Te onderzoeken of wereldbeelden een belangrijke verklarende factor zijn in waarom in sommige beleidsprocessen impasses en disfunctionele compromissen ontstaan.

De aanpak van dit onderzoek

Het wereldbeelden perspectief bevat vier wereldbeelden die gebaseerd zijn op Thompson's Culturele Theorie en het wereldbeelden onderzoek van het MNP. De wereldbeelden hebben neutrale benamingen; het A1, B1, B2 of A2 wereldbeeld. Het

A1 wereldbeeld ziet de natuur als stabiel, daardoor kan de natuur gebruikt worden als productiefactor om economische groei te bewerkstelligen. Het B1 wereldbeeld ziet de natuur als stabiel binnen bepaalde grenzen. Om een verschuiving van ecosystemen te voorkomen, is zorgvuldig management gebaseerd op kennis van experts nodig. Het B2 wereldbeeld ziet de natuur als fragiel. Daarom moet de natuur volgens dit wereldbeeld niet onder druk gezet worden om ineenstorting van ecosystemen te voorkomen. Het B2 wereldbeeld wil geen risico's nemen en is voor toepassing van het voorzorgsbeginsel. Het A2 wereldbeeld heeft een fatalistisch beeld van de maatschappij en zoekt vooral persoonlijke (financiële) veiligheid. Hij ziet de wereld als een vijandige plaats en gelooft niet dat hij invloed kan uitoefenen op beslissingen. In plaats daarvan worden beslissingen hem opgedrongen. De deelnemers in het interactieve proces werd een wereldbeeld toegekend gebaseerd op interviews, publicaties en beleidsdocumenten.

Dit onderzoek analyseert de rol die wereldbeelden spelen in interactieve beleidsprocessen door hypothesen te testen in twee casussen. De hypothesen verklaren waarom conflict ontstaat in interactieve processen, waarom dit conflict tot een impasse leidt, hoe compromissen gevormd kunnen worden tussen deelnemers met verschillende wereldbeelden en waarom deze compromissen disfunctioneel zijn. De hypothesen zijn gebaseerd op de Culturele Theorie en het wereldbeelden onderzoek van het MNP. Het onderzoeksobject was het interactieve beleidsproces. Het interactieve beleidsproces is in twee casussen bestudeerd.

De eerste casus gaat over de discussies over het Schelde Estuarium. De Westerschelde vormt de toegang tot de haven van Antwerpen. Om de grootste schepen onafhankelijk van het tij toegang te geven tot de haven van Antwerpen, moet de vaargeul verdiept worden. Dit is de wens van de Antwerpse haven. Maar de natuur in het Schelde Estuarium staat onder druk, de hoeveelheid schorren en slikken nemen af. Europese regelgeving vraagt om een herstel van de natuurlijke kwaliteit van het Schelde Estuarium. Verder speelt ook de veiligheid tegen overstromingen een rol. Vooral in Vlaanderen zijn de kansen op overstroming nog (te) hoog. Interactieve processen zijn in het verleden gestart om deze problematiek op een integrale manier aan te pakken.

De tweede casus gaat over de mechanische mosselvisserij in de Waddenzee. De schelpdiervisserij in de Waddenzee kwam in de jaren '90 onder toenemende druk te staan. Een gepolariseerde discussie tussen de natuurorganisaties, die vonden dat vooral de mechanische kokkelvisserij leidden tot vogelsterfte en schadelijk was voor het Wadden ecosysteem, en de visserijorganisatie, die vonden dat zij in de Waddenzee thuis hoorden en juist goed zorgden voor het ecosysteem. Er moest een nieuw schelpdiervisserij beleid komen en interactieve beleidsvorming moest bijdragen aan een beleid dat zowel economische als ecologische aspecten in evenwicht zouden brengen.

De bevindingen van het onderzoek

Het wereldbeelden perspectief gaat ervan uit dat conflicten tussen wereldbeelden niet opgelost kunnen worden en dus leiden tot impasses in besluitvorming en disfunctionele compromissen. Deze aanname werd getest met behulp van vier hypothesen.

Hypothese 1 stelt dat wanneer verschillende deelnemers met verschillende wereldbeelden samen komen in een interactief proces, dit leidt tot onenigheid en conflict tussen de verschillende wereldbeelden. Hypothese 1 test de mate waarin conflicten tussen deelnemers ook conflicten zijn tussen wereldbeelden.

De analyse laat zien dat de wereldbeelden het conflict niet verklaren wanneer de discussie een cultureel-historische of geopolitieke achtergrond heeft. In plaats daarvan zijn macht, internationale of interregionale verhoudingen, historische en culturele factoren belangrijker in het veroorzaken van conflict dan de wereldbeelden en hun verschil in perceptie. Maar wanneer de discussie een socio-economische en ecologische achtergrond heeft, dus wanneer het een economie-natuur discussie betreft, zijn conflicten tussen deelnemers ook conflicten tussen wereldbeelden. Deze conflicten waren gebaseerd op een verschil in perceptie tussen de wereldbeelden. Culturele en historische aspecten kunnen in dat geval wel een extra dimensie toevoegen aan het conflict.

Volgens het wereldbeelden perspectief ontstaan conflict in interactieve processen vanwege verschillen in percepties tussen de wereldbeelden. Deze verschillen kunnen niet overbrugd worden. Hypothese 2 stelt dat wanneer men probeert om consensus te creëren in een interactief proces, deze pogingen zullen stranden door de verschillen in percepties. Wanneer er een conflict is tussen wereldbeelden, kan er geen gemeenschappelijke perceptie of consensus ontstaan. Compromissen kunnen wel ontstaan, maar dit compromis zal dan een verschil in perceptie verbergen.

De analyse laat zien dat in het geval dat er een conflict bestaat tussen wereldbeelden, er geen consensus gevonden kon worden doordat de verschillen in perceptie hardnekkig en onoverbrugbaar bleken. In het geval van de Waddenzee eindigde het interactieve proces zelfs in een impasse.

In veel gevallen kon wel een compromis gevonden worden tussen deelnemers met verschillende wereldbeelden, maar dan bleven de verschillen in perceptie voortbestaan onder het oppervlak van het compromis. Deze verschillen kwamen in een later stadium opnieuw bovendrijven.

Hypothese 3 stelt wanneer overeenkomst tussen deelnemers in een interactief proces ontstaat. Allereerst kan een overeenkomst ontstaan wanneer het interactieve proces belanghebbenden met een ander wereldbeeld buitensluit. Het proces bevat dan slechts één wereldbeeld en er is geen reden voor fundamenteel conflict. Ten tweede kan overeenstemming bereikt worden wanneer een deelnemer van wereldbeeld verandert. Ook in dat geval is er één wereldbeeld betrokken in het interactieve proces. Ten derde kan overeenstemming bereikt worden doordat er een alliantie gevormd worden tussen twee wereldbeelden.

De analyse laat zien dat ondanks de conflicten tussen wereldbeelden in interactieve processen er vaak toch overeenstemming bereikt werd in de vorm van een compromis. Het compromis ontstond om verschillende redenen. Allereerst kon een compromis ontstaan doordat deelnemers een alliantie aangingen met deelnemers met een ander wereldbeeld. Echter deze allianties werden om andere redenen gevormd dan de Culturele Theorie voorzag. Publieke steun, win-win situaties en het koppelen van voorheen ongerelateerde discussies zorgden voor de vorming van allianties.

Compromissen konden ook ontstaan doordat bepaalde deelnemers met een ander wereldbeeld werden uitgesloten. Echter, dit betekende niet dat alle deelnemers met een afwijkend wereldbeeld uitgesloten werden. In de bestudeerde interactieve processen heeft geen enkele deelnemer zijn wereldbeeld veranderd. Hypothese is niet geaccepteerd.

Een belangrijke manier om compromissen te bereiken bleek het koppelen van voorheen ongerelateerde discussies. Door deze koppeling ontstond een nieuwe

situatie, met nieuwe mogelijkheden, baten en nieuwe prikkelingen om te participeren en er samen uit te komen.

Maar ondanks de compromissen ontstonden er problemen in de implementatie fase. Hypothese 4 stelt waarom compromissen vaak disfunctioneel zijn. Volgens het wereldbeelden perspectief kan consensus alleen ontstaan tussen deelnemers met een zelfde wereldbeeld. Een dergelijke consensus zou blinde vlekken hebben, omdat het slechts één wereldbeeld behelst. Daarom kan dit soort consensus gezien worden als disfunctioneel. Verder zijn compromissen disfunctioneel omdat het compromis het verschil in perceptie slechts toedekt. Het compromis wordt vervolgens verschillend geïnterpreteerd door verschillende partijen en de achterban stookt het vuurtje op en zorgt voor een expliciete formulering van het verschil in perceptie.

De analyse laat zien dat de compromissen in de bestudeerde interactieve processen wel degelijk disfunctioneel waren. Door verschillen in interpretatie en door protest vanuit de achterban was het moeilijk om de overeenkomsten te implementeren. Blinde vlekken in overeenkomsten konden niet gesignaleerd worden.

Waren wereldbeelden een belangrijke verklarende factor om te verklaren waarom in sommige interactieve processen impasses en disfunctionele compromissen ontstonden?

In discussies met een socio-economische en ecologische achtergrond waren de wereldbeelden een belangrijke verklarende factor voor het conflict en disfunctionele compromissen in interactieve processen. De wereldbeelden kunnen ook deels het ontstaan van impasses in interactieve processen verklaren, maar slechte persoonlijke relaties, polarisatie en verborgen agenda's zijn ook belangrijke factoren bij het ontstaan van impasses.

De belangrijkste boodschap van dit onderzoek is een nieuwe kijk op interactieve beleidsvorming en participatie nodig is. Interactieve beleidsvorming is ontstaan als alternatief voor top-down beleidsvorming en besluitvorming door de overheid. Interactieve processen moeten dus leiden tot besluiten en een interactief proces wordt gezien als mislukking wanneer er geen overeenstemming bereikt kan worden. Het is deze focus op het bereiken van overeenstemming die heroverwogen dient te worden wanneer wereldbeelden een sterke rol spelen in discussies. In zulke gevallen zijn conflicten hardnekkig en moeilijk op te lossen. De resulterende compromissen worden verschillend geïnterpreteerd. Dit onderzoek stelt vragen bij de mogelijkheden om in interactieve beleidsprocessen ook beslissingen te kunnen nemen. In veel gevallen moet de overheid uiteindelijk toch de knoop doorhakken. Het bereiken van overeenstemming moet niet de primaire focus zijn van interactieve beleidsprocessen en men moet kritisch zijn op de compromissen die uit dergelijke processen rollen. De *'clumsy institutions'* waar Michael Thompson over praat in zijn boek *'Clumsy Solutions for a Complex World'* lijken onvermijdelijk. Wereldbeelden spelen een invloedrijke rol in interactieve beleidsprocessen en hier moet meer aandacht voor zijn in de literatuur en de praktijk van interactief beleid.