

Representing the wild

A study on animal advocacy in policy networks surrounding Dutch human-wildlife conflicts: the cases of geese and muskrats



Anke L. Bakker



Representing the wild

A study on animal advocacy in policy networks surrounding Dutch human-wildlife conflicts: the cases of geese and muskrats

Utrecht University
Faculty of Geosciences
Department of Innovation and Environmental Sciences
Master: Sustainable Development
Track: Environmental Governance

Master thesis
GEO4-2321
45 ECTS

August, 2013

Anke L. Bakker

Student number: 3826961
E-mail address: anebakker@gmail.com
Mobile telephone number: +31(0)6 163 162 90

Supervisor: dr. M. Giezen
Second reader: prof. dr. P.P.J. Driessen

ABSTRACT

Human-wildlife conflict has become a complex policy area due to an increase in the amount and different types of involved actors. In the Netherlands, the two most recent policies dealing with wildlife nuisance did not sufficiently take into account the interest of the involved animals. It is important to better understand the decision-making process surrounding human-wildlife conflict in order to explain the results regarding animal welfare measures in policies on wildlife nuisance. Therefore, in this study the policy networks surrounding the recent goose and muskrat policies were explored by means of policy network analyses. This was done according to the Typology of Network Structures by Adam and Kriesi (2007), by analysing the interaction between pairs and coalitions of actors and the power distribution among actors in the networks. An outline of important events and the perceived power distribution was used to characterise the predominant types of network structures.

This qualitative study was based on literature research and semi-structured, audio-recorded and transcribed interviews with 12 respondents from the case of the geese and 19 respondents from the case of the muskrats. The respondents from the policy network surrounding goose nuisance represented nature management organisations, agricultural organisations, animal advocacy groups, a hunting association and the provincial government. Respondents from the case of the muskrats represented the water board governments, the muskrat extermination organisation and an animal advocating political party. The gathered data was used to describe the development of the nuisance problems, the interests of the involved actors, the important events and interaction during the policy-making process and the power distribution among the involved actors. The two cases were compared to each other in order to find differences and similarities with regard to their network characteristics and the final policies' implementation of animal welfare measures.

In both the cases, animal advocacy groups were dissatisfied with the final policy content because lethal removal continued to be the main focus. There was a clear divide between animal advocacy groups and all the other actors in the policy networks regarding respectively their protective and managerial point of view. The policy content can be attributed to a cooperative type of interaction between actors in a decision-making coalition among which animal advocacy groups were a minority. Because of this suboptimal position, animal advocacy groups did not succeed in enforcing un-lethal measures. However, as a result of a compromising interaction between two actors including an animal advocacy group, the geese policy does ensure the protection of hibernating geese. On top of these results it was discovered that within the policy networks the effectiveness and efficiency of un-lethal measures was a big topic of debate. Based on these findings, a recurring pattern in human-wildlife decision-making is proposed.

Keywords. Human-wildlife conflict, animal nuisance, policy network analysis, network structures, decision-making process, animal advocacy

ABBREVIATIONS

AC	Administrative Council
AGV	Waterschap Amstel Gooi en Vecht
APnl	Stichting Agrarisch en Particulier Natuur- en Landschapsbeheer Nederland
BvD	Bont voor Dieren
FBE	faunabeheereenheid
FPG	Federatie Particulier Grondbezit
G-7	Ganzen-7
G-8	Ganzen-8
HDSR	Hoogheemraadschap De Stichtse Rijnlanden
HHNK	Hoogheemraadschap Hollands Noorderkwartier
HHSK	Hoogheemraadschap van Schieland en de Krimpenerwaard
IPO	Interprovinciaal Overleg
KNJV	Koninklijke Nederlandse Jagersvereniging
LTO	De Landbouw en Tuinbouworganisatie Nederland
PvdD	Partij voor de Dieren
UvW	Unie van Waterschappen
WBE	wildbeheereenheid

PHOTOS, FIGURES AND TABLES

Front page photos from VidiPhoto

<http://www.vidiphoto.photoshelter.com>

info@vidiphoto.nl

Figure 1. Research framework for studying policy networks surrounding Dutch human-wildlife conflicts	p. 14
Figure 2. Impact model of the G-7/IPO goose policy	p. 24
Figure 3. The focus of actors in the policy network surrounding goose nuisance	p. 33
Figure 4. Time line 1 with important events in the policy process surrounding goose nuisance	p. 37
Figure 5. Advertisement about the goose policy from the Faunabescherming	p. 38
Figure 6. Time line 2 with important events in the policy process surrounding goose nuisance	p. 39
Figure 7. Time line 3 with important events in the policy process surrounding goose nuisance	p. 40
Figure 8. Time line 4 with important events in the policy process surrounding goose nuisance	p. 42
Figure 9. Impact model of the muskrat policy “Muskusrattenbeheer 2012-2015”	p. 50
Figure 10. The water board areas of responsibility	p. 52
Figure 11. The focus of actors in the policy network surrounding muskrat nuisance	p. 55
Figure 12. Time line 1 with important events in the policy process surrounding muskrat nuisance	p. 59
Figure 13. Time line 2 with important events in the policy process surrounding muskrat nuisance	p. 63
Figure 14. Summarising box with the predominant types of network structure in the two policy networks	p. 69
Figure 15. Recurring pattern in human-wildlife policy development: the cases of geese and muskrats	p. 71
Table 1. Typology of Network Structures by Adam and Kriesi (2007, p.135)	p. 12
Table 2. Respondents from the policy network surrounding goose nuisance	p. 19
Table 3. Respondents from the policy network surrounding muskrat nuisance	p. 21
Table 4. Predominant types of network structure in the policy network surrounding goose nuisance	p. 46
Table 5. Predominant types of network structure in the policy network surrounding muskrat nuisance	p. 66

CONTENTS

ABSTRACT.....	3
ABBREVIATIONS	4
PHOTOS, FIGURES AND TABLES.....	5
CHAPTER 1 <i>INTRODUCTION</i>	9
1.1 Background of the study	9
1.2 Earlier research.....	10
1.2.1 Animal advocacy and values.....	10
1.2.2 Human-wildlife conflict.....	10
1.2.3 Policy processes in animal decision-making	11
1.3 Problem definition.....	11
1.3.1 Theory of policy networks	12
1.3.2 Research aim and questions	13
1.3.3 Research framework	14
1.4 Relevance	14
CHAPTER 2 <i>METHODOLOGICAL FOUNDATION</i>	16
2.1 Case-studies.....	16
2.2 Background and stakeholders	16
2.3 Qualitative data analysis.....	16
2.4 Empirical research	17
2.4.1 Respondents from the policy network surrounding goose nuisance	19
2.4.2 Respondents from the policy network surrounding muskrat nuisance.....	20
CHAPTER 3 <i>GOOSE NUISANCE: CONTEXT</i>	22
3.1 Problem development.....	22
3.2 Former policies	22
3.3 Ganzen-7 and IPO goose policy	24
CHAPTER 4 <i>GOOSE NUISANCE: INVOLVED ACTORS</i>	26
4.1 Introduction to the involved actors	26
4.1.1 De12Landschappen	26
4.1.2 De Federatie Particulier Grondbezit (FPG).....	27
4.1.3 De Landbouw- en Tuinbouworganisatie Nederland (LTO)	27
4.1.4 Natuurmonumenten.....	27
4.1.5 Stichting Agrarisch en Particulier Natuur- en Landschapsbeheer Nederland (APnl)	28
4.1.6 Staatsbosbeheer	28
4.1.7 Vogelbescherming Nederland.....	29
4.1.8 De Koninklijke Nederlandse Jagersvereniging (KNJV)	30
4.1.9 Dierenbescherming	31
4.1.10 Faunabescherming.....	31
4.1.11 Interprovinciaal Overleg (IPO)	32
4.2 The interests of involved actors.....	32

CHAPTER 5 <i>GOOSE NUISANCE: POLICY NETWORK ANALYSIS</i>	34
5.1 Events and interaction	34
5.1.1 From “Beleidskader Faunabeheer” to Ganzen-8	34
5.1.2 Mutual Gains Approach	35
5.1.3 From Ganzen-8 to Ganzen-7	36
5.1.4 Presenting the agreement ‘Nederland Ganzenland’	37
5.1.5 From G-7 agreement to governmental collaboration	39
5.1.6 G-7 and IPO negotiations	41
5.1.7 Final agreement between IPO and G-7	41
5.2 Power distribution	42
5.2.1 Vogelbescherming	42
5.2.2 Other animal advocacy groups	43
5.2.3 KNJV	43
5.2.4 Nature management organisations	44
5.2.5 State actors	44
5.2.6 Farmers	44
5.3 The type of network structure: conclusions	45
CHAPTER 6 <i>MUSKRAT NUISANCE: CONTEXT</i>	47
6.1 Problem development	47
6.2 Policies	47
6.3 Muskrat policy “Beleidsnota 2012-2015 Muskusrattenbeheer”	49
CHAPTER 7 <i>MUSKRAT NUISANCE: INVOLVED ACTORS</i>	51
7.1 Introduction to the involved actors	51
7.1.1 Water boards	51
7.1.2 Administrative Council (AC)	52
7.1.2 Muskusrattenbeheer	53
7.1.3 Politics and Partij voor de Dieren (PvdD)	53
7.1.4 Dierenbescherming	53
7.1.5 Faunabescherming	54
7.1.6 Bont voor Dieren (BvD)	54
7.2 The interests of the involved actors	54
CHAPTER 8 <i>MUSKRAT NUISANCE: POLICY NETWORK ANALYSIS</i>	56
8.1 Important events and interaction	56
8.1.1 One ‘Muskusrattenbeheer’ on behalf of six water boards	56
8.1.2 Creating a shared policy for Muskusrattenbeheer	57
8.1.3 Conference for the policy note for AB’s on 13 April 2012	59
8.1.4 Finalising the concept policy for muskrat management	61
8.1.5 Establishing the final policy ‘Muskusrattenbeheer 2012-2015’	61
8.1.6 Animal advocacy around the establishment of ‘Muskusrattenbeheer 2012-2015’	62
8.2 Distribution of power	63
8.2.1 Water board politics	63
8.2.2 The power of fear	64
8.2.3 Animal advocacy groups	64
8.3 Type of network structure: conclusions	65
CHAPTER 9 <i>COMPARISON OF THE TWO CASES</i>	67
9.1 Comparing the backgrounds	67
5.2 Comparing the involved actors	67

5.3 Comparing the network structures	68
5.3.1 The position of animal advocacy groups	70
CHAPTER 10 <i>CONCLUSION AND DISCUSSION</i>	72
10.1 Conclusion	72
10.2 Discussion	73
REFERENCES <i>LITERATURE AND REPORTS</i>	75

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Aside from the 16 million humans, a countless amount of non-human animals also make use of the air, water and grounds of the Netherlands. After the incubation season, the skies are home to between 50-100 million birds alone (Vogelbescherming Nederland, 2012). The saying 'the more the merrier' does not always apply to this equation. While living together, every single being tries to fulfil its own needs, ranging from basic instinctive needs to luxurious socially constructed desires. Whatever the needs may be, they require space and natural resources in order to be satisfied. Liberals often state: 'your freedom stops where mine begins', but in human confrontations there is often no consensus on where to draw that very line. This is no different where animals are involved. Sharing space and natural resources often leads to situations of conflict when mixing up each other's plans.

In the Netherlands for example, there are conflicts with wild boars because of damage to lawns (e.g. Nijland, 2011), with wild geese due to flight risks, crop and grassland damage, noise nuisance and loss of precious vegetation (e.g. Heijne, 2011; AD, 2013; LD 2013, Dagblad van het Noorden, 2013), conflicts with muskrats due to water protection risks as a result of their burrows in banks and dikes (e.g. AD/Rivierenland, 2012), with rabbits due to train traffic safety risks, because of their holes underneath train tracks (e.g. Sevil, 2013), with deer because of traffic risks and damage to forests, crops, grassland and lawns (e.g. IJmuider Courant, 2013), with birds as a result of their bird poo on cars and on the ground (e.g. De Stentor/Veluws Dagblad, 2013; Leeuwarder Courant, 2013) and conflicts with rats due to land collapse risks (e.g. Volkskrant, 2012), or because rats are labelled as dirty pests, just as pigeons and mice (e.g. Vermaat & Zuidervaart, 2011).

In such conflicts, people try to represent the interests of all who are involved in the situation. For example, they can speak in the name of humans, like families, entrepreneurs or corporations. But they can also advocate the interests of involved animals, be they pets or livestock or wild animals. Also, people can defend other aspects of nature, focusing on for example trees, water or complete ecosystems. Depending on their moral starting point, people choose what they believe has most value, and is most important to represent. From an anthropocentric point of view, the nonhuman aspects of nature only have an possible instrumental value to people. This perspective can be found in concerns over e.g. natural resource management and nature conservation (Curry, 2011). From a sentientism starting point, all who can suffer deserve consideration. This belief can be found in animal-rights or animal-welfare groups, ascribing animals a right to life, including a certain quality of life (Curry, 2011). Next, from a biocentric perspective, the consideration is extended to everything alive. Furthermore, an ecocentric point of view incorporates animate as well as non-living holistic entities, considering the integrity of species, ecosystems, human and nonhuman organisms (Curry, 2011). Finally, the perspective of holism has inspired people to advocate the interests of the Earth, Gaia, as a whole (Curry, 2011). In the Netherlands there are advocacy groups concerned with nature in general or animals in specific, representing certain interests by lobbying, campaigning, consulting and conducting research.

Dutch advocacy groups have been actively involved in the two most recent policy making processes regarding wildlife: mitigating geese and muskrat nuisance. For both cases, in 2012 a joint policy was created as a result of collaboration by different stakeholders. Remarkable here is the final reaction of the involved animal advocacy groups on the policies. They are dissatisfied to moderately satisfied with the policy on muskrat nuisance in "Beleidsnota Muskusrattenbeheer 2012-2015" (PvdD, 2012; Dierenbescherming, 2012A;), and they are highly dissatisfied with the policy on combating goose nuisance in "Nederland Ganzenland" (Dierenbescherming, 2012b,

Faunabescherming, 2012). When involved in the policy making process, animal advocacy groups can present animal welfare measures that prevent the occurrence of (nuisance of) certain animals (such as: displacing the animals; making the environment less attractive for the animals or placing barriers), and/or measures that focus on alleviating cruel methods of lethal removal (such as: treating eggs as an alternative to shooting; no shooting in the breeding season which would lead to abandoned young animals; no traps that result in hours of struggle). Apparently the involvement of animal advocacy groups in the policy making process did not lead to policies in which the interests of animals are sufficiently assured. In order to understand why the interests of animals in human-wildlife conflicts are not always guaranteed in final policies, this study concentrates on the realisation of the two recent policies.

1.2 Earlier research

1.2.1 Animal advocacy and values

A great body of research exists that is oriented at the development of animal advocacy groups. The introduction of animal advocacy in society is explained by Inglehart (1990, 1997), who points at a shift from materialist values to post-materialist values in societies that experienced a shift from industrialism to post-industrialism. More specifically, these shifts in values can be found in citizens' 'wildlife value orientation' (Teel, Manfredo & Stinchfield, 2007), which can give an insight into citizens' acceptance of various human-wildlife policy measures.

A 'wildlife value orientation' can be explained as patterns of "basic beliefs that give personal meaning of right and wrong and an ideal life to one's more basic values in relation to wildlife" (Teel, Manfredo & Stinchfield, 2007). According to various studies in the United States, scholars have identified a set of classifications of wildlife value orientations among citizens, including *materialism* (the belief that wildlife exists for human use and that wildlife welfare is subordinate to human welfare), *mutualism* (view of human-wildlife relationships as similar to human-human relationships, focusing on relationships of trust and on animal rights), *attraction/interest* (interest in and enjoying wildlife), *concern for safety* (concerns about possible harm due to interactions with wildlife), *environmentalism* (concern for the environment extended to preserving wildlife), *rational/scientific* (explanations about the way nature works or animals behave) and *spiritual/religious* (wildlife as an expression of higher power) (Teel et al., 2005; Teel, Manfredo & Stinchfield, 2007; Dayer et al., 2007).

A study by Jacobs (2007) revealed that wildlife value orientations among inhabitants of the Netherlands are dominated by the mutualism orientation, which matches the results of an earlier comparative study in 19 western states in the United States (Teel et al., 2005; Teel, Manfredo & Stinchfield, 2007). Because it is likely for mutualists to support enhancing wildlife welfare and less likely for them to favour harming wildlife (Teel, Manfredo & Stinchfield, 2007), it could be expected that this dominant value orientation marks the course of human-wildlife conflict governance in the Netherlands. However, the two policies central to this research appear to demonstrate otherwise.

1.2.2 Human-wildlife conflict

A second field of research explores the different types of human-wildlife management. Here conservationists are concerned with designing solutions to mitigate human-wildlife conflict, considering both people's activities and wildlife needs (Sillero-Zubiri, Sukumar and Treves, 2006). According to Macdonald & Sillero-Zubiri (2004) there are two possible relevant solutions when a conflict is experienced as unbearable by people, namely to control the problematic species, population or individual or to compensate the aggrieved people. A third option would be to solely protect the species, population or individual, without alleviating the unbearable experience of the deprived stakeholder. Controlling the problematic species can be done by preventing or reducing the frequency or the severity of human-wildlife conflicts (by means of using guards or placing barriers or refuges), or by directly dealing with those animals that are part of the conflict (for example by lethal removal, dislodgement or displacement). Macdonald & Sillero-Zubiri (2004) furthermore suggest raising people's tolerance towards wildlife, which could soften people's judgement. Next to economic incentives (for example offering a compensation for agricultural losses) they also emphasise the importance of education (learning about the nature of wild animals and judging risks in a

realistic manner).

As Heberlein (2004) notes, there are currently many stakeholders involved in human-wildlife conflicts, bringing different perceptions of conservation, nature, animal welfare, politics and natural resource economics to the table. Heberlein (2004) also underlines the divide between urban and rural interests, due to the fact that urban policy makers often set the rules for rural lifestyles. In this respect Manfredi and Dayer (2004) state that human-wildlife conflicts have become primarily people-people conflicts, due to opposite values regarding using or protecting natural resources. With such a large spectrum of interests, this policy area has become extremely complex. According to Heberlein (2004) there is a need for innovative, clear-thinking solutions that necessarily need to come from a multidisciplinary approach. Ultimately, as Sillero-Zubiri & Laurenson (2001) believe, “the best we can hope for may be an uneasy tolerance” of the conflicts between humans and wildlife. Macdonald (2001) also stresses that in this development, people should not get sealed off from nature, but they should “involve a respectful engagement with wildlife”.

1.2.3 Policy processes in animal decision-making

As just made clear, the changing wildlife value orientations and the involvement of many stakeholders in the policy making process have led to a complex policy area of human-wildlife conflict. This said, it is important to understand the complexity of this policy area and to explore the policy making process. However, so far only a small body of research has been conducted into this process.

In his book ‘Political Animals’, Garner (1998) already pointed out the absence of studies by political scientists regarding public policy input to protect animals. His research focuses mainly on policy processes around laboratory procedures and the use of animals for food in both Britain and the United States. According to Gardner (1998), lessons can be learned regarding the power relationships between stakeholders by analysing policy networks. Policy network analysis treats public policy as a product of various networks, consisting of government and non-government players, each with its own network characteristics. Garner (1998) found that transparency of animal protection groups in the form of advisory reports is of great importance for their influence on decision-making. Also, policy output depends on the extent to which the animal movement is united and different groups are cooperating with each other. Furthermore, Garner (1998) shows that public pressure is a valuable tool for legislative reform. On the other hand, he makes clear how in sectoral decision-making, past developments in existing structures can thwart animal welfare developments, like in the case of USA agriculture where sectoral interests predominantly have had overriding influences. This process is also found by Lyons (2011) in his research on developments in the British animal research policy process. Just as Garner (1998), he also applies policy network analysis, which enables him to study the relationships between group and state actors in explaining policy processes. His main finding is that due to their “greater resources, structural advantages and a culture of secrecy”, the interests of the animal-testing industry have been able to overcome pressure from animal advocacy groups.

However, besides this publication on policy networks and animal advocacy in Britain, there is still little information available on the policy processes surrounding animals. Moreover, any study regarding the policy processes in human-wildlife conflict seems to be absent.

1.3 Problem definition

As described earlier on, recently two policies have been established for mitigating human-wildlife conflict in the Netherlands. First, in September 2012, a joint policy was created by the water boards of mid- and west-Netherlands regarding conflicts with muskrats: “Beleidsnota Muskusrattenbeheer 2012-2015”. Next, in December 2012, a group of stakeholders presented a national policy on countering goose nuisance at farmers grasslands: “Nederland Ganzenland”. In general the involved advocacy groups were not satisfied with the resulting policies, the best result being a moderate satisfaction from the Dierenbescherming regarding the muskrat policy. This raises questions regarding the policy processes underlying these outcomes.

The policy area surrounding animals in general, and the human-wildlife conflict in specific, is characterised as a complex field due to the many different interests involved. At the same time, there is a lack of knowledge on the network processes involving the human-wildlife policies. In order to contribute to the knowledge gap, this study tries to uncover the processes that have shaped the before mentioned two policies. These insights might allow us to draw conclusions regarding stakeholder influence and interactions, which will hopefully help achieve further animal welfare measures.

1.3.1 Theory of policy networks

In order to understand the policy making process, this study has used a typology of network structures. Adam and Kriesi (2007) propose to characterise social networks based on two elements: a set of actors and the relationships between pairs of actors. The set of actors can be studied by looking at the actors' attributes (so-called composition variables) and the relationships between pairs of actors can be researched by looking at the types of ties between the actors (so-called structural variables).

First, the composition variables are composed by several actors' attributes (capabilities, perceptions and preferences) of which 'capabilities' is thought to be the most important one in policy networks according to Adam and Kriesi (2007). When focusing on the distribution of capabilities over a set of actors, it is possible to shed some light on the power structure within a social network. Power is a complex concept, however generally it refers to a relationship between at least two actors in the sense that: "A has power over B to the extent that he can get B to do something that B would not otherwise do" (Dahl, 1957, pp. 202-3). The distribution of power can be concentrated around one dominant actor or a sub-set (coalition) of actors or it can be fragmented (shared) between the involved actors.

Second, the structural variables include the 'degree of cooperation' among actors, which allows for conclusions about the types of interaction within the network. Adam and Kriesi (2007) distinguish three predominant types of interaction: conflict/competition, bargaining/negotiation, and cooperation. When combining the distribution of power and the type of interaction, it is possible to differentiate between six types of policy networks (see figure 1).

Distribution of power	Type of interaction		
	<i>Conflict/competition</i>	<i>Bargaining/negotiation</i>	<i>Cooperation</i>
<i>Concentration</i>	Dominance -- Moderate potential for rapid (serial) shift	Asymmetric bargaining -- Low to moderate potential for incremental change	Hierarchical cooperation -- Low potential for change - maintenance of status quo
<i>Fragmentation</i>	Competition -- High potential for rapid (serial) shift	Symmetric bargaining -- Moderate to high potential for incremental change	Horizontal cooperation -- Low to moderate potential for change -maintenance of status quo

Table 1. Typology of Network Structures by Adam and Kriesi (2007, p.135)

Following the distribution of power leads to a hierarchical divide of the types of interaction. Additionally it is possible to study what type of actor(s) have the highest share of power. As Adam and Kriesi (2007) suggest, one can distinguish between state actors and advocacy actors (political parties, interest groups, and nongovernmental organisations/social movement organisations). Coalitions can be homogeneous (including only one of these types of actors) and they can be heterogeneous (composing of a variety of types of actors).

By looking at the distribution of power and the type of interaction, it should be possible to draw conclusions regarding the potential for, and the direction of, policy change. As Adam and Kriesi (2007) propose, the type of

interaction determines the form of policy change, while the degree of concentration of power is supposed to determine the potential for change. If power is fragmented, it is expected that the potential for each type of change is greater. When power is concentrated, it is harder for challengers to fight down the powerful actors, because of their lack of resources.

1.3.2 Research aim and questions

The aim of this research is to uncover the network characteristics that can explain the policy decisions in the two selected cases. This is done by investigating the processes that underlie the policy decisions, by means of a policy network analysis. The main research question of this study is:

*“How can policy network characteristics explain the results regarding animal welfare measures in the 2012 policies on the human-wildlife conflicts with geese (*Anserini*) and muskrats (*Ondatra zibethicus*) in the Netherlands?”*

Answering this explanatory question demands an investigation of several sub-questions, which are:

- #1 *“What is the context of both conflicts in regard to the problem development and former policies?”*
→ Chapter 3 and 6
- #2 *“Who are the relevant actors in the two policy networks and what is their interest in the issue?”*
→ Chapter 4 and 7
- #3 *“How has the interaction between pairs or coalitions of actors influenced the policy outcomes?”*
→ Chapter 5 and 8
- #4 *“How has the power distribution among the involved actors influenced the policy outcomes?”*
→ Chapter 5 and 8
- #5 *“What similarities and differences can be found in the policy processes of both cases in regards to the network characteristics?”*
→ Chapter 9

The first sub-question is answered in chapter 3 (the case of the geese) and chapter 6 (the case of the muskrat). Both chapters provide background information on the problem development and the relevant recent policies. This introduction to the two conflicts is important to understand why the two policies under study were established and it helps to understand recent policy choices in the light of earlier developments.

For answering the second sub-question it is necessary to identify the involved actors, describe their main occupations and their advocating role. This exploration gives information about the actors' problem and solution perspective and their interest will be presented in a table. The second sub-question is answered in chapter 4 (the case of the geese) and chapter 6 (the case of the muskrat).

The third and fourth sub-questions, about interaction between actors and power distribution among actors in both policy networks, are answered in chapter 5 (the case of the geese) and chapter 8 (the case of the muskrat). These two chapters start with an outline of important events during the policy making process and the related interactions between involved actors. In order to visualise the information, the data is presented in a time line, highlighting the interactions that most influenced the policy content. The second parts of chapter 5 and 8 are composed of an

elaboration on the power distribution among the actors. By combining the insights from the interactions and power distribution, the two chapters end with a characterisation of the type of network structure. These characterisations enable to make conclusions regarding the relation between network structure and policy content.

The fifth sub-question is answered by comparing all researched network characteristics in the case of the muskrat to those in the case of the geese. This analysis can be found in the first parts of chapter 9. What follows after the comparisons in chapter 9 is a conclusion about the relation between network characteristics and the results regarding animal welfare measures in the two policies. This is the main research question of the study.

1.3.3 Research framework

For this research, the theoretical foundation on policy networks formed the basis of assessment indicators for measuring the distribution of power and the types of interactions in the policy networks. Comparing the results of both analyses uncovered how network characteristics explain the policy decisions in the two case-studies.

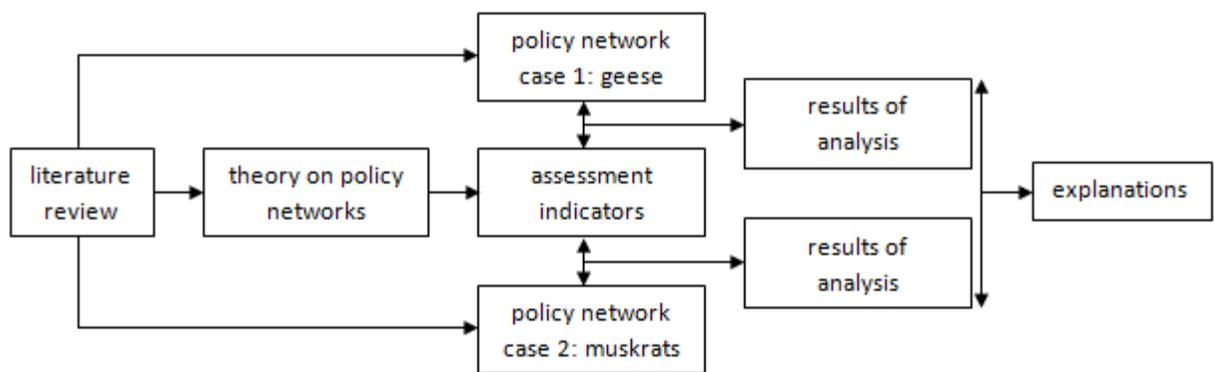


Figure 1. Research framework for studying policy networks surrounding Dutch human-wildlife conflicts

1.4 Relevance

The master's programme Sustainable Development is focused on sustainable development which "requires a process of change in which a balance is achieved among ecological, technological, economic, and social-cultural values, from the local to the global scale, in both the short and the long term." (Vermeulen & Bootsma, 2011, p.8). Assuring a respectful treatment of animals can be seen as a social-cultural or, if you prefer, an additional ethical value. When speaking of achieving a balance among this wide variety of values, often the interests of animals are not taken into account when designing policies around the world's resources. In human-wildlife conflict, humans and animals both want to make use of the same natural resources, frequently leading to policies in which animals' interests are insufficiently incorporated. This means that there is still a lot of work to do in order to make a transition to sustainable decision-making in the policy area of human-wildlife conflict.

As already made clear at the start of this research proposal, there is barely any research available regarding the policy process for policies on human-wildlife conflict. Research on this topic contributes to a better understanding of policy decisions and thus helps closing this knowledge gap. This research also contributes to the need of empirical research to show whether network approach is a useful tool in describing and explaining policy decisions (Adam and Kriesi, 2007, p.147). In addition, according to Börzel (1998, p. 267, from: Adam and Kriesi, 2007, p.147),

"empirical analysis still has to prove that networks do not only *exist* in European and national policy making but are also *relevant* for policy processes and policy outcomes". Consequently this research will contribute to a better understanding of the importance of relations between actors and a network structure.

Besides its relevance to science, this research also has a societal value in the sense that it can provide knowledge on how a more respectful treatment of animals can be achieved in the policy process. Especially for animal advocacy groups, this can produce valuable knowledge regarding their strengths and weaknesses in decision-making. This strategic knowledge about animal advocacy groups can help them have a bigger influence in the policy making process in the future. Looking at ongoing conflicts with e.g. deer and the introduction of the wolf in the Netherlands, this research can have high societal relevance in the near future. Hopefully it would ultimately contribute to a more balanced representation of human and non-human animals in policies on human-wildlife conflict.

CHAPTER 2

METHODOLOGICAL FOUNDATION

2.1 Case-studies

The research is limited to the two case-studies of policy about geese and muskrat nuisance. In the case of geese, the research focuses on the December 2012 national policy 'Nederland Ganzenland' that deals with nuisance at farmers' grasslands. At the same time this policy was created, there were also problems with goose nuisance at the Schiphol airport. These problems were dealt with in another policy network, although there was some overlap in the involved parties. This Schiphol case is excluded from this research. The case of muskrats is limited to the policy 'Nota Muskusrattenbeheer 2012-2015' that covers the area of six water boards in the mid- and west-Netherlands. Water boards in the eastern part of the Netherlands also cooperated in dealing with muskrat nuisance, but they had not yet established a common policy at the start of this study. For this reason, this study is limited to the policy of the six water boards in the mid- and west-Netherlands.

2.2 Background and stakeholders

This study starts with a background chapter that describes both cases in regard to the problem development, the history of involved stakeholders and earlier policies. Problems with muskrats have existed for over 50 years, while conflicts with geese have been around for even several centuries. For both cases it was decided to give a general outline on these developments starting 10 years ago, and to give a more detailed description of the developments over the last decade. This was done by means of a desk research, based on information from books, newspaper articles, information on stakeholders' websites and scientific articles. As an elaboration of the history of involved stakeholders, the current set of relevant actors that belong to the two policy networks will be explained. They were found by looking at the parties that are mentioned in the final versions of the two policies, but also by using information that was found during the desk research. Also, during the course of the research additional stakeholders were identified, mostly at the advice of another respondent.

2.3 Qualitative data analysis

For analysing the composition (competences/power) of the policy networks, a standard operationalisation was used. The distribution of power is often operationalised by reputational, positional, or participation-based indicators (Adam and Kriesi, 2007). Researching whether the distribution of power is concentrated or fragmented in the policy network can be done in several ways. In community power research, many different research models have been used, according to Jacobsen and Cohen (1986) all with their own flaws. However, after reviewing their strengths and weaknesses, the reputational model seemed to be the most practical and most suitable for this study. Central to this reputational model is the view that actors' power reputation is a reflection of the power distribution of actors in a network. According to Moschitz and Stolze (2009, p.259) reputation can be defined as "the expression of the power of an actor, i.e. the perceived power of an actor to have influence in the network." In order to measure this power reputation, all actors in a network can be asked to name the actor(s) that are seen as influential in relation to a particular decision. A weakness of this approach, according to Jacobsen and Cohen (1986) is that actors without a power reputation are not expected to wield power. Also, with this model alone it is impossible to draw conclusions regarding power relationships. However, both these weaknesses are only valid when this model is used in order to make certain predictions regarding policy networks. This is not the case in this study, because the policies have already been created, which makes it possible to accompany the findings with empirical data regarding actual behaviour of the actors and actual policy content. For this research the reputational model is used in order to analyse the composition of the networks.

Second, the structure of the decision-making process is operationalised by giving an outline of important events and by describing the links between the actors at the events. Selecting the so-called 'crucial events' and the links between actors in a policy process depends on the case being studied (Serdült and Hirschy, 2004). These can be meetings, parliamentary sessions, signing of a relevant international treaty, consultations of other actors, establishing a preliminary policy draft, etc. For this study, the data selection was based on empirical evidence from written documentation (like protocols, negotiation reports or file notes) or from information from interviews with actors. According to Serdült and Hirschy (2004, p.142) the basic data for their operationalisation is composed of a "thick description" of detailed narratives of incidents within and around the identified policy events.

This procedure is proposed by Serdült and Hirschy (2004), who furthermore process structural network information in a computer software program to generate quantitative comparable network data. They call this an Actor-Process-Event-Scheme (APES). However, for this study a quantitative elaboration on event participation did not seem relevant. Instead, additional information regarding the content of the actors' participation is provided. This was needed in order to determine how interactions between pairs or coalitions of actors influenced the policy process and ultimately the policy decisions. The combination of event participation, links between actors and the content of interaction, also helped to determine the predominant type of interaction (i.e. conflict/competition, bargaining/negotiation or cooperation).

The creators of the Typology of Network Structures did not provide scientific definitions of the three types of interaction. Because the typology of network structures is a simplification of reality, it is assumed that for determining the three types of interaction, a gross description will suffice. Therefore, the general definitions from the Oxford Dictionary are followed in defining whether conflict/competition, bargaining/negotiation or cooperation is the predominant type of interaction in both networks. The Oxford Dictionary defines the verb *conflict* to "be incompatible or at variance; clash;". The noun *competition* is defined as "the activity or condition of striving to gain or win something by defeating or establishing superiority over others". The verb *bargain* is defined as to "negotiate the terms and conditions of a transaction", while the verb *negotiate* means to "try to reach an agreement or compromise by discussion". Finally, the noun *cooperation* is defined as "the action or process of working together to the same end" (Oxford Dictionaries, 2013).

Finally, combining the insights from interactions and from the power distribution, it is possible to draw conclusions regarding the predominant types of policy networks as presented in figure 1. The types of policy networks are used in a dynamic manner, acknowledging that over time different types of interactions and power distributions can prevail. Based on these typologies, conclusions were made regarding the policy decisions.

2.4 Empirical research

For this research most time is dedicated to empirical research, because of the aim to do semi-structured interviews with all actors within both the policy networks. A spreadsheet with all involved organisations and the relevant contact data was created in order to keep track of telephone conversations researching the right people to interview. All interviews were in person, because this personal contact was assumed to be important when talking about interactions with other organisations. This way, the interviewer also got an impression of organisational culture and ambiance while travelling across the country. In the case of the goose policy it took many calls to get in touch with the persons who were actively involved in the policy process. The involved persons in the network around the muskrat policy were easier to find. However, this muskrat network turned out to be much bigger than expected.

Making contact with the organisations that created the goose policy, it soon became clear that there were several problems to overcome. In contrary to the animal advocacy organisations that did not sign the agreement, the involved organisations were not that motivated to participate in the research. First, the policy agreements appeared to be made primarily by the directors of the involved organisations. This was done in a closed setting, without a registry taking minutes of the conversation. Second, the content development of the agreement was said to be vulnerable information and consequently the involved organisations together agreed on not going into detail with outsiders about the content. These two obstacles made it necessary to communicate about the research objectives

with an emphasis on the policy procedures, instead of the content. Also, the goal of the research was explained in a general manner: to uncover the network processes and procedures in order to understand the policy decisions, because the subject relates to sustainable development. Since the content development is vulnerable to the involved actors, and since there was a fear of possibly influencing the results, it did not seem wise to point at the specific emphasis on animal advocacy. Rather, the study was explained as important to the master's programme Sustainable Development, because the topic relates to nature conservation, spatial planning, food production and animal welfare. As a consequence of the directors' closed setting of policy making, it was necessary to accept interviews with policy makers that had not been directly involved in the meetings, but who could explain about the perspective of their organisation. This eventually worked out well: the policy makers sometimes felt free to share oversimplified information about relationships with other organisations. Also, several directors agreed on doing an interview, because of the involvement of policy advisors from other organisations.

Finding the right respondents in the muskrat network was easier, because the network is centred around public water boards. Being governmental organisations, water boards are transparent in their meetings and procedures and the contact information of almost all employees is visible on the webpage of the relevant water board. Another positive factor was the information of a communications advisor who organised a seminar about the policy, meant for all interested board-members of the water boards. This respondent also provided information of the policy advisors from every board. Choices had to be made, because every water board is made up of 25-30 board-members and every water board delivered one or two policy makers to create the policy together. It was decided to interview all involved policy makers and the representatives from the political party the Partij voor de Dieren (Party for the Animals) from the six water boards. These policy makers and political representatives were expected to be able to explain about the actors' interactions and policy processes.

In the end, the amount of respondents interviewed was 12 from the geese network and 19 from the muskrat network. The interviews were semi-structured, surrounding the organisations' problem and solution perspective, its involvement in the policy process and the respondents' perception of other actors' influence. All interviews were audio recorded with permission from the respondents. The audio recordings were transcribed into digital text and imported into the qualitative data software program Atlas-Ti. With this program parts of the text were manually categorised according to different codes, such as "problem perspective", "solution perspective", "power" and "interaction". Together with data from websites, reports and minutes, the coded text was finally processed into this report.

On the next three pages, all interviewed respondents are presented in tables. These give information on the actor that is represented, the abbreviation of this actor, the name of the respondent and his or hers professional position and information on the interview date and place. None of the respondents asked for anonymity and that is why the names and positions of the respondents are complete. The respondents are signed a reference code in the first column of the tables, ranging from R1 to R28. In case of the muskrats, two interviews were conducted with two respondents at the same time (R19-1 & R19-2 and R20-1 & R20-2). There were two respondents representing organisations that belong to both the policy networks (R10 and R11). In case of the muskrats, a meeting by animal advocacy organisations was attended (R28). In the following chapters the reference codes in the first column are used when referring to a respondent.

2.4.1 Respondents from the policy network surrounding goose nuisance

Reference	Actor	Abbreviation	Respondent	Position	Interview date
R1	“De Ganzen-7” (Geese-7)	G-7	Erik Koffeman	Secretary at the Ganzen-7	5 April 2013 Dien Bosch
R2	De 12Landschappen (12 Landscapes)		Berry Lucas	Senior policy advisor on ‘Nature and Landscape’	8 April 2013 De Bilt
R3	Federatie Particulier Grondbezit (Federation Private Land Estate)	FPG	Reinier van Elderen	Chairman at Hollands Particulier Grondbezit	12 April 2013 Zwanenburg
R4	De Landbouw- en Tuinbouworganisatie Nederland (Agricultural and Horticultural organisation Netherlands)	LTO	Harm Kossen	Coordinator Multifunctional Agriculture and Nature at Limburgse Land- en Tuinbouwbond	20 March 2013 Roermond.
R5	Natuurmonumenten (Nature monuments)		Michiel van der Weide	Advisor fauna & nature management at the department Nature and Landscape	21 March 2013 's- Graveland
R6	Stichting Agrarisch en Particulier Natuur- en Landschapsbeheer Nederland (Foundation Agrarian and Private Nature- and Landscape management Netherlands)	APnl	Jos Roemaat	Chairman at NPN-LTO	11 March 2013 Utrecht
R7	Staatsbosbeheer (management of state forests)		Meta Rijks	Fauna-ecologist	13 March 2013 Driebergen
R8	Vogelbescherming Nederland (Bird protection Netherlands)		Fred Wouters	Director	6 March 2013 Zeist
			Joachim van der Valk	Policy advisor “Kleinschalig Natuurlandschap” (Smallscale Naturelandscape)	Personal e-mail communication: 10 July 2013
R9	De Koninklijke Nederlandse Jagersvereniging (Royal Dutch Hunters Association)	KNJV	Douwe Boersma	Director	3 March 2013 Amersfoort
R10	De Dierenbescherming (Animal protection)		Femie Kraaijeveld- Smit	Senior policy advisor on wildlife	25 March 2013 Den Haag Personal e-mail communication: 9+10 July 2013
R11	De Faunabescherming (Fauna protection)		Harm Niessen	Chairman	21 March 2013 Bergen
R12	Interprovinciaal Overleg (Interprovincial Council)	IPO	Jeroen Huneker	Program coordinator on nature legislation	9 March 2013 Utrecht

Table 2. Respondents from the policy network surrounding goose nuisance

2.4.2 Respondents from the policy network surrounding muskrat nuisance

Reference	Actor	Abbreviation	Respondent	Position	Interview date
R13	Unie van Waterschappen (Union of Waterboards)	UvW	Dolf Moerkens	Policy advisor / National coordinator muskrat and coypu	2 April 2013 Den Haag
R14	Hoogheemraadschap Hollands Noorderkwartier	HHNK	Derk-Jan Marsman	Senior policy advisor	15 April 2013 Heerhugowaard
R15	Waterschap Amstel Gooien Vecht	AGV	Lammert van Raan	Member of the general administrative body, representing the Partij voor de Dieren (Party for the Animals) (PvdD)	28 March 2013 Amsterdam
R16			Martin Nieuwjaar	Policy advisor	4 March 2013 Amsterdam
R17	Hoogheemraadschap van Rijnland	Rijnland	Dick de Vos	Member of the general administrative body, representing the Partij voor de Dieren (Party for the Animals) (PvdD)	27 March 2013 Leiden
R18			Erwin de Groot	Policy advisor	27 March 2013 Leiden
R19-1	Hoogheemraadschap Delfland	Delfland	Hans Overmeer	Member of the general administrative body, representing the Partij voor de Dieren (Party for the Animals) (PvdD)	14 May 2013 Delft
R19-2			Bart Simon	Member of all advisory board committees, representing the Partij voor de Dieren (Party for the Animals) (PvdD)	
R20-1			Rene van der Werf	Program manager "Stevige Dijken" (Solid Dikes)	R. van der Werf, personal e-mail communication: 23 May 2013 Interview with both respondents: 7 May 2013 Delft
R20-2			Albert Gort	Coördinator Embankments (technical operational)	
R21	Hoogheemraadschap van Schieland en de Krimpenerwaard	HHSK	Martijn Guichelaar	Policy advisor of the department "Embankments and Roads"	1 May 2013 Rotterdam
R22			Suzanne Groenbos	Communication advisor ad interim of the department Muskusrattenbeheer (Muskratmanagement)	22 March 2013 Houten
R23			Patrick Poelman	Dijkgraaf (Chair) of HDSR / Chair of the Bestuurlijk Overleg (Administrative Council, "AC")	23 April 2013 Houten Personal e-mail

	Hoogheemraadschap De Stichtse Rijnlanden	HDSR		Muskusrattenbeheer (Muskratmanagement)	communication: 22 March 2013
R24			Marjan van Meelis	Head of Muskusrattenbestrijding (Muskratmanagement)	23 April 2013 Houten
R25			This Buurman	Field coordinator of the department Muskusrattenbeheer (Muskratmanagement)	23 April 2013 Houten
R26			Wanda Bodewitz	Member of the general administrative body, representing the Partij voor de Dieren (Party for the Animals) (PvdD)	10 May 2013 Vleuten
R10	De Dierenbescherming (Animal protection)		Femmie-Kraaijeveld-Smit	Senior policy advisor on wildlife	25 March 2013 Den Haag
R11	De Faunabescherming (Fauna protection)		Harm Niesen	Chairman	21 March 2013 Bergen
R27	Bont voor Dieren (Fur for Animals)	BvD	Femke Zandberg	Campaigner	26 March 2013 Amsterdam
R28	Muskusrattenoverleg (Muskrat Council)		Paul Denekamp	Representing political party GroenLinks	P. Denekamp, personal e-mail communication: 29 April 2013
			Femmie Kraaijeveld-Smit	Representing Dierenbescherming	Participatory observation: 24 May 2013 Amsterdam
			Pauline de Jong	Representing Faunabescherming	

Table 3. Respondents from the policy network surrounding muskrat nuisance

CHAPTER 3

GOOSE NUISANCE: CONTEXT

3.1 Problem development

Geese are waterfowl that feed on vegetable food and generally migrate every winter and summer in order to respectively hibernate and breed. Geese couples are inseparable for life and they live in groups with a certain family and social structure (Vogelbescherming Nederland, 2013E). The different types of geese can be divided into grey/brown geese (like the Greater White-fronted Goose (*Anser albifrons*) and the Greylag Goose (*Anser anser*)) and black/white geese (like the Brent Goose (*Branta bernicla*) or the Barnacle Goose (*Branta leucopsis*)). Moreover, there are several rare geese types (like the Lesser White-fronted Goose (*Anser erythropus*)) and there are “exotics” that originally do not live in the Netherlands, but were domesticated throughout history and ultimately became wild again (like the Egyptian Goose (*Alopochen aegyptiacus*) and the Canada Goose (*Branta canadensis*)) (Vogelbescherming Nederland, 2013F). Until the second half of the 20th century, geese in the Netherlands generally lived on seagrass beds, marshes and reed swamps and they were caught by hunters for their meat. Around 1950 the amount of geese declined rapidly and in 1970 this resulted in a hunting restriction (prohibition to hunt after 10:00 AM), decided upon by hunters and nature conservators (Ebbing et al., 2003). This measure, and similar measures abroad, resulted in a rapid growth of the geese population. Furthermore, the Dutch landscape transformed into wide agricultural fields with rich grasslands, which offers ideal living conditions for geese (Ebbing et al., 2003). As a result, the Netherlands have become an important place for wild geese over the past 50 years.

By 2004 half of all European geese (around 1.5 million) spent their winter time in the Netherlands (Sanders et al., 2004) and every year more geese also stayed during the summer time. In the summer of 2009 employees from Alterra and SOVON counted 281.380 geese, and a variety of 19 geese species. Two-third of this population belongs to the Greylag Goose (*Anser anser*) (SOVON, 2010). This many geese cause a disturbance in the agricultural business, a threat to air-traffic safety and damage to protected plant species. Geese eat farmers’ vegetation (Vlaswinkel et al., 2010) and at the same time the geese’s excrement have a muddy effect on the soil (Natuurmonumenten, 2013). Consequently farmers have extra costs for feeding their livestock to compensate for the lost grass, or they experience damage to their crops. Also, the excrement of the geese leads to an excessive amount of nutrients in surrounding natural landscapes, which has negative effects on protected plant species that need nutrient-poor soils (Natuurmonumenten, 2013). And finally, the birds regularly are a risk for airplanes at Schiphol airport, because during the take-off and touchdown the birds can get stuck in the engines (Schiphol, 2012). Research in 2003 showed that the species Greylag Goose (*Anser anser*), White-fronted Goose (*Anser albifrons*) and the Eurasian Wigeon (*Anas Penelope*) together account for over half of all Dutch wildlife damage (Ebbing, 2003). However, in 2011 a report about agricultural damage by geese in 2010 stated that specifically the Greylag Goose (*Anser anser*) is responsible for 70% of all agricultural damage (Vlaswinkel et al., 2010).

3.2 Former policies

The population growth of geese after 1970 resulted in many different policy measures aiming at mediating between the birds and the concerned farmers. Starting with several experiments, in 1975 on the island Texel a farm was completely dedicated to attract and to allow geese, so that they would not damage the crops of other farmers in close vicinity (Ebbing et al., 2003). Also, on Terschelling in 1982 an attempt was made to dislodge geese from the island, but this just moved the geese to other places nearby (Ebbing et al., 2003). In the ‘80 there was increasing attention for the important role of the Netherlands in geese migration. This led to the policy ‘Ruimte voor ganzen’ in 1990, that focused mainly on offering sufficient foraging and resting areas for the more vulnerable geese species. Also, farmers were obligated to use dislodging methods to protect their land and in case of agricultural damage they were financially compensated.

After 1996 an experimental system based on the 'Regeling Agrarisch Natuurbeheer' was put into place (Ebbing et al., 2003). Farmers could sign up their farm as a safe-zone for geese in the period from November the 1st until somewhere in April, depending on the area. They received financial aid in exchange for leaving their plots alone in the determined period so that the geese could forage without restraint. In 1999 there was a national ban on hunting geese, with several exceptions in case of preventing agricultural damage. However, these exceptions were made invalid in 2001, which meant that there was a complete ban on hunting geese. Farmers were also not obligated to try and dislodge the geese from their land anymore and they could still get a financial compensation for any agricultural damage by geese.

Since 2004 the management of geese has been nationally discussed by the Ministerie van Landbouw, Natuur en Voedselkwaliteit (LNV), Interprovinciaal Overleg (IPO), Land- en Tuinbouworganisatie Nederland (LTO), Vereniging Natuurmonumenten, Staatsbosbeheer, Koninklijke Nederlandse Jagers Vereniging (KNJV) and Vogelbescherming Nederland. This 'Beleidskader Faunabeheer' (Fauna Management Policy Framework) further developed the system of safe-zones for geese. Based on voluntary participation, since 2004 a total of 80.000 forage hectares were assigned that would be completely dedicated to providing sufficient food for the wintering geese and the Eurasian Wigeon (*Anas penelope*) (LNV, 2004). This was supposed to gradually teach the birds where they were welcome and consequently minimise the damage to nearby farmers on the long run (Directie Kennis, 2009). The volunteering farmers received financial aid and additionally could get compensation for geese damage on their land. Farmers outside of the foraging area could also get financial compensation in case of geese damage, but in return they had to actively try to dislodge the geese. This was also allowed to be done by means of shooting, in case of the Greater White-fronted Goose (*Anser albifrons*), the Greylag Goose (*Anser anser*) and the Eurasian Wigeon (*Anas penelope*). Many have used this opportunity to shoot, resulting in even higher killings than in the period when hunting was still allowed (Directie Kennis, 2009).

The system was based on the law 'Flora- en Faunawet' that was put into operation in 2002, and it endorses the principle to protect wild animals, except for when they are a threat to agricultural business and/or human safety (LNV, 2012). If the latter is the case, animals may be killed in the name of 'schadebestrijding' (damage-control). Exterminating animals in order to prevent damage is only allowed based on a Faunabeheerplan (Fauna-management Plan), created by provincial FBE's (faunabeheereenheden / fauna-management units) and accepted by the provincial government (LNV, 2012). Their plans are carried out by hunters who are officially organised in regional WBE's (wildbeheereenheden / wild-management units) (Wildbeheereenheid Haarlemmermeer, 2013). In order to control damage, the Flora- en Faunawet also allowed for exemptions for shaking eggs to prevent geese births (Vogels en de Wet, 2013). Next to damage-control, it is also possible to hunt wild animals when they are mentioned on the so-called "wild list". These animals may be killed in a predetermined time period and with certain restrictions. However, geese are not included on this list (Ministerie van Economische Zaken, 2013).

Evaluation research on the safe-zones policy between 2005 and 2008 shows that the system of allowing geese in foraging areas and the additional shooting of geese outside the foraging areas both did not lead to a decrease in agricultural damage (Directie Kennis, 2009). The foraging areas were insufficiently used by the birds, and one of the reasons for this is that the areas were not safe enough for the birds. Because farmers signed up voluntarily, the foraging areas became fragmented plots that were not well-connected to each other. Specifically, the policy did not work for the Eurasian Wigeon (*Anas penelope*), because this bird forages at night, which makes dislodgement impossible. Due to maintenance, administration and compensation costs and fees, the policy was also very expensive. Based on the policy evaluation it was recommended to still continue with this safe-zone policy, but to make various adjustments to improve it (Directie Kennis, 2009). On the contrary, researchers from the 2010 ex ante evaluation of policy cost-effectiveness recommended quitting the safe-zone policy and to financially compensate farmers for geese damage everywhere, because out of 8 calculated future scenarios, this one would lead to the highest savings (Guldemond et al., 2010).

In the next period the safe-zone policy was kept in place. However, in December 2012 the Interprovinciaal Overleg (IPO) agreed on a new goose policy together with seven stakeholders "Ganzen-7": De12Landschappen, de Federatie Particulier Grondbezit (FPG), de Landbouw- en Tuinbouworganisatie Nederland (LTO), Natuurmonumenten,

3.3 Ganzen-7 and IPO goose policy

In the most recent goose policy, G-7 and IPO set the goal to sustainably manage the Dutch geese populations in order to find a balance between the population size of indigenous geese and the related risks. This means that over time the need for population reduction will decline; shaking eggs will not be practiced anymore after five years and the Netherlands will protect migrating geese. In order to reach this goal, they set three sub goals to reach between 2013 and 2018. First of all, the level of damage will be reduced to the level it was in 2005. Second, the current amount of summering geese will be reduced to an acceptable level. And third, the populations of exotic and domesticated geese will be removed. The main goals of the new goose policy are visualised in the middle and on the right side of figure 2.

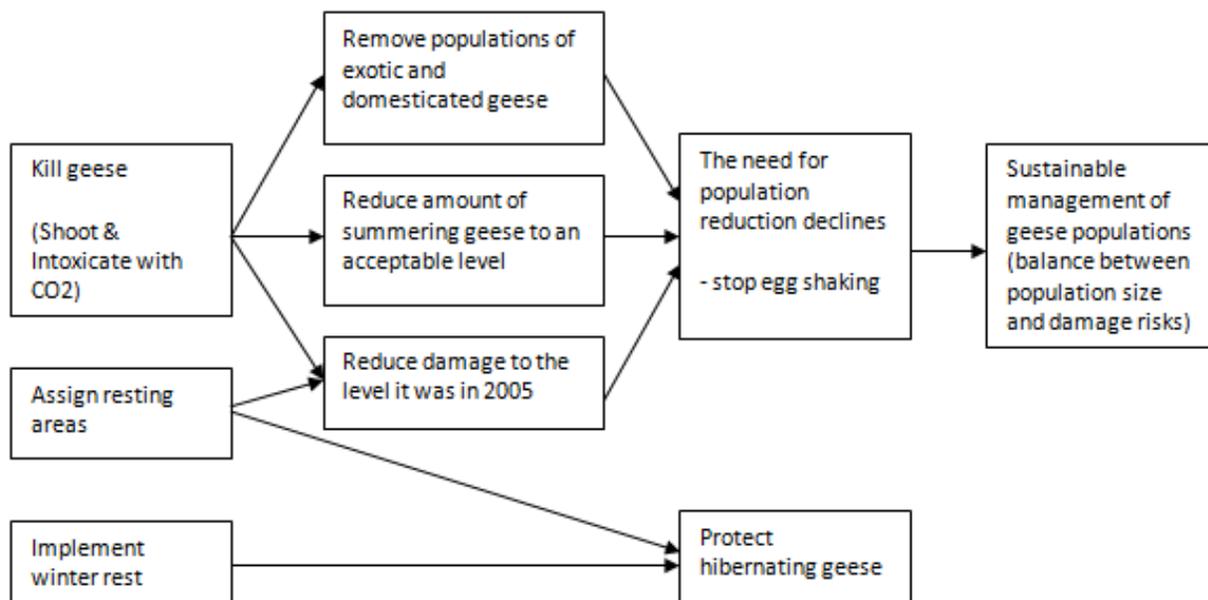


Figure 2. Impact model of the G-7/IPO goose policy

In order to reach these sub-goals, several measures will be in place. With the new policy, it is prohibited to shoot geese in the winter time (from 1 November to 1 March in the north of the Netherlands and 15 February in the South). There is an exception for vulnerable crops, and grassland is not considered as such. As another exception, in February it can be allowed to shoot geese that are becoming a pair. Also, exotic geese may be exterminated with all possible legal measures.

The Ganzen-7 proposed a safe-zone policy “new style” that makes several adjustments to the previous policy. These new “Resting areas” will offer protection to hibernating geese and at the same time centralise damage. They are assigned by taking into account damage history; the amount of occurring geese; and/or the relation to European protected nature areas. It is prohibited to disturb geese in these areas, also on vulnerable crops. Hunting, management and damage control, including the extermination of exotics, is only allowed when the migrating geese are not disrupted.

In the policy it is emphasised that a prerequisite for a successful policy is to get generous exemptions for killing and that geese will not be placed on the wild list. Also, using CO₂ for intoxication is seen as a necessary method. At the moment of establishing the policy, this method was not legally accepted. The G-7 partners and IPO agreed on trying to get this method accepted at European and national level. The G-7 partners agreed on employee cooperation and opening nature areas in order to take measures. They agreed not to object against permits, exemptions and instructions in line with the policy.

Logistically, the new policy also includes the creation of regional workgroups that set up detailed plans to manage geese populations according to the guidelines of the policy. Such workgroups, "GAKs" (ganzenafstemmingskaders) will be created by the provinces, and will be fall under the FBE's. In these GAKs, the provinces, all G-7 partners and WBE's will be represented. The plans made in the GAKs will be included in the fauna management plans from the related FBE. Furthermore, in the time plan of the policy, it is included that a 'toolbox' with measures will be created (Ganzen-7/IPO, 2012). In the earlier policy proposal from G-7, it was explained that this toolbox includes measures, instruments, suggestions, methods and processes with which they can support the GAKs in their policy implementations (Ganzen-7, 2011).

The provinces work with a national budget of 12,5 million euro. A 130% damage compensation is promised to the owners of the resting plots, with the precondition that government will receive additional European financing. In the winter time, outside resting areas, 95% of the valued damage will be compensated. Also, with regard to damage done by summering geese in the summer period, a maximum of 95% of the valued damage will be compensated with a maximum of two million euro per year. In the winter time dislodgement measures are no prerequisite for receiving financial damage compensation.

CHAPTER 4

GOOSE NUISANCE: INVOLVED ACTORS

4.1 Introduction to the involved actors

Goose nuisance has been a concern to farmers, different levels of government and animal advocacy groups. The recent goose policy is signed by the G-7 parties and the Interprovinciaal Overleg (IPO). However, the Koninklijke Nederlandse Jagersvereniging (KNJV) was also a part of the policy network in an earlier phase of creating the policy. Also, the animal advocacy groups Dierenbescherming and Faunabescherming are considered to be a part of the policy network, since they most evidently tried to influence the policy content. Other groups, such as the Ganzenbescherming and the Partij voor de Dieren, were also concerned with the goose policy. However, their involvement was limited and barely mentioned during the interviews. As a result, it is decided that the just mentioned 11 actors together make up the policy network around the 2012 goose policy. In the next part all 11 actors will be introduced by means of a description of their general aims and activities and their problem and solution perspective with regard to goose nuisance. This way, their interest in the issue will become clear.

4.1.1 De12Landschappen

De12Landschappen (founded in 1989) is an umbrella organisation that nationally advocates the interests of the 12 provincial Landschappen (Landscapes): regional organisations that protect and develop their provincial natural and cultural heritage. By cooperating and representing all 12 Landschappen in one umbrella organisation, De12Landschappen tries to realise a greater influence in national policy making. Their aim is to consequently make a bigger contribution to the quality of nature and landscapes in the Netherlands (de12Landschappen, 2013A). De 12Landschappen cooperates with other nature management organisations, such as Landschapsbeheer Nederland, Natuurmonumenten and Staatsbosbeheer. Also, they have a history of working together with government ministries. De12Landschappen emphasises on the importance of the IPO as a partner, because the provinces are responsible for the implementation of several subsidies (de12Landschappen, 2013B).

Regarding the problem of goose nuisance, a representative of De12Landschappen (see R2 in Table 2) explained the organisations' point of view. During winter time, geese have always hibernated in the areas of De12Landschappen, before leaving again at the start of spring. They are increasingly fertilising nutrition-poor fens where orchids grow, which clashes with trying to reach European nature goals. Besides this, the respondent from De12Landschappen experienced getting blamed by neighbouring farmers, because the geese breed in the protected areas of De12Landschappen. For De12Landschappen it was important to sustain a good friendship with the other involved actors and to get to a solution in which they were not given the complete blame for the problem. They wanted to take their responsibility, but with a certain protection level for geese. For De12Landschappen it is not an option to kill geese in big nature areas that have relatively low interaction with agricultural areas. In small areas closely related to agricultural plots, it could be possible to take measures. However, the nature management organisations do not want geese to be killed during the breeding season, because this could disturb the breeding of rare birds. Together with Natuurmonumenten and Staatsbosbeheer, De12Landschappen created a shared vision on the geese problem with criteria on when and how to deal with geese within their nature areas. The exact content of this vision is confidential, but the starting point is not to strongly reduce the geese population.

According to the respondent from De12Landschappen (R2) they find it difficult to cooperate on removing geese, nests, eggs, and killing geese in and around their areas, because they are a nature organisation. Their principle is never to kill animals, unless it is really necessary. In order to protect meadow birds against the fox,

De12Landschappen has agreements with hunters to execute FBE plans in their areas. Also, several nature managers are hunters themselves. At De12Landschappen, killing geese with CO₂ gasses is thought to be the most animal friendly killing method.

4.1.2 De Federatie Particulier Grondbezit (FPG)

The FPG (founded in 1911 as “Het Grondbezit”) is an organisation of private owners of farmland (leased or in own use), estates, forests and nature reserves. With approximately 1800 members, the FPG gathers owners who together make up almost 200.000 hectares property in the Netherlands. They see it as their mission to promote private ownership that is economically sustainable and socially responsible. That is why they look after their financial interests regarding financing and developing opportunities. They are active in The Hague, Brussels, the provinces, municipalities and water boards. Finally, the FPG regularly works together with agricultural organisations and nature organisations (FPG, 2013A).

According to the representative from FPG (R3), nature areas are big breeding areas for geese, which leads to nuisance at agricultural fields. He emphasised that neither farmers nor hunters created the problem of goose nuisance, and that the problem needs to be tackled at the core, which is at the nature areas. As a solution, the FPG wanted to highly reduce the amount of geese spending their summer in the Netherlands. For FPG, it was important that farmers would be able to protect their lands by hunting on geese, also during the wintertime. According to the respondent from FPG (R3), alternative measures do not work. He believes it is a pity that emotion plays such a big role when it comes to fauna management. According to him, hunting is a rational solution for when there are too many animals that create damage to the fields.

4.1.3 De Landbouw- en Tuinbouworganisatie Nederland (LTO)

LTO Nederland (established in 1955) is a joint organisation from the Land- en Tuinbouworganisatie Noord (LTO Noord), the Zuidelijke Land- en Tuinbouworganisatie (ZLTO) and the Limburgse Land- en Tuinbouwbond (LLTB), representing almost 50.000 agrarian entrepreneurs (LTO, 2013A). They advocate the economic and societal interests of these entrepreneurs by getting in debate with policy makers and by publishing their visions on certain Dutch and European policies (LTO, 2013B).

The members of LTO Nederland want effective measures against the unmanageable problem of geese damage and nuisance. According to them, the amount of summering geese has become way too many (LTO, 2012). The respondent from LTO (R4) stated that it is a waste of money that geese eat from agricultural lands and next poop in nature areas. He also sees it as a problem that farmers need to take dislodgement measures in order to receive damage compensation. According to him, these measures take up a lot of time and are not always effective. For LTO, it was important to reduce the amount of geese, reduce the amount of damage, and to get a fair compensation for the remaining damage (R4). According to the LTO respondent, it is important to some of their followers to be able to shoot in the winter time. He explains that shooting geese is the most effective solution, but that many people will not understand because they are emotional. Not many people will acknowledge farmers’ burden, because they believe it to be sad for the geese (R4).

4.1.4 Natuurmonumenten

Natuurmonumenten (established in 1905) is an association that takes care of nature in the Netherlands by buying nature areas, sustainably managing them and by advocating nature's interests at the national, municipal and provincial level of policy making. They protect endangered species, like the Black Grouse (Natuurmonumenten, 2013B). The association has almost 3800 volunteers and more than 730.000 members. Natuurmonumenten organises general activities in nature, many of which specifically focused towards children (Natuurmonumenten, 2013A).

In line with the problems of De12Landschappen, the representative from Natuurmonumenten stressed that the amount of geese in the summer have not only led to agricultural damage, but also to problems with reaching nature goals (R5). He emphasised that it is a matter of strict balancing when a certain species increases at the expense of

another species. According to their representative, Natuurmonumenten does not believe that goose nuisance is solely their fault, but rather points at the general policy of nature development in the Netherlands. According to him, geese belong to everybody. That is why Natuurmonumenten wanted a solution not only focused on the nature areas. They wanted to strive towards less damage instead of towards reducing the populations. The latter could be a means for the former, but it must be clear that with a higher population it is still possible to reach the same decline in damage (R5). Natuurmonumenten wants measures to make areas less attractive to geese, like separating water from grassland with spine bushes, which might allow for less intensive interventions in the population. According to the representative, the problems are so extensive that it is necessary to set up a large-scale approach, supported by everyone, especially because Natuurmonumenten is not established to kill animals (R5).

With regard to killing geese, the representative from Natuurmonumenten stated that he is curious to see if people's attitude will change with regard to eating wild animals. According to him, the geese could be seen as a cultivated product of our agrarian landscape, just as the milk from the cows. If it becomes accepted to eat these animals, the problems surrounding goose nuisance will not centre around killing animals, but rather on harvesting them (R5). In terms of welfare, the representative from Natuurmonumenten stated that these wild animals lived a great life in comparison to an overfed chicken 'Plofkip' from factory farming (R5). With regard to utilising natural products, Natuurmonumenten is also exploring the possibilities of selling other animals that are shot in their areas (R5).

4.1.5 Stichting Agrarisch en Particulier Natuur- en Landschapsbeheer Nederland (APnl)

Since 2010 the Stichting Beheer Natuur en Landelijk gebied (SBNL) and Natuurlijk Platteland Nederland (NPN) have combined their advocacy powers into the Stichting Agrarisch en Particulier Natuur- en Landschapsbeheer Nederland (APnl). In close cooperation with LTO Nederland, the organisation defends the interests of farmers, together owning more than 200.000 hectares of private and agrarian nature. They see agrarian and private nature- and landscape-management as a valuable "green service". Besides advocating their interests, the APnl aims at increasing the farmers' expertise, quality and innovation (APnl, 2011).

Due to the increasing amount of geese, the farmers from APnl experienced damage to their crops and additional red tape regarding hunting permits and financial regulations (R6). The respondent from APnl stated that they wanted to strive towards reducing the geese population in order to reach an acceptable damage level. A big part of the APnl farmers wanted to reduce the geese population to almost zero and did not want to be limited in shooting measures. Adding geese to the wild list was the desirable solution to some of them (R6). Also, it was a wish to keep the system with safe-zones and foraging areas in place with certain adjustments. In contrary to followers from the Dierenbescherming, the APnl farmers look at geese as a species of which the population needs to be reduced, instead of individual birds that will be killed (R6). However, APnl farmers are very dedicated to arranging a suitable environment for meadow birds (R6).

4.1.6 Staatsbosbeheer

After being a part of the Ministerie van Landbouw Natuurbeheer en Visserij, in 1998 Staatsbosbeheer became a corporation with a statutory duty (Staatsbosbeheer, 2013A). With approximately 1.000 employees, the organisation manages more than 260.000 hectares of Dutch nature, of which 92% is publicly accessible; the other 8% is protected due to the vulnerability of the area. The organisation wants to involve people with nature, and for this their aims are centred around the ambitions to "protect, experience and utilise". They look for an optimal cooperation with residents, visitors, political bodies, governments and business. For Staatsbosbeheer sustainability is the principle rule, because future generations should also be able to experience and utilise nature (Staatsbosbeheer, 2013B). Their vision is the Netherlands as a place where nature and landscapes are appreciated and cherished because of their beauty, the resources they produce and the ecosystem functions they fulfil (Staatsbosbeheer, 2013C).

In line with the story from De12Landschappen and Natuurmonumenten, Staatsbosbeheer also felt blamed by farmers for the fact that the amount of geese are increasing. According to the representative from Staatsbosbeheer, the responsibility for solving the problem was dropped at the nature managers' feet, because if they would "clear

away” “their” geese, there would be no problem anymore for agriculture (R7). However, she stresses that vice versa the problem would also be solved if the farmers would stop feeding the geese (R7). According to her, geese belong to everybody (R7). As a result of the increasing geese population, Staatsbosbeheer experienced some fertilisation of nutrition-poor waters. It is unsure whether a decrease in the variety of vulnerable vegetations was due to geese grazing. Also, there was a more emotional worry around the consequences of the amount of geese on meadow birds (R7). Indirectly there is a link with meadow bird management, because their tenants might quit as a result of agricultural geese damage, leading to a management problem at Staatsbosbeheer (R7). Finally, Staatsbosbeheer was just about anticipating civil claims for agricultural geese damage, with regard to the fact that Staatsbosbeheer holds hunting rights for their areas but are not always willing to intervene in the geese population (R7).

For Staatsbosbeheer an important reason for joining the policy process was to find a solution instead of pointing at each other and getting more and more polarised (R7). Also, for Staatsbosbeheer it was important that the geese would not be put on the wild list, because this would take away all urgency to create a structural plan (R7). The representative from Staatsbosbeheer explained that society does not accept the current amount of agricultural damage and consequently it is needed to decrease the amount of geese to a low level (R7). She stressed that dislodging measures are only useful when the population has declined and that killing geese with CO₂ gasses is least animal unfriendly (R7).

With regard to killing geese, Staatsbosbeheer always takes into account its responsibility for protecting vulnerable bird species. Measures that disturb these other birds will not be acceptable for Staatsbosbeheer (R7). Also, since almost all Staatsbosbeheer terrains are open to public, it is not desirable to shoot geese when visitors are around. The representative from Staatsbosbeheer points to a shift in society, in which people are more concerned with individual animals. Since Staatsbosbeheer is more focused on populations, this makes it necessary to explore a reasonable compromise that is clearly communicated to the public. Behind this main focus set by the director of Staatsbosbeheer, the employees all have different points of view regarding the geese problem (R7).

4.1.7 Vogelbescherming Nederland

The association Vogelbescherming Nederland, established in 1899, is a national organisation with 153.000 members, 60 employees and more than 350 volunteers who protect nature (Vogelbescherming Nederland, 2013A). They are a part of BirdLife International, the worldwide organisation that advocates the interests of birds and their habitat. Vogelbescherming Nederland believes birds are a substantial part of nature, which should be sustained in order to contribute to a liveable world (Vogelbescherming Nederland, 2013B). The representative from Vogelbescherming stated that they focus on species and their habitat, on a population level (R8). Vogelbescherming Nederland uses political lobbying, juridical action, education, campaigns, protection programs and intensive cooperation in order to protect birds (Vogelbescherming Nederland, 2013A). The organisation is against hunting wild birds for either pleasure or for damage control, with the only exception being a very high necessity that would overrule the interests of the birds. In that case, where alternative measures have failed and there is no other option left, Vogelbescherming Nederland emphasises that the amount of birds to be killed should be the minimal amount that stops the damage (Vogelbescherming Nederland, 2013C).

Regarding the increasing amount of geese, according to the representative from Vogelbescherming there is no proof that geese are a threat to meadow birds (R8). He does emphasise that there is an increasing experience of nuisance from geese, for example agricultural damage, nuisance of poop in the city, in parks, at ponds and playfields, and noise nuisance at night, leading to a decrease in societal support to tolerate the birds (R8). Vogelbescherming Nederland declares that it unsuccessfully tried to prevent the killing of geese with juridical procedures against shooting permits (Vogelbescherming Nederland, 2013A). Furthermore, they forecasted an increased killing of geese, that would start to look like extermination (R8). Vogelbescherming participated in de Ganzen-7 in order to ensure that as many geese as possible would be saved (R8; Vogelbescherming Nederland, 2013A).

Vogelbescherming Nederland believes that first of all measures alternative to shooting should be implemented and tested to prevent damage (R8). If this fails, they are in favour of providing farmers with a sufficient financial compensation (Vogelbescherming Nederland, 2013D). They are against killing protected wintering geese for damage

prevention, because killing birds leads to agitation and a disturbance to the geese population. Vogelbescherming Nederland also points at the international responsibility of the Netherlands regarding wintering geese, for which the Netherlands is an important hibernating place (Vogelbescherming Nederland, 2013D). In case birds are getting killed, Vogelbescherming believes to use CO₂ gasses is more animal friendly and faster than to use guns, because of non-lethal shots and the spread of hail in birds' bodies (R8).

4.1.8 De Koninklijke Nederlandse Jagersvereniging (KNJV)

The KNJV (established in 1904) is a national organisation that is experienced with hunting, hunting-dogs and fauna management. They defend the interests of over 21.000 members and 300 "wildbeheereenheden" (WBE's), so-called "wild-management units" that consist of individual hunters and gamekeepers who together work in an area of 5000 or more hectares (KNJV, 2013A&B). They exchange data with the Fauna Beheer Eenheden (FBE's) that are the overarching provincial units, who create fauna management plans (KNJV, 2013B). The KNJV conducts research on the level of wildlife and provides the WBE's with advise on managing animal species and their habitat. They also organise education for hunting dogs and they encourage their members to take part in special days for hunting practice. The KNJV strives towards a sustainable and fauna biodiversity that allows for "wise use" of the fauna (KNJV, 2013A). To achieve this, they cooperate with inter alia Natuurmonumenten, Staatsbosbeheer, FPG, de Provinciale Landschappen and LTO Nederland and they advocate their members' and WBE's interests on a local, provincial, national and European level (KNJV, 2013A).

According to the KNJV, goose nuisance needs to be dealt with by addressing problems in the execution of the current policy: summering geese are not yet well managed; there is insufficient coordination between the involved parties; separated responsibilities (province creates policy and the national government pays compensations) lead to unclear arrangements and unnecessary obstacles in executions and finally the foraging areas are insufficiently connected. That is why the KNJV calls for policy measures that are created on a national level and that can be generally executed (KNJV, 2011). KNJV members point at the fact that excluding geese from wild list lies at the core of the current problems (R9). They want geese and the Eurasian Wigeon on the wild list, and they believe the focus must be on practical cooperation between the province, the FBE and the WBE (KNJV, 2011). Generous exemptions for hunters are a prerequisite for effective goose policy (R9). Looking at the increase of damage in the past years, the KNJV values hunters as expert volunteers who fulfil a necessary social role. The KNJV recalls international regulations that approves yielding birds when they have a sufficient population (R9). Furthermore, the KNJV asks for more attention to international aspects of geese migration, since the Netherlands is not the only place where population size can be influenced (KNJV, 2011). The director from KNJV mentioned that making changes to the Dutch monoculture of grassland, by for example creating herb strips, will decrease the geese population (R9).

According to the director from KNJV, hunting has an emotional image, because factory farming transformed killing animals into an anonymous event (R9). The director from KNJV however explains that hunting on wild animals is a natural activity inspired by respect and love for animals and nature (R9). Hunters make an inventory of the amount of animals, let the "capital" live, but "yield" the "interest", so that the population always stays optimal at N=100 (R9). In line with this "wise use" is the fact that hunters always eat the animals they shoot (R9). In their point of view the meat of wild geese fits nicely into the current societal trend surrounding sustainable food (KNJV, 2013C). The representative from KNJV stated that hunters take measures to increase populations that get below their optimal size, in order to yield them later on. The population of animals that originally do not live in the Netherlands ought to be completely reduced to zero according to the representative from KNJV, because these exotics suppress other animals. According to their historical perspective and principles, hunters only hunt animals that are defensible, and thus not animals that are vulnerable e.g. in their breeding and moulting period (KNJV, 2011&2013D). The director from KNJV explained that hunters focus on managing wild animals, in contrast to protecting them. He believes that there is no sustainable self-regulating nature anymore in the Netherlands, and that is why it needs to be managed. They actively work on sustaining a diversity in animals and accordingly explain that hunting is a gain for nature (R9). Due to the emotional image, it is important that killing is done correctly (R9).

4.1.9 Dierenbescherming

The Dierenbescherming (founded in 1864 as “de 's Gravenhaagsche Vereeniging tot Bescherming van Dieren”) is a non-profit organisation that defends the interests of all animals, with a focus on emergency help, inspection work and fighting for better living conditions for laboratory animals and animals in factory farming. They have almost 200.000 followers, existing of members, donors and volunteers (Dierenbescherming, 2013A). Their two principles are that 1) animals have an intrinsic value, meaning that they are independent creatures that are worth to be treated for their own sake and not as a means to others and 2) human beings have the obligation to protect animals, to treat them well, to respect their freedom and their habitat and to save their lives as far as possible (Dierenbescherming 2013B). The Dierenbescherming performs international lobbying in order to influence European law (Dierenbescherming, 2013A). Regarding wild animals, they believe that nature has self-regulating power and that human intervention with wild animals is only justifiable when there is either a direct danger to humans (with food or health) or when it is in the interest of the animals (for example taking care for animals after a natural disaster, forest fires or during extreme weather) (Dierenbescherming, 2013C).

With regard to the geese problems, the representative from the Dierenbescherming also experienced that the involved parties are all blaming each other (R10). She stressed that goose nuisance is a societal problem, starting with the fact that every one of us wants a lot to eat, which has led to intensive agriculture, stimulated by the government (R10). According to the Dierenbescherming, killing geese cannot be justified as a solution, because there are alternative measures for preventing nuisance. The method of shooting geese thus leads to unnecessary suffering (Dierenbescherming, 2011). Furthermore, the Dierenbescherming believes it is not necessary to determine which types of birds can stay or go based on their original presence or absence in the Netherlands. They do not discriminate between indigenous geese and exotic geese, because they accept wild animals who independently and without any health problems now occur in the Netherlands and who have settled successfully over time. Moreover, both indigenous and exotic geese can experience pain and stress (Dierenbescherming, 2011).

The Dierenbescherming wrote an alternative plan to the Ganzen-7 ‘Nederland Ganzenland’ policy document. Their plan is based on the current system of foraging areas but with a focus on environmental adjustments: making the foraging areas more attractive and the other areas unattractive to geese. They propose to sow white clover over fields in order to make the foraging areas more attractive, pointing at scientific research that proves geese appreciation of this plant over grass (Dierenbescherming, 2011). Furthermore they propose a variety of measures that should make the other plots less attractive, for example: adjusting the water level unfavourable to the geese (in breeding season geese look for high water levels that can serve as an escape route); make use of animal friendly dislodgement methods, like robot-birds, border collies, ribbons, lasers, decoys (fake animals), bangs, shout-noises and animal alarms on suitable moments; further develop new dislodging technologies, like geese-wire and the automatic avert- and dislodge-system “Safe Mills-project” (Dierenbescherming, 2011). Next to adjustments to the environment, the Dierenbescherming proposes to ban hunting the fox. Since the fox is a natural predator to the geese, this will help managing the geese population (Dierenbescherming, 2011). Possible damage from foxes to other animals can also be prevented by making adjustments to the environment. In order to achieve a wide spread use of these animal friendly measures, the Dierenbescherming proposes to use media and workshops to expand farmers' knowledge on these techniques. Also, they propose to financially support farmers that use alternative animal friendly measures and to give them positive media attention.

4.1.10 Faunabescherming

The foundation Faunabescherming (former 'Kritisch Faunabeheer') has advocate the interests of wild animals since 1976. Their goal is to establish an ethical and scientifically responsible fauna policy. The foundation introduces itself as a fauna expert to politics and the government, trying to improve the wellbeing of animals that live in the wild and fetching alternatives to hunting (Faunabescherming, 2013A). The representative from the Faunabescherming emphasised that hunting leads to a lot of damage to nature and that nature is not meant to be eaten (R11). According to the Ecovision from the Faunabescherming, people should not use, exterminate or disturb nature; animals and species should have the possibility to live according to natural life-cycles without human interference in case of natural sickness and death; animals should have the freedom to move, to reproduce and build a population,

and to gather food. Humans have a responsibility to protect these rights and interests of animals (Poeder & Bouterse, 2000). Faunabescherming tries to reach their goals by organising protests at hunting activities and arrangements; influencing the policy process for fauna management and nature protection; starting juridical procedures against hunting exemptions; organising inspections at the field in order to detect abuses and by trying to get the attention of people for the issue of wellbeing of wild animals. The organisation exists of volunteers and does not receive government financing (Faunabescherming, 2013A).

Faunabescherming acknowledges that economic damage from fauna can be a motivation for taking measures (De Jong, 2011). Regarding agricultural goose nuisance, Faunabescherming advises to dislodge or avert geese on crops that are vulnerable to damage and on crops that have a relatively high yield (De Jong, 2011). Any remaining damage ought to be financially compensated according to the crops value (De Jong, 2011). Faunabescherming believes that geese should be able to forage on all other lands without being disturbed. On these lands farmers should also get a financial compensation according to the crops value (De Jong, 2011). This way, Faunabescherming expects there to be enough plots where the birds can forage. Faunabescherming proposes dislodging measures to implement on vulnerable crops, in line with those from the Dierenbescherming: placing flags, "flash harry's", terror ribbons, bang devices, raptor-kites, dislodging pistol, using flavourings or walking over the land in a striking outfit with or without a dog (De Jong, 2011).

According to the representative from the Faunabescherming, the problem of goose nuisance will ultimately be solved without human intervention (R11). He stressed that such a big population at some time will get confronted with natural enemies, being parasites, bacteria and viruses (R11). Faunabescherming believes that killing geese or destroying eggs is a useless method for trying to decrease the population size. They stress that without adjusting the habitat, like the breeding opportunities and the availability of food, killed geese will soon be replaced by new geese (R11).

4.1.11 Interprovinciaal Overleg (IPO)

The IPO is an advocating organisation for the interests of the 12 provinces on a national and a European level, established in 1986 (IPO, 2013A). They have an extended network with the council of ministers, parliament, ministries, the EU and societal organisations (IPO, 2013B). Every province is represented in the IPO by two members, nominated by the Provinciale Staten (the democratically chosen representatives of the provinces) (IPO, 2013C). IPO wants to contribute to improving the quality, effectiveness and efficiency of public governance (IPO, 2013B). Since nature management became a regional responsibility in 2011, the provinces called upon a project agency 'Vitaal Platteland' in order to facilitate and implement nature policy from an interprovincial perspective (IPO, 2013D). This project agency is concerned with policy for geese management.

For IPO goose nuisance was mainly a financial problem. With the decentralisation of nature policy, the provinces received a limited budget to work with (R12). The representative from IPO stated that they wanted to implement shooting measures throughout the winter time, at least in the first two years (R12). According to them, two out of three wintering geese are actually summering geese, and shooting them would contribute to a decrease of the summering population. They believed the geese population first needed to be decreased in order to be able to use alternative measures later on (R12).

4.2 The interests of involved actors

The introduction to the involved actors makes it clear that there is a variety in actors' interest in the issue of goose nuisance. Agricultural organisations experience damage to their crops, nature management organisations experience damage to rare vegetation and these two groups blame each other for the occurring problems. The KNJV believes the problem lies at mismanagement of the population, pointing at the geese being excluded from the wild list. However, for animal advocacy organisations it is a problem that geese are killed, which, according to them, is neither an effective nor a responsible way of dealing with goose nuisance. Based on the gathered data, it was found that the involved actors' interest can be characterised by their point of view regarding people's responsibility towards nature and animals in specific. It became clear that animal advocacy groups in the network strive towards

protecting animals, while the agricultural organisations, the hunters organisation, nature management organisations and the provincial government find solutions focused on managing the population. Nature management organisations emphasise to protect rare species, but just as the KNJV they do this from a management perspective. Just as they manage flora, they also manage animals that can threaten the existence of other species. These differences in points of view are visualised in figure 3. When looking at the figure, it is clear that most actors are concerned with species. The association Faunabescherming is positioned both in the individual box and in the species box, because the Faunabescherming protects nature according to its natural life-cycle, without differentiating much between individuals and species. In this respect, Dierenbescherming is the only one that is specifically takes into account the intrinsic value of individual animals.

Regarding the actors' solutions to the problem, it appears that most of the involved actors share the same point of view: minimising the goose population by lethal removal in order to decrease goose damage. This majority of actors with this solution perspective can be related to their managerial point of view as visualised in figure 3.

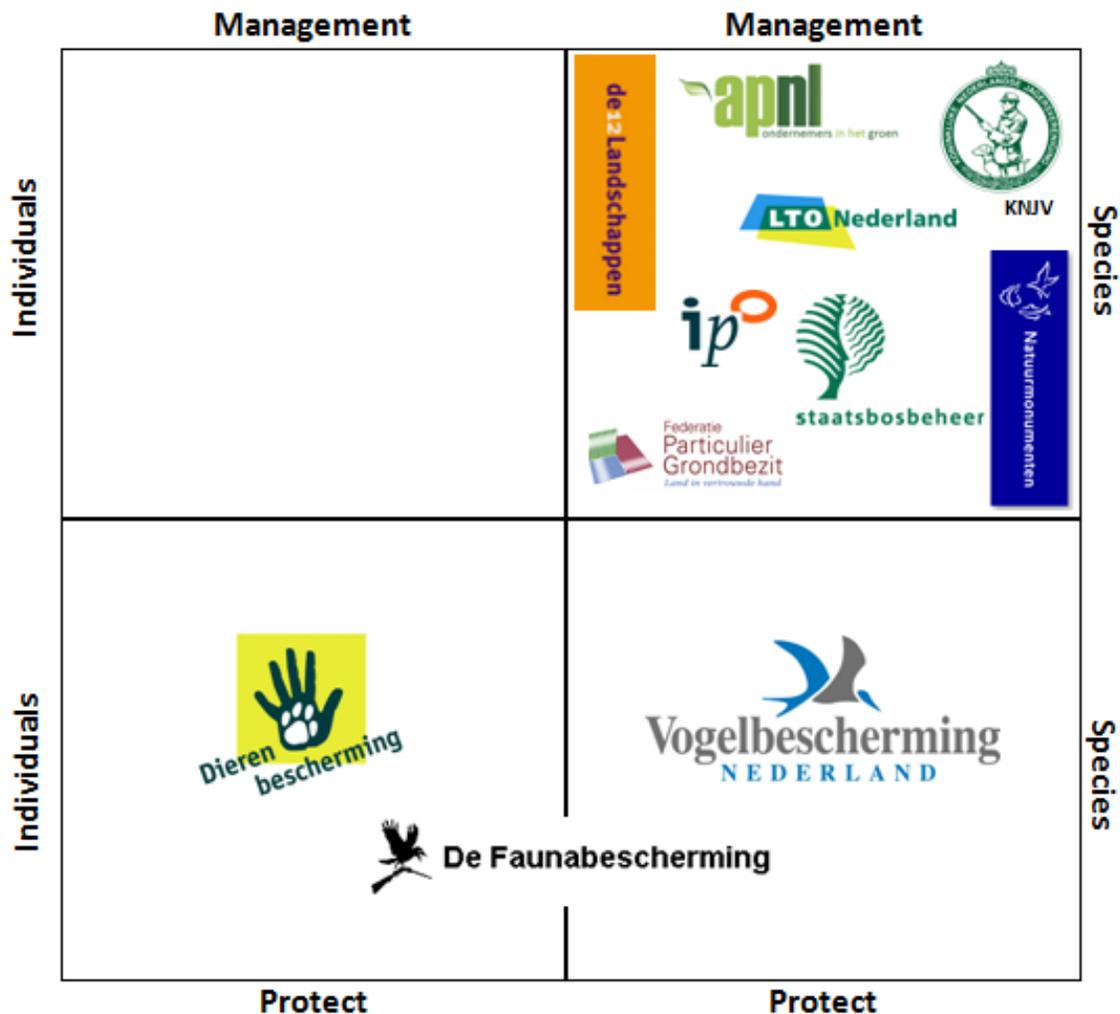


Figure 3. The focus of actors in the policy network surrounding goose nuisance

CHAPTER 5

GOOSE NUISANCE: POLICY NETWORK ANALYSIS

This chapter gives an analysis of the policy network surrounding goose nuisance. Two network characteristics are explored: the type of interaction between actors during the process and the distribution of power among the actors. The type of interaction is determined by giving an outline of important events and the relationships between pairs or coalitions of actors. Second, the power distribution is explained by looking at respondents' judgments about actors' power reputation. These two network characteristics make up a type of network, which can help understand the policy content. The outline of important events is visualised by providing several summarising time-lines in which the crucial types of interaction and power distribution are marked with bold text.

5.1 Events and interaction

5.1.1 From "Beleidskader Faunabeheer" to Ganzen-8

In writing the Beleidskader Faunabeheer (Fauna Management Policy Framework, from now on FMPF), the discussions on goose nuisance did not lead to new policy solutions over the past years. As mentioned by several respondents (R1; R2; R3; R8) the discussions became more and more laborious and finally the two most opposite societal organisations, Vogelbescherming and KNJV, made a compromised agreement in order to establish a solution. The director of the Vogelbescherming could not remember when this meeting took place, he guessed somewhere in 2008 or 2009. He explained that their opposite points of view could only lead to a compromise based on inter alia time-periods, species and amounts. This effort to try and reach a compromise by discussion can be defined as the 'negotiation' type of interaction, as is also mentioned in figure 4. The two directors agreed on reducing the geese population by killing geese, but with a winter rest to protect hibernating geese (R8; R9).

Next, the two decided to get together with only the societal organisations from the FMPF, without governmental representatives. This so called Ganzen-8 was composed of the directors/head of boards from the Vogelbescherming (Fred Wouters), KNJV (Andreas Dijkhuis), LTO (Peter de Koeijer), APnI (Jos Roemaat), Natuurmonumenten (Jan Jaap de Graeff), Staatsbosbeheer (Chris Kalden), FPB (Reinier van Elderen) and De12Landschappen (Hank Bartelink). The 8 parties all had the intention to come to a solution (R1; R3; R6). They found a common ground in the believe that geese belong to the Netherlands and that they are welcome to the Netherlands. Consequently, they worked on a plan called "Nederland Ganzenland" ("The Netherlands Geeseland").

Dierenbescherming has not been a part of the FMPF. Sometime before the G-8 collaborations started, the respondent of the Dierenbescherming read in the magazine Van Nature nr. 1, 2010 that Staatsbosbeheer, Natuurmonumenten, 12Landschappen and the Vogelbescherming were going to create a common vision on geese management. De Dierenbescherming believed that they ought to be a part of the collaborations (R10), and consequently, the respondent made a phone call to a representative from Natuurmonumenten (R10). He explained that their common vision would in the end be submitted to the Dierenbescherming for their input. According to the Dierenbescherming, the organisations from the FMPF were afraid that they would not get to any agreement with the Dierenbescherming. The fact that they preferred to give the Dierenbescherming a heads up later on in the process, made it impossible for the Dierenbescherming to influence the policy afterwards (R10). The representative of the Dierenbescherming explained that as a logical consequence, they now do not agree with the policy.

The representative of APnI also stated that it would not have been possible to come to an agreement with the Dierenbescherming, because of their principal standpoint that every animal has an intrinsic value. According to him, it is only possible to come to an agreement when everyone takes into account each other principles. If de

Dierenbescherming would not agree on killing a single goose, there would not have been a solution (R6).

The Dierenbescherming sent their proposal on managing geese to Staatsbosbeheer, Natuurmonumenten, 12Landschappen and the Vogelbescherming on 1 March 2010, before the Ganzen-8 began their collaboration (F. Kraaijeveld-Smit, personal e-mail communication, 10 July 2013). In this proposal the Dierenbescherming emphasised that killing geese is not a structural solution to the experienced problems. They proposed to focus on dislodgement measures and on habitat adjustments in order to ward off the geese from nature areas where they are not welcome and to make clear regional goals for this. The proposal also suggests protecting the fox, who can serve, who can serve as a natural population manager.

De Faunabescherming also was not involved in the G-8 meetings. The respondent from the Faunabescherming stated that they are never invited to such collaborations and that they are reserved with inviting themselves (R11).

5.1.2 Mutual Gains Approach

The first time the Ganzen-8 came together was 22 September 2010 (R3). Because of the difficulty of the problem, the G-8 organisations decided to invest in a so-called Mutual Gains Approach (MGA). They chose Maas Goote, an internationally experienced MGA facilitator, to manage the process (R5; R8; R2). Unlike traditional negotiations, which are often based on strategic compromises and intransparency, the MGA is centred around understanding other representatives and knowing what is important to them (R6; R7; R8; R9) and focusing on finding shared interests (R9). They all put aside their differences (R1; R5). Every representative agreed on an outcome in which he finds winning and losing points (R8). This transparency results in finding real bottlenecks in the problem, which enables the representatives to make a range in interests, in difficult and easier solutions, in solutions around time and in solutions regarding money (R6). It was mentioned by a couple of respondents that the representatives felt that this was the last opportunity they had or the only road to follow to solve the problem together (R1; R6).

Overall, the process of coming to an agreement on 3 May 2011 took approximately 15 meetings, which were intensive sessions of two to four hours (R3), regularly in the VROM building or at Staatsbosbeheer (R6). The representatives often came together in the evening, because not everybody was available during the day (R3). In the meetings only the directors or heads of board from the 8 organisations and the facilitator were present. A prerequisite for the meetings was that every representative was present (R6).

There was a rough time plan for the G-8 meetings, based on three time phases (R6). The first phase was orientating on all interests. One of the assignments here was for representatives to get to understand the other's interests (R8, R6). For example, the director of the Vogelbescherming was told to defend the interests of farmers or hunters, and pretended to do so in a room full of people. Besides hilarious moments, this method led to serious evaluations and a certain mindset (R8). The second phase was finding solutions and the final phase was placing the solutions in time. The G-8 did not make detailed minutes of the meetings, but they worked with loose notes describing the previous meetings (R6). According to the representative from APnl the notes played a subordinate role in the process. He explained that it was more important to talk to each other, outweighing thoughts and bringing them back to about 10 lines (R6). During the course of the meetings, the notes came to include agreements on financing, killing methods and expectations from politics, that had to be fine-tuned in the end (R6).

The respondent from FPB gives a more detailed reconstruction of the meetings. The first meeting was focused on deciding on the goal and on how to get there (R3). They made an agenda, stating: making an inventory of the problem; determining the rules of the game; making an inventory of the interests of the participants; talking about each other's interests, tasks and mandate of the participants; discussing solution packages; reaching an agreement; implementing the agreement; mapping possible problems with the implementation and trying to prevent possible implementation problems. On 7 February 2011, the first contours of the plan, with the plans preconditions, were set out (R3). In March 2011 the first plan in 15 pages was finished. Every representative had to present this plan to their followers (R3). During the meetings the representative from FPG felt that there were many opportunities to explain about your organisations' interests. It was possible to use flap-overs to write down thoughts, or to sit and talk with just one other representative to try and get to an agreement about something (R3).

The purpose was to keep the MGA a closed process of collaborating just between the G8 representatives. The reason for this was that every external input could make the process instable (R6). Apparently this succeeded to some extent, because according to the respondent from IPO the G-8 process is a black box to IPO. Because of this intention to keep it a closed process, it was also decided that policy advisors from the organisations would not be involved during the meetings (R2; R6). As a result, the directors, or heads of board, wrote texts without their policy advisors, which is a very unusual procedure (R6). According to APnI the representative Peter de Koeijer researched several concrete aspects by himself. Jan Jaap de Greaff and Fred Wouters sometimes consulted a couple of colleagues for input (R6).

In contrast to the closed character of the process, an important part of the process for all involved representatives was to repeatedly guarantee the mandate received by their followers. This process was not the same for every organisation, due to differences in organisational structure regarding members and employees (R8). For some representatives it was necessary to initiate a member council, through for example district commissions (R5) while others only needed to ask permission from the rest of the board. Every meeting started off with a question round on the status quo with regard to everyone's mandate (R8; R9). At some point during the process, the mediator made an intervention to emphasise the importance that everyone makes an effort in reassuring their mandate (R8).

Several parties even emphasised that the MGA process led to a strong relationship with the others (R3; R6; R8). In case of APnI the representative explained that this puts him in a complicated position, because of historical conflicts between the organisations. His organisational followers are farmers that have negative experiences with nature management organisations, because many farmers have been subject to policy change regarding the nature development plan Ecologische Hoofdstructuur (Ecological Mainstructure). This policy forced farmers to move and their sites were then given to nature management organisations. Due to long political negotiations and uncertainties, many of his organisational followers do not trust the site managers, which puts him in a complicated position (R6).

The interaction between the G-8 organisations within the Mutual Gains Approach was characterised by learning about each other's interests, building trust and creating a common goal. Working together towards the same end can be called a 'cooperative' type of interaction. Because this interaction is clearly a crucial event in the policy process, it is marked bold in the summarising time-line in figure 4.

5.1.3 From Ganzen-8 to Ganzen-7

On 3 May 2011, the G-8 agreed on "Nederland Ganzenland - Een gezamenlijke landelijke en regionale visie" ("The Netherlands Geeseland – A common national and regional vision") (Ganzen-8, 2011). The last step in making this a final agreement between the 8 parties was to present the agreement to the organisational followers and get a final mandate. It was not possible anymore to make big changes to the final concept of the agreement, but small changes in text formulation were allowed (R5). In the last G-8 meeting, before the G-8 would present the agreement to society, the director from the KNJV was rebuffed by his followers (R8). He did not receive the final mandate from his board and departments for signing the agreement (R8). The KNJV board made the decision at a meeting on 17 May 2010 (WBE Duin- en Bollenstreek, 2010).

There are several reasons given by representatives for the lack of mandate for the KNJV director. Some say that the hunters were dissatisfied with the limitations during hunting periods (R1) and that they rather preferred the new Naturelaw to be implemented (R1). Another reason that was given is that the hunters felt like they had to clean up the problems that had come about due to mismanagement (R1) or that they did not want to be made responsible for the fact that there was such a big problem (R4). Overall it is judged by the respondents that the KNJV was unable to compromise (R1).

The respondent from the KNJV believes that something failed with the communication between his predecessor and the rest of the board. He believes that the representative from the KNJV was not been clear enough about the content of the meetings, or that he was not clear enough in asking the board for the mandate, because the content of the agreement came as a surprise to the board. The surprise was that there would be a resting period in the winter, during which it would not be permitted to shoot the geese (R9). The doubts within the board resulted in a

members consultation, which had to be organised on short term. According to the respondent from the KNJV the members felt surprised by this consultation, for two reasons. First, the consultation was on such short notice, and second, they were surprised by the agreement to close the winter hunting. Regardless of the fact that members were clear about their rejection of the agreement, according to the respondent from the KNJV the consultation also led to a hassle within KNJV, because members felt as if it were already a closed deal. Finally, the members felt that due to their big influence they were able to save the day and break the deal (R9).

As a result of the negative advise from the members consultation, the director of the KNJV was rebuffed from the finalising meeting by his followers. Afterwards they stated that according to them the policy is ethically and practically unrealizable (R9). Ethically unrealisable, because the agreement goes against the hunters rules to not shoot during the breeding time, and practically unrealizable because of the closing down of the winter hunting. Because the KNJV felt obligated to achieve results based on the agreement, they did not want to sign the agreement (R9).

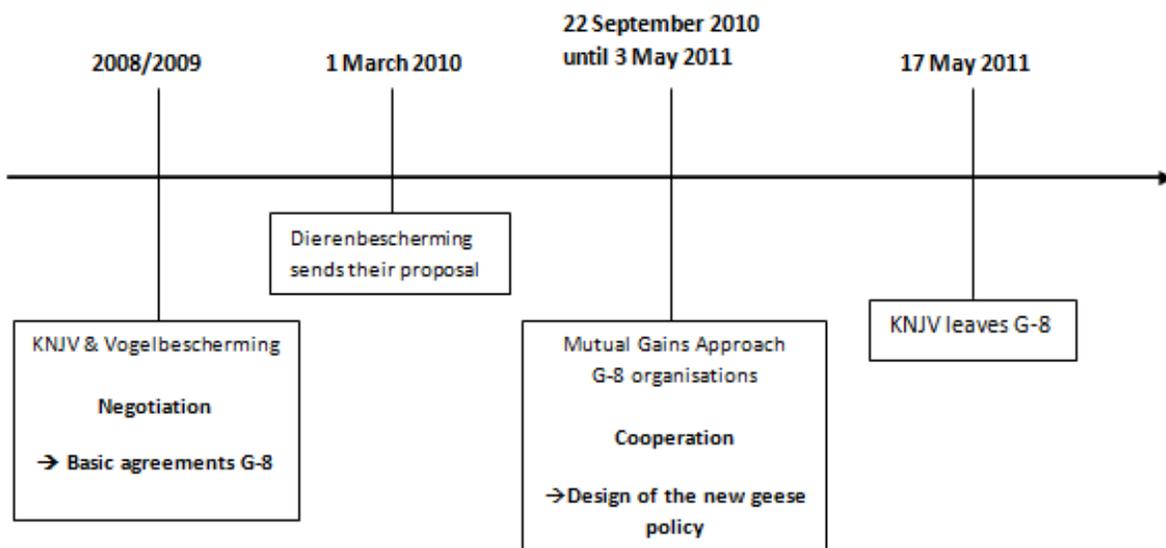


Figure 4. Time line 1 with important events in the policy process surrounding goose nuisance

5.1.4 Presenting the agreement ‘Nederland Ganzenland’

The G-7 closed the agreement without the KNJV, because of the good momentum and the pressure they were under (R8). The publishing date of the document “Nederland Ganzenland – Een gezamenlijke landelijke en regionale visie” was 23 May 2011 (Ganzen-7, 2011). As a result, the KNJV protested that it would not be possible to carry out the policy without the hunters (R8). However, as several respondents made clear (R8), there is a great division among hunters regarding the preparedness to carry out the proposed goose policy.

The G7 parties decided that Staatsbosbeheer (Chris Kalden) and Vogelbescherming (Fred Wouters) would present and explain the agreement in media communications based on the balance that was found in the organisation’s interests (R6; J. Van der Valk, personal e-mail communication, 10 July 2013). These two parties were chosen specifically to present the plan around killing geese, so that they could explain how the nature management organisations and the Vogelbescherming created a balance in the agreement (R6). As the respondent of Natuurmonumenten explained, it was important to only present itself as a part of the G-7 group instead of emphasising its own principle opinion about the problem. The reason for this was that the G-7 was a coalition with a special outcome, that continuously needed to be defended. Since it was sensitive material, it was important to stick together. If friction came about, there would be the possibility of a party stepping out of the agreement. At that point the agreement could fall apart (R5).

Within a month, on 6 June 2011, the Dierenbescherming published the report “Zomerganzenvisie Dierenbescherming – structurele, diervriendelijke oplossingen om overlast van zomerganzen te verminderen” (“Vision on summering geese from the Dierenbescherming – structural, animal friendly solutions to decrease nuisance from summering geese”) in which they proposed structural, animal friendly solutions that would prevent nuisance from summering geese. As a result, the Dierenbescherming was invited to join a taskforce to work on a Toolkit describing alternative measures to killing geese (R10; R12). After the agreement was presented, de Dierenbescherming visited the Vogelbescherming for a talk about the implementation of animal-friendly alternatives in the agreement. Dierenbescherming requested the Vogelbescherming to communicate more to the public about how alternative measures would be incorporated in the goose policy. The representative of the Dierenbescherming stated that she did not get the impression that the Vogelbescherming made any changes in communication in response to their request (F. Kraaijeveld-Smit, personal e-mail communication, 10 July 2013).

Between 4 and 6 June 2011, The Faunabescherming placed an advertisements in several national newspapers in reaction to the G-7 agreement (Faunabescherming, 2013C) (see figure 5), stating at the top: “With friends like the Vogelbescherming and Natuurmonumenten, the goose no longer needs enemies” The ad has a picture of a dead goose in the grass in the middle, with underneath it the message: “Seven organisations, actually including Vogelbescherming and Natuurmonumenten, want geese to be shot en masse. The Faunabescherming is against this and always will be. Because we choose animals and not cruel measures that don’t work. When there are plenty of alternative measures available.”, after which they call for donations to their organisation.

**Met vrienden als
Vogelbescherming en
Natuurmonumenten
heeft de gans geen
vijanden meer nodig.**

Zeven organisaties, waaronder ook Vogelbescherming en
Natuurmonumenten, willen dat ganzen massaal worden afgeschoten.
De Faunabescherming is daar tegen en dat zullen wij altijd
blijven. Want we kiezen voor dieren en niet voor wrede maatregelen
die niet helpen. Terwijl er genoeg alternatieven voorhanden zijn.
Blijf ook een vriend van de ganzen? Wat dan doneren aan
De Faunabescherming. Elk euro doet goed op faunabescherming.nl.

DE FAUNABESCHERMING
Jagen? Niet altijd niet.

Figure 5. Advertisement about the goose policy from the Faunabescherming

On 7 June 2011 the Faunabescherming sent a letter to minister Bleker of the ministry of Economische Zaken, Landbouw en Innovatie (Economic Affairs, Agriculture and Innovation, from now on: EL&I) and the college of Provincial Deputies with the request to not adopt the G-7 policy. The Faunabescherming sent alternative advice focused on not managing the geese population by killing, but rather to focus on dislodgement measures and on a system of damage compensation to farmers (Faunabescherming, 2011). The Coalitie DierenwelzijnsOrganisaties Nederland (CDON), composed of 24 animal protection organisations including Faunabescherming and Dierenbescherming, also wrote a letter to minister Bleker on 11 June 2011 in which the coalition asked the minister not to implement the G-7 advice (CDON, 2011). The CDON lobbied for an animal-friendly alternative proposal, in line with the ones already described by the Faunabescherming and the Dierenbescherming. These efforts from animal advocacy groups are summarised in a time-line in figure 6.

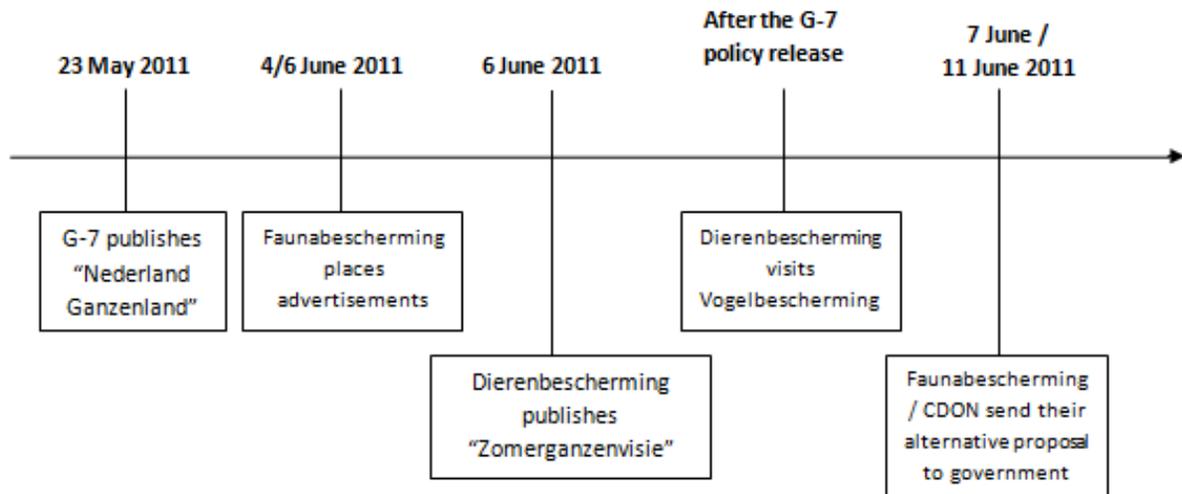


Figure 6. Time line 2 with important events in the policy process surrounding goose nuisance

5.1.5 From G-7 agreement to governmental collaboration

After the G-7 agreement was presented in May 2011 the G-7 parties lobbied at individual provinces and at the national government in order to start a conversation with governmental parties (R8). According to the Vogelbescherming, the former minister of the former ministry Landbouw, Natuur en Voedselkwaliteit (Agriculture, Nature and Food quality) did not pay much attention to the G-7 initiative, even though the G-7 regularly asked for a get-together with governmental representatives. This occurrence could be connected to circumstances regarding the decentralization of responsibilities for nature, shifting from the national government to the provinces (R6; R8).

In October 2011 minister Bleker proposed a concept nature law that would integrate 3 different laws related to nature (Flora- en faunawet, Natuurbeschermingswet and Boswet) (Rijksoverheid, 2011). This development was not appreciated by the G-7 parties. The new law would mean the end for the policy of the Ecologische Hoofdstructuur (Ecological Mainstructure), which would have a big impact on the budgets for nature management organisations (R6). In the concept law it was also proposed to place the Greylag Goose and the Greater White-fronted Goose on the wild list, which was not in line with the plans made during the G-7 collaborations (R2; R2; R8). As the respondent of APnI makes clear, the representatives from the nature management organisations and the agricultural organisations got along fine with each other, but not with minister Henk Bleker (R6).

During a parliamentary legislation meeting on agriculture and nature on 16 June 2011, minister Bleker promised to inform parliament about the future of geese management in the Netherlands. In his statement on 16 December 2011, minister Bleker did not want to comment on the content of the G-7 agreement, as according to him the provinces are primarily responsible for potentially elaborating on the proposal made by the G-7 (EL&I, 2011). He did

say he was prepared to financially facilitate the calculation of different managerial scenarios, including the G-7 scenario (EL&I, 2011).

As a reaction to the proposed Natuurwet (Naturelaw) by minister Henk Bleker, the G-7 campaigned for their “Nederland Ganzenland” at parliament through Parliamentary Members using motions (R8). At the same time, according to the secretary of the G-6, the KNJV lobbied at parliament with the aim to push through the new Naturelaw through (R1). Eventually, two relevant motions were accepted by parliament on 22 December 2011 (Tweede Kamer, vergaderjaar 2011-2012, 32 372, nr. 80 and 81). These motions inter alia requested government to get into deliberation with decentral governments and the G-7 parties, to ensure an integral implementation of the G-7 recommendations and to adjust the proposed Naturelaw in such a way that it is in line with the G-7 agreements.

It took a long time before the G-7 and IPO agreed on the geese-policy, because the G-7 agreement consisted of general main lines without a financial elaboration (R8). The provinces on the other hand were mainly focused on the policy and financial aspects, and they were very apprehensive about the costs (R2; R6; R8). According to APnI, Bleker decided that IPO had a budget for 10 million euros, while the G-7 scenario would cost far more than that. As a result there was a need for financial calculations regarding different policy scenarios.

As visualised in figure 7, approximately between September 2011 and February 2012 they took the time to start an investigation on financial calculations of the policy scenarios from the G-7 and IPO (R6). This investigation was commissioned by IPO, Ganzen-7 and the former ministry EL&I and performed by the researchers from CLM Onderzoek & Advies and LEI Wageningen UR. In the process of this research, the policy scenario from IPO was subject to several changes due to practical impossibilities (R6) and in the end it appeared that the two scenarios from the G-7 and IPO did not differ that much when looking at the costs (R6; R7). These financial calculations were published in August 2012. The main difference according to the respondent of APnI was that the G-7 counted on European co-financing that had to be requested.

In the meantime, the Dierenbescherming had a meeting with representatives from Natuurmonumenten and Staatsbosbeheer, which is an annual event. The respondent from the Dierenbescherming did not know exactly when they met anymore, but it must have been before August 2012. During this meeting the representatives talked about the solutions to the geese problems and the Dierenbescherming emphasised on alternative methods to killing in order to preventing goose nuisance.

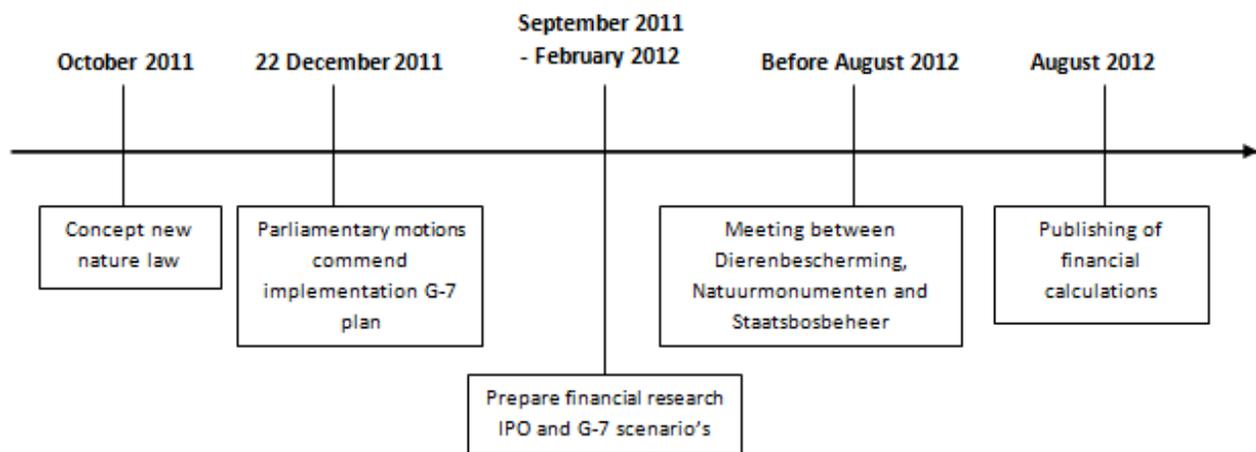


Figure 7. Time line 3 with important events in the policy process surrounding goose nuisance

5.1.6 G-7 and IPO negotiations

All in all, it took approximately one year before the G7 and governmental representatives gathered around the table to collaborate (R6). There were approximately 8 meetings between the G-7 and IPO and there was no structured plan for these meetings (R12). According to the representative of IPO, it is a process ahead of which you can't predict how many iterative steps need to be taken in order to come to an agreement.

These negotiations were very different than the G-7 collaborations during the Mutual Gains Approach. The meetings were more traditional negotiations about financial aspects and about disagreements between the 12 Provincial Deputies (R6). Also according to IPO the stakes were high and the contrasts were on a very strategic and financial level. The representatives did not write down minutes during the discussions, instead only using lists with agreements (R12). The IPO / G-7 interaction can be defined as a 'bargaining' type of interaction, because it was solely focused on negotiating the terms and conditions of a transaction.

In these final negotiations between the G-7 and IPO, the G-7 chose three main spokesmen that represented the agricultural organisations (Peter de Koeijer from IPO), the nature management organisations (Jan Jaap de Graeff from Natuurmonumenten) and the animal advocacy organisation (Fred Wouters from de Vogelbescherming). According to the respondent of APnl it would have worked to continue to talk with 7 parties and the 12 deputies from the Province.

In these negotiations other animal advocacy groups besides the Vogelbescherming were not involved. According to the respondent from IPO, the discussions with the Dierenbescherming were mainly left to the nature management organisations and to the Vogelbescherming. There was no possibility for big changes to the course of the agreement (R12), and the exact interpretation of the Toolkit and the GAKs was again not incorporated into the agreement (R10). Regarding lethal removal measures, IPO proposed to additionally shoot geese that are becoming a pair even during the winter (R12). However, for IPO low policy costs were most important in the negotiations.

5.1.7 Final agreement between IPO and G-7

According to the respondent from FPB the parties came to an agreement on 3 November 2012. The official agreement on the geese-policy between IPO and G-7 was published on 6 December 2012, as is shown in figure 8 below. Several respondents mentioned the power and the will of the G-7 to stick together (R5), even though the process took more than two years and even though there was political lobby against the agreement.

The Dierenbescherming was very disappointed that there was no elaboration on the implementation of alternative, animal-friendly measures in the final G-7/IPO agreement (R10). According to the respondent from the Dierenbescherming, the provinces play a big part in coordinating and facilitating alternative measures, and that is why they had expected more attention on this aspect. As a result, the Dierenbescherming asked for a meeting in a letter they sent to the G-7, IPO, parliament, FBE's, in order to discuss the use of alternatives (Dierenbescherming, 18 January 2012). This meeting was arranged on 28 February 2013 with de Vogelbescherming, Staatsbosbeheer, LTO and the secretary of the G-7. The respondent from the Dierenbescherming used this meeting to again make clear what de Dierenbescherming means with alternative measures to prevent goose nuisance. They elaborated on three animal-friendly alternatives from the toolkit: non-lethal chasing methods from agricultural fields, creating safe-zones for summering geese, and chick grids. According to the Dierenbescherming these alternative measures need to be clearly written out in the task force and they will contribute to achieve this. It is important to note that the Dierenbescherming was indeed involved in the development of the Toolkit, as was promised earlier by the G-7.

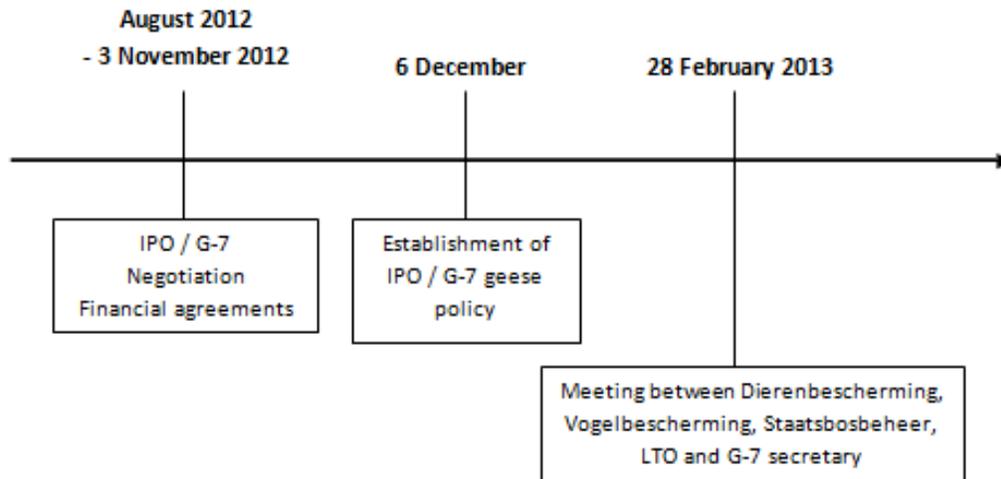


Figure 8. Time line 4 with important events in the policy process surrounding goose nuisance

5.2 Power distribution

5.2.1 Vogelbescherming

Starting off with the animal advocacy groups in this policy network, it is clear that the Vogelbescherming had a very different power position compared to the other involved animal advocacy groups. This is due to the involvement of the Vogelbescherming in the G-8/7 collaborations, in contrast to the Dierenbescherming and the Faunabescherming who were not included in this process.

As explained by the respondent from the Vogelbescherming, the organisation took part in the collaborations, because it was afraid that many more geese would have been killed if the Vogelbescherming had not participated in the G8/7 (R8). He emphasised that animal advocacy groups even together are too small to take on against the agricultural lobby, the majority of the public opinion and the majority of parliament. The Vogelbescherming claims that it now saves the lives of 250.000 geese on an annual basis, which would not have been possible if the organisation had stayed excluded from the decision-making process (R8). Because of their involvement, the agreement includes a period in the winter when it is prohibited, with certain exceptions, to kill geese (R8). This central agreement has been the foundation of the collaborations (R3). According to the representative of IPO, in the spectrum of all negotiators, the Vogelbescherming fulfilled a flank position due to this breaking point (R12).

Other respondents (R1; R2; R12) emphasised that they needed the Vogelbescherming in the agreement in order to prevent the occurrence of a revolt from animal advocacy groups. Even though they found it disturbing that there would be a winter resting period, they felt it was necessary in order for the Vogelbescherming to back the plan (R3). According to the representative from FPB, the Dierenbescherming made an agreement with the Vogelbescherming not to publically criticize the goose policy any more. He saw this as a benefit of having the Vogelbescherming as a part of the G-7 (R3). However, the Dierenbescherming denies that there was an agreement on this (F. Kraaijeveld-Smit, personal e-mail communication, 9 July 2013).

Furthermore, the representative from the Vogelbescherming stated that, even though the alternative animal-friendly policy measures are not concretely included in the G-7/IPO agreement, the involved actors all knew that the practical elaboration on and final implementation of these alternative measures was a breaking point for the Vogelbescherming (R8). In that sense, the Vogelbescherming believed it had the power to ensure that alternative animal-friendly measures would be specified and implemented, even though this was not guaranteed in the written

agreement (R8). The Vogelbescherming did not succeed in getting guarantees on these parts of the written agreement, because according to the representative that would have resulted in endless negotiations with ultimately no agreement (R8).

5.2.2 Other animal advocacy groups

Animal advocacy groups other than the Vogelbescherming on the contrary did not take part in the G8/7 collaborations. FGB stated that the Dierenbescherming did not have any influence on the agreement, at its most via de Vogelbescherming. The representative from the Dierenbescherming emphasised that the report from the Dierenbescherming about animal-friendly alternatives was not sent out for financial calculations by the ministry, as was the case for the G-7 and for the IPO policy scenario.

The Dierenbescherming did get involved in elaborating on alternative animal-friendly measures in a task force that will create the Toolkit, which will be used by the FBE's in the GAKs when making regional plans (R5). According to the representative of Natuurmonumenten, the animal-friendly alternatives are definitely going to be included in the Toolkit, because the Dierenbescherming advocates an important interest that is widely acknowledged and cannot be ignored (R5).

The Faunabescherming is also not mentioned by other organisations to have had an influence on the content of the geese agreement. However, the respondent from the Faunabescherming described how the Faunabescherming is able to create negative publicity around massive killing actions, as happened three years ago on the island Texel. He explained that the Faunabescherming filmed the gassing of hundreds of geese, which was a situation of bloody panic. On their website the Faunabescherming called Texel 'murder-island' and they compared the gassing actions to the holocaust (Janssen, 19 June 2008). Two weeks after the gassing action, the gassing company Duke Faunabeheer was set on fire (NOS, 28 June 2008). Based on slogans that were written on the walls, animal activists from the Animal Liberation Front were suspected to have organised the fire (Trouw, 28 June 2008). In response to the gassing actions, the Faunabescherming sought a preliminary injunction. However, the injunction was rejected by the judge (NOS, 18 October 2008).

The gassing on Texel is also mentioned by the representative of Natuurmonumenten, who explained that colleagues were threatened by animal activists: threatened with their life, cornered while driving a car and their cars were scratched. The representative of Natuurmonumenten stated that in the case of future gassing action, it will be important to make sure people are well informed and understand the reasons in advance to avoid another backlash (R5).

5.2.3 KNJV

The KNJV managed to get the Vogelbescherming to agree on killing geese, because the Vogelbescherming feared that in other scenarios many more geese would have been killed (R8). To compromise, the KNJV initially agreed on a period without shooting geese in the winter, because this was a prerequisite for the Vogelbescherming to join a new geese agreement (R8).

With regard to the nature management organisations, the representative of the KNJV stated that it was due to the KNJV that nature management organisations opened their terrains for killing activities (KNJV). However, as will be described later on, this is also attributed to the influence of farmers who blamed the nature management organisations for trying to create safe breeding landscapes for geese (R2, R9).

According to the representative of LTO, for the LTO the KNJV was the most logical partner in the G-8 collaborations. He explained that the farmers needed the hunters to minimise geese damage, and that as a consequence of this stranglehold, they had to work together (R4).

Besides the influence of the organisation KNJV in the collaborations for a new geese agreement, it is worth noting that hunters are not just represented in the KNJV. As was explained by the representative of the FPB, he felt that the representatives of the nature management organisations had a good understanding of hunting. Because of this, he

trusted that he could do business with this group of people (R3). According to his information, the father of the director of Staatsbosbeheer used to be a poacher, and his brother is a hunter. The director of Natuurmonumenten used to annually join a group of hunters on a property of which he was a member of the foundation's board. Together with the representative of the FPB, the representative of the 12Landschappen is a member of the foundation Flora and Fauna Exams for hunters. This information is not verified, because the essence of the information is that the representative of the FPB experienced a positive attitude towards hunting from the other nature management organisations. He emphasised that in the past, representatives from nature management organisations did not know much about hunting, which made it hard to get to do business (R3).

5.2.4 Nature management organisations

The nature managers were blamed by neighbouring farmers for offering geese a safe place to breed, after which the geese went and fed off of agricultural sites (R2; R3; R5; R9; R10; R11). According to the representative of the 12Landschappen, nature management organisations wanted to stay on good terms with farmers and that is why they gave in on shooting geese on their terrains (R2). The fact that nature management organisations felt pressure from the agricultural sector and did not want conflict with their neighbouring farmers was also emphasised by Staatsbosbeheer. The representative from the Dierenbescherming stated that aside from this commitment by the nature management organisations, she does not see much commitment from the other parties regarding alternative measures (R10).

However, since the nature management organisations were experiencing more and more nuisance from geese on their own terrains, they were increasingly willing to get to a solution to decrease the geese damage. It is mentioned that this nuisance at nature terrains has contributed to the fear of the Vogelbescherming that many more geese would be killed if they would not take part in the collaborations (R1).

Next to this indirect influence on the Vogelbescherming mentioned by the secretary of the G-7, there was no other respondent that attributed power to the nature management organisations. Respondents mainly described that the nature management organisations were subject to pressure from other groups.

5.2.5 State actors

As became clear in the line of events, minister Bleker had the power to delay the G-7/IPO negotiations, because he was working on other plans regarding nature and wildlife management. However, a majority of parliament called upon the minister to support the G-7 recommendations by means of two motions.

The power of IPO resulted in financial limitations. For example, due to the IPO, farmers with resting areas for geese will not get a management fee on top of their damage compensation anymore (R12). Also, FPB wanted 100% damage compensation with an extra 10% compensation for overhead costs. However, IPO made an ultimatum of compensating 95% of the damage costs. Since FGB did not want to step out of the agreement, they had to agree with this compromise.

Besides this financial influence, IPO did not have the power to make any more big changes to the content of the G-7 agreement. They rather wanted the possibility to shoot geese in winter time (R12), but the G-7 organisations made binding agreements around the winter rest.

5.2.6 Farmers

As already mentioned, together with the KNJV and the nature management organisations, the LTO had the power to get the Vogelbescherming to agree on killing geese. Also, due to neighbouring farmers blaming nature management organisations for creating safe breeding landscapes for geese, the nature management organisations opened their terrains for killing activities (R2; R9).

An important requirement of the LTO was the insurance of financial compensations for geese damage and this has been arranged in the agreement with a budget of 12,5 million euros. According to the KNJV this damage

compensation was the most important negotiation apart from the resting period in the winter (R9).

Besides this evident influence, the farmers were also subject to the power of the other actors. Regarding the Vogelbescherming, the agricultural advocacy groups LTO and APnl gave in on not shooting in the winter time in return to killing activities in other seasons. Another influence on the farmers was the KNJV. As described above, according to the representative of LTO, to the LTO the KNJV was the most logical partner in the G-8 collaborations, because farmers and hunters are in a stranglehold relationship. Farmers need the hunters to minimize their geese damage and consequently they need to work together (R12).

5.3 The type of network structure: conclusions

The line of events that made up the policy process gives an insight into the interaction between pairs or coalitions of actors within the policy network. This interaction through time can be connected to the three typologies of interaction from the network typology model: conflict, bargaining or cooperation. In the description of the line of events, this is done for three of the important events, marked bold in the time line figures: the Vogelbescherming/KNJV agreement; the G-8 MGA process and the IPO/G-7 negotiations. The first two mentioned really influenced the main goals and measures of the policy, and the final IPO/G-7 negotiations only established binding financial agreements. This is why the interactions with IPO are not taken into account in determining the predominant type of network structures.

First, the negotiation between Vogelbescherming and KNJV established the basic agreement for the G-8 meetings. When exploring their power distribution, it can be stressed that both organisations enforced an important prerequisite for the new policy. Because of this fragmented power distribution, this phase of the policy making process is characterised as '*symmetric bargaining*' when following the typology of network structures by Adam and Kriesi (2007, p. 135).

Second, the most evident coalition of actors within the policy network is the heterogeneous group of G-7, consisting of farmers, nature management organisations and one animal advocacy group. In the outline of events, this coalition is characterised by a cooperative relationship. Because of the actors' different interests and the cooperation within the Mutual Gains Approach, the outcome is described in terms of a fragile agreement in which it is important that every actor stays on board. In developing the policy content, state actors and animal advocacy groups other than Vogelbescherming were not involved. Because the policy making process is dominated by this coalition, it can be defined as a "policy monopoly" as used by Baumgartner and Jones (1993, from: Adam and Kriesi, 2007, in: Sabatier, 2007). However, this policy monopoly does not mean that all actors within the coalition had the same amount of input on the policy content.

As becomes clear when analysing the previous parts on power reputation, within the G-7 coalition two groups had most influence on another group or on a set of groups, namely: the animal advocacy group Vogelbescherming and the farmers. As just made clear, the Vogelbescherming enforced a period in the winter with a stop on killing geese. Moreover, they are valued as a representative for a broader group of animal advocacy organisations, which is necessary for preventing great tumult and protests against the agreements. Together with the Vogelbescherming, the farmers make up the most powerful group in the coalition. They created a situation in which the coalition actors predominantly agreed on killing geese. Due to their influence, the nature management organisations agreed on opening their terrains for killing activities. As a conclusion the power distribution in the policy network is mainly concentrated around the Vogelbescherming and the agricultural organisations within the G-7 policy monopoly. In the table with typologies of network structures by Adam and Kriesi (2007, p. 135), a cooperative interaction combined with a concentrated distribution of power is called a *hierarchical cooperation*.

To conclude, the policy network around "Nederland Ganzenland" had a dominant network structure of *symmetric bargaining* and later on *hierarchical cooperation*. This is shown in table 4. According to Adam and Kriesi (2007, p. 135) the network structure of symmetric bargaining is expected to have a moderate to high potential for incremental change. This is in line with the fact that the Vogelbescherming enforced a winter resting period, which is a change to the previous policy. Next, the predominant type of network structure *hierarchical cooperation* is

expected to have a low potential for change, or in other words, a maintenance of status quo. This is in line with the fact that animal advocacy groups outside the G-7 created neither a rapid shift nor incremental change in the course of the policy on goose nuisance.

Distribution of power	Type of interaction		
	<i>Conflict/competition</i>	<i>Bargaining/negotiation</i>	<i>Cooperation</i>
<i>Concentration</i>	Dominance -- Moderate potential for rapid (serial) shift	Asymmetric bargaining -- Low to moderate potential for incremental change	Hierarchical cooperation -- Low potential for change - maintenance of status quo
<i>Fragmentation</i>	Competition -- High potential for rapid (serial) shift	Symmetric bargaining -- Moderate to high potential for incremental change	Horizontal cooperation -- Low to moderate potential for change -maintenance of status quo

Table 4. Predominant types of network structure in the policy network surrounding goose nuisance

CHAPTER 6

MUSKRAT NUISANCE: CONTEXT

6.1 Problem development

The muskrat is a semiaquatic rodent originated in North America. After the animal was introduced to Europe around 1900 by a Czech count (Muskusrattenbeheer, 2013), the muskrat eventually also appeared in the Netherlands in 1941 in Valkenswaard nearby the border of Belgium (CBS et al., 2012). Muskrats live on shores near freshwater, where they eat the vegetation and dig holes to make corridor systems. Recently they are widely represented around almost every shore area in the Netherlands, except for two of the Wadden Islands (Heidinga, 2006). Ever since the muskrat was first recognised in the Netherlands, their digging activities have been seen as a threat to Dutch water safety (CBS et al., 2012). However, due to a lack of decent research on the threat of muskrats, there is a lot of disagreement in society regarding the exact level of threat and the possible effective measures that should be taken (Zandberg et al., 2011). Research shows that it is indeed possible that pressure on embankments (for example from cows or tractors) can lead to a collapse, but this threat can only be called minor (DHV Groep 2006, DHV B.V. 2007a, Gaaff et al. 2007). In the Netherlands muskrats have always been hunted as a way to minimise their threat. In the period 2000 - 2005 between 300.000 and 400.000 muskrats were captured on a yearly basis. This amount declined every year since and came down to 124.930 in 2011 (CBS et al., 2012). Because it is impossible to count every single muskrat, the number of captured muskrats is generally used as an indicator for the population decline. The fact that the captures are declining is consequently seen as confirmation that hunting these animals is a necessity and a good thing. Proponents of hunting muskrats believe that these animals naturally will keep on growing in numbers, which justifies their controlling practices (e.g. Waterschap Velt en Vecht, 2013; Waterschap Zuiderzeeland, 2013; Waterschap Reest en Wieden, 1988). On the other side, opponents point out that this reasoning is not based on scientific proof. According to them it is not possible to draw such conclusions when there is no evidence of a relation between the amount of muskrats and the amount of damage (Zandberg et al., 2011). Furthermore they believe muskrats have a certain population potential, which will be balanced out by natural death. Also, they think there is a possibility that muskrats will adapt to their environment and learn how to avoid traps, which in the end will also lead to a decline in captures. If these expectations are valid, hunting would not necessarily be needed, and alternatively focusing on making the environment less attractive and using damage prevention would suffice. It could be that hunting muskrats now only triggers new accretion (Zandberg et al., 2011). However, all this stays unclear until further research results.

6.2 Policies

Before the muskrat was first seen in the Netherlands in 1941, there were already national measures set by a law in 1930 in order to prevent their arrival. Since then it was prohibited to keep or transport the animals, and in 1937 by Royal Decree the muskrat was officially categorised as harmful pest based on the 1923 Jachtwet (Huntinglaw). Hunters and fishermen were obligated to report muskrats and the national Plantenziektenkundige Dienst was responsible for detection and combat (Heidinga, 2006). By 1975 the muskrat was present in every Dutch province despite further measures in 1951 regarding strict reporting, governmental catch premiums and exterminators' responsibilities. These measures did not lead to desired results and in 1986 a new law (Wet voorzieningen ten behoeve van inzet en bekostiging muskrattenvangers), also called the Muskusratwet (Muskratlaw), was put into operation. From now on the fight against muskrats was no longer mainly a national activity, but it became a provincial responsibility (Heidinga, 2006). The goals were to minimise the digging damage to an acceptable level and to completely eradicate the muskrats from the Netherlands. In this period the provinces were supervised and coordinated by a national organisation, the Permanent College van Overleg Muskusrattenbestrijding (PCOM) (Heidinga, 2006). In 1994 the national government also transferred the financial organisation to the provinces. The PCOM was replaced by the Landelijke Coördinatiecommissie Muskusrattenbestrijding (LCCM), created by the Unie

van Waterschappen (UvW) and the IPO. The concrete implementation of fighting muskrats is allowed to differ between provinces and most of them have assigned the task to the water boards (Heidinga, 2006). For around 8 years this system functioned, legally backed by the Huntinglaw and the Muskratlaw, until a new law regarding flora and fauna was created.

The Flora- en faunawet, overruling the Huntinglaw and the Muskratlaw, was put into operation in 2002. This law prescribes the protection of plant and animal species and it points at the general citizens' duty to care for wild animals and plants and their environment. However, in case of threat to human safety or severe economic damage, dangerous species may be managed. The Flora- en faunawet determines that in such cases the Provincial Executives may assign persons that may perform these managerial activities. Also, it prescribes the types of traps that are allowed and prohibited, and it determines that the animal in question needs to die within 300 seconds (Heidinga, 2006). All provinces have used this opportunity to legally employ muskrat-exterminators.

The next important development regarding muskrat policy took place as a result of the former government looking for possibilities to cut in the State Budget. With their Stormbrief on 4 November 2009, the UvW made efficiency proposals regarding 'doelmatig waterbeheer' to the Secretary of Verkeer en Waterstaat (Traffic and Water Management). An elaboration on these proposals followed in the 'werkdokument Storm' on 21 April 2010. Here, the UvW made proposals to expected to save up to 130 million euro per year on water management, including savings due to the transfer of muskrat extermination from the provinces to the water boards (UvW, 2010). This shift was already recommended by the advisory organisation PriceWaterhouseCoopers in October 2006 (PWC, 2006).

On 23 November 2010 national parliament agreed on a modification of the Waterwet, transferring the task of preventing muskrat damage to waterworks from the Province to the water boards (Tweede Kamer, 2010). This change to the Waterwet officially became operative on 1 July 2011 (Staatsblad van het Koninkrijk der Nederlanden, 2011). The change included an amendment and three motions from the PvdD regarding the goal of muskrat extermination and the implementation of animal friendly measures. The amendment replaces "muskrats and coypu extermination" with "preventing damage to state waterworks caused by muskrats and coypu" (Tweede Kamer, 2010). This means that by law the water board must take care of preventing damage to state waterworks and the water system caused by muskrats and coypu. Because of this change in legislation, it has become a policy choice of the involved water boards whether muskrats are exterminated, and with what intensity this is done (Zandberg et al., 2011). The motions called for implementing preventive measures as much as possible during the design, creation and maintenance of embankments; researching the effect of muskrat extermination on damage and on the muskrat population; and the final motion asked to research the possibilities of banning the drowning cages and to look for animal friendly alternative measures (PvdD, 2010).

In line with the second motion, a national field trial "de Veldproef" will be conducted around the Netherlands, from January 2013 until January 2016, guided by representatives from Dierenbescherming, LTO, Stowa and the gezamenlijke natuurbeschermingsorganisaties (UvW, 2012). This research is conducted by the Unie van Waterschappen (UvW), the overarching advocating water board association. The relation between working hours of exterminators and the amount of damage will be studied. In doing this, the quality of the dikes and shores is taken into account. 117 areas of five by five kilometres are a part of the study. In one third of these areas, exterminators will spend 30% less than usual exterminating; in another one third they will spend 30% more time, and in the remaining 30% they will spend the same amount of time. They expect this will allow them to predict a situation in which muskrats are not exterminated at all, and will show them how effective preventive measures are in reducing the amount of damage. As a final step, in order to better understand the habitat of muskrats, several muskrats are caught, marked and again released (UvW, 2012).

After muskrat extermination was shifted from the provinces to the water boards, the 25 water boards in the Netherlands began working together with eight management organisations that deliver exterminators to work in assigned areas (HDSR, 2013). The organisation of muskrat-extermination has been professionalised by the UvW. The main business of the water boards with regard to (prevention of) digging-damage continues to be muskrat extermination (UvW, 2013A). Yearly the extermination costs 35 million euro and it employs 420 full-time employees

(CBS et al., 2012).

6.3 Muskrat policy “Beleidsnota 2012-2015 Muskusrattenbeheer”

Since 2012 the six water boards in West-Netherlands (Hoogheemraadschap Hollands Noorderkwartier (HHNK), Waterschap Amstel Gooi en Vecht (AGV), Hoogheemraadschap van Rijnland, Hoogheemraadschap Delfland, Hoogheemraadschap van Schieland en de Krimpenerwaard (HHSK) en Hoogheemraadschap De Stichtse Rijnlanden (HDSR)) assigned with managing the muskrats, have been integrated into one organisation, ‘Muskusrattenbeheer’, ran by the water board HDSR. During the course of the first year, the water boards worked together in order to create the organisational policy. In December 2012 this led to the policy document ‘Beleidsnota 2012-2015 Muskusrattenbeheer’, which describes the implementation of management measures and the related budget.

The policy report refers to the water boards’ legal task to take care of the water system, which includes preventing damage to waterworks from muskrats and coypu. Muskrat extermination is explained not to be a goal per se, but a means to prevent problems from developing. In the first parts of the policy report, it is mentioned that preventive measures need to be taken by the individual water boards, and that the national field trial the Veldproef will provide insights regarding alternative killing methods, the effectiveness of extermination on waterworks safety and damage to shores, and population development.

The muskrat policy mentions two main goals: to ensure that muskrat digging does not endanger the safety of people and the environment (at embankments, but also at urban and rural water systems), and to minimise animal suffering. Managing the muskrat population at the lowest possible amount is stated to be the most effective method for establishing these goals. Several measures will be taken in order to achieve this. Muskrats will be exterminated year round to minimise the population and to prevent growth. The traps used will be a variety of cages and jams. The focus will be on “piekbestrijding” (“peak extermination”), which means exterminating in areas where the effort is most efficient and where the most severe “besmettingshaarden” (“infection centres”) can be tackled. Second, the registration system for catches, catch places and damage places will be improved with a GIS and GPS system in order to better keep track of the work. Next, catching method will be improved to minimise animal suffering and/or accidental captures, and in order to increase the efficiency and effectiveness of catching. Employees will be educated in order to work efficiently and responsibly, according to the organisations’ code of conduct. Finally, Muskusrattenbeheer stresses that it will actively work with possible alternative measures that might surface based on expected research results. This could further improve catching methods and minimise animal suffering. The main goals and measures of the new muskrat policy are visualised in an impact model in figure 9.

The drowning cage will stay part of the catching strategy. In the policy note it is argued that with correctly using the drowning cage the killing time stays within set time limits. Next, the note points at an experiment with placing jaws inside drowning cages, however, since this asks for more working hours, this method cannot be used in areas with a high muskrat population. Furthermore, the policy note elaborates on the catching targets for every water board area, on internal and external communication structures, the relevant national studies and the possible risks to the effectiveness of the policy.

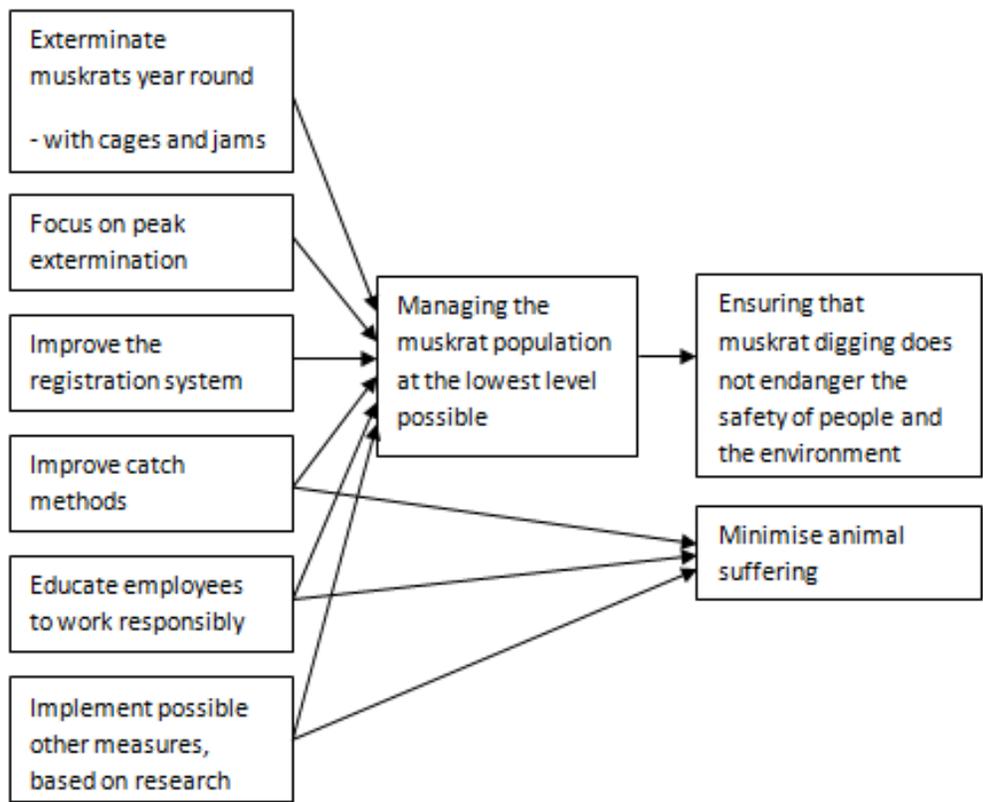


Figure 9. Impact model of the muskrat policy "Muskusrattenbeheer 2012-2015"

CHAPTER 7

MUSKRAT NUISANCE: INVOLVED ACTORS

7.1 Introduction to the involved actors

Over time, the actors responsible for managing the risks of muskrats have shifted from the national government to the provinces to the water boards. The recent 2012 policy document is a publication from the six cooperating mid-western water boards. As explained earlier on in chapter 2, these water boards all have their own political constellation, meaning that every water board went through a policy process ultimately ending up in the establishment of the common policy. However, it is outside the scope of this study to perform a detailed analysis of all the important interactions and actors' power distribution within each water board. As a result, these aspects are only grossly introduced in the following part, and generally analysed in the next chapter. Also involved were Dierenbescherming, Bont voor Dieren and the Faunabescherming advocated the interest of muskrats by giving input for more animal friendly measures. The water boards and 3 animal advocacy groups will be introduced below.

7.1.1 Water boards

A water board in the Netherlands is a regional governmental body with an independent taxing system. Anno 2013 there are 24 water boards spread over the Netherlands and they are all focused on managing water and weirs and taking care of water quality in the area of their responsibility. Every water board is composed of a general administrative body (Algemeen Bestuur, from now on "AB"), an executive body (Dagelijks Bestuur, from now on "DB") and the chair. The water boards are represented by the association Unie van Waterschappen (Union of Water boards, from now on "UvW"). This organisation is also involved in developing governmental policy, regulations and policy notes for water management (UvW, 2013B). The areas of the six mid-western water boards relevant to this study are shown in figure 10.

Regarding muskrats, the six cooperative water boards all delivered representatives to the Bestuurlijk Overleg (Administrative Council, from now on AC), an administrative council on muskrat management). This AC is considered to be an actor in the policy network. Also included as an actor in the network is the executive department for muskrat management "Muskusrattenbeheer" at HDSR.

Several water boards give their point of view on muskrat nuisance on their website. HHNK, Delfland, HDSR and HHSK explain that muskrats need to be exterminated, because their digging activities are a threat to the stability of the piers and shores (HHNK, 2013A; Delfland, 2013B; HHSK, 2012; De Stichtse Rijnlanden, 2013B). According to HHNK and HDSR, muskrats together transport 13 wheelbarrows a year. Furthermore, a female muskrat is able to give birth to 18 babies in a year, and those newborns can have kids on their own within a year. Finally, the muskrat has few natural enemies in their habitat. According to both HHNK and HDSR these three facts makes it necessary to exterminate these animals (HHNK, 2013B; HDSR, 2013B). According to HDSR, the goal of muskrat-extermination is to keep the population of muskrats as small as possible, in order to minimise the digging-damage. They emphasise that muskrats preferably should be captured before they are able to multiply (HDSR, 2013C). The water board Delfland however additionally points at the fact that muskrats originally did not live in the Netherlands (Delfland, 2013B). AGV only mentions muskrats in a concept list, describing the animal as a rodent that digs in the shores and piers of rivers, brooks and ditches, which can weaken the shores and piers, with a collapse and a flood as a result (AGV, 2013D). Rijnland also only points at the types of threats to public safety (Rijnland, 2013A).

Rijnland is the only water board that is conducting a pilot regarding preventive measures for muskrat damage. The pilot, started in 2013, includes testing constructive measures at three locations in the polder Oudendijk (Rijnland, 2013B).



Figure 10. The water board areas of responsibility (from: Muskusrattenbeheer, 2013)

7.1.2 Administrative Council (AC)

Governors from the six water boards discussed the future of muskrat management in the AC. The chair of this council is also the chair from HDSR (R24). Since other governors in this council were not interviewed in this study, the AC is solely represented by the chair of the HDSR. It might be possible that among other BO members there were different problem and solution perspectives. However, it is assumed that the AC chair speaks on behalf of the majority of the AC.

The chair of HDSR explained that muskrats can cause damage due to their digging. He especially pointed out damage experienced by farmers, who see their cows sink in holes in the ground (R23). However, he emphasised that the exact amount of muskrat damage to dikes and embankments is insufficiently administrated. For him it is important that this will be studied as a part of the Veldproef (R23). The chair stated that there are limits to implementing preventive measures to piers and ditches, because they stretch out over thousands of kilometres. He is convinced that it is necessary to minimise the population of muskrats in order to prevent damage. He explained that this at the same time minimises animal suffering, because with a small population only a small amount of muskrats will be killed. The chair of HDSR and the AC believes that minimising the muskrat population is a type of war against the muskrat (R23). He explains that executing their “battle plan” well is important to prevent the situation to get out of hand (R23). He believes hunting is nothing bad, and rather something very primal to humans (R23).

7.1.2 Muskusrattenbeheer

At HDSR, the department Muskusrattenbeheer first executed the task of muskrat extermination for the province Utrecht. Now with the new policy, their working area includes the areas from the six water boards as visualised in figure 10. The field coordinator from Muskusrattenbeheer stated that he is convinced that at this moment their approach is still the best way to go (R25). However, he emphasised that it is a big disadvantage of his job that it involves killing animals (R25). For him it is important to minimise animal suffering, and according to him this can be done by managing muskrats at a low level of population. Keeping the amount of muskrats at a low level would prevent the need to exterminate many muskrats (R25).

The head of Muskusrattenbeheer explained the necessity of managing the muskrat population by pointing at the fact that the Netherlands is a culture landscape. According to her, leaving muskrats alone would essentially mean that humans have to give in, when it is their primary task to care for the interests of people (R24). She also states that it is important to minimise unnecessary animal suffering, for example by preventing accidental catches (R24).

7.1.3 Politics and Partij voor de Dieren (PvdD)

The majority of AB members are elected democratically every four years by means of the water board elections. The parties that take place in these elections come from one of the following categories: citizens, nature management organisations, landowners or business. Though they participate in the election, several seats are reserved especially for the last three groups, as they are said to have an extra high interest in the works of the water boards (Rivierenland, 2013). For example, the water board HHNK has 30 AB seats, three of which are secured for landowners (from LTO Noord), three for business (from Kamer van Koophandel) and one for nature conservators (from het Bosschap) (HHNK, 2013).

At AGV, Rijnland, HDSR and Delfland, the political party PvdD is seated in the AB. This party is the only one that explicitly states that they want to put an end to muskrat extermination in their program. In their election program they state that regardless of there not having any dike collapses as a result of muskrat digging, between 200.000 and 400.000 muskrats are killed on a yearly basis. They stress that the yearly costs of 31 million euros are more than the actual damage due to muskrats. According to them, the cruel, large-scale killing of muskrats cannot be justified (PvdD, 2008). Apart from their rejection to killing muskrats, the PvdD representatives at Rijnland and AGV stated that they are specifically against using the drowning cage (R17, R15). According to the first mentioned, muskrats experience stress for up to four minutes inside such drowning cages, which is not acceptable (R17). The PvdD believes people should not disturb wild animals, as far as possible. Animals need to be protected against poisoning, maltreatment and neglect (PvdD, 2008).

Instead of exterminating muskrats, the PvdD wants to take extra measures to ensure dike safety and study which types of measures are attractive and unattractive to muskrats. Furthermore, they plead for developing methods to detect diggings in dikes, which would make it possible to take timely measures. They propose making an inventory of dikes that are threatened by holes, to repair these dikes and to demotivate muskrats to dig in these dikes. The PvdD stresses that catching and removing muskrats can only be considered when all before mentioned measures fail and there is a threat to safety. They are guided by the principle of not exterminating animals, be they indigenous or exotics, unless there are weighty motives and no alternative measures (PvdD, 2008).

The PvdD representative from HDSR mentioned that several AB members from the organisation Water Natuurlijk are also very much against the current system of muskrat extermination and that she can count on at least two members from that party when it comes to putting an end to the extermination (R26).

7.1.4 Dierenbescherming

This organisation is already introduced as one of the actors in the policy network around the problem of goose nuisance. In case of the conflict with muskrats, Dierenbescherming emphasises that the necessity to kill muskrats in order to prevent damage has never been scientifically proven. According to them, there is no proven relation between the amount of muskrats and the amount of damage to dikes and shores. Also, they point at the fact that

there is no scientific proof for the assumption that to stop killing muskrats would lead to an explosive increase in the amount of muskrats. Next to the lack of scientific proof, Dierenbescherming notes that muskrat-extermination is a very expensive business: 34 million euros a year, which is 219 euros for every captured muskrat (Dierenbescherming, 2013D). They mention that muskrats are captured in cages under water, where they die after death agony that lasts for minutes. This is also the case for thousands of other animals that are accidentally captured in the cages, like ducks, moorhens and fish (Dierenbescherming, 2013D).

Together with the organisations Bont voor Dieren and Faunabescherming, Dierenbescherming wrote the report 'Op alternatieve wijze schade voorkomen', with proposals to prevent digging-damage in an animal-friendly way (Dierenbescherming, 2013D). The report describes measures to adjust vulnerable dikes and shores to prevent muskrats from digging, for example by creating slope shores; using a thick deck of clay; installing coconut-mats on waterways and using plastic chicken gauze. Additionally they propose better supervision of the quality of the dikes and shores with the help of sensors, which can identify the areas where adjustments are necessarily (Zandberg et al., 2011).

7.1.5 Faunabescherming

The introduction to the Faunabescherming can be found in the description of actors in the policy network surrounding goose nuisance. Regarding muskrats, the Faunabescherming believes that muskrats are not a real threat to the dike safety of the Netherlands, because according to the representative from Faunabescherming, muskrats do not dig in dikes but only in shores (R11). Faunabescherming believes the emphasis must be on preventing damage and not on exterminating muskrats. Just as Dierenbescherming, Faunabescherming points at the lack of scientific proof for the relation between the amount of muskrats and the amount of damage to dikes and shores. They would rather see money spent on structural prevention measures, instead of on capturing and killing the animals, which is an everlasting job, because the animals will continue to multiply (Faunabescherming, 2013B). The representative from Faunabescherming emphasised that the attempts to exterminate muskrats have been going on for 50 years now, and that it is not working out (R11). Faunabescherming worked on the alternative policy document together with Dierenbescherming and BvD.

7.1.6 Bont voor Dieren (BvD)

Bont voor Dieren, established in 1982 with the name 'Anti Bont Comité', is a foundation that fights for animals and against fur. They believe animals should not be killed to produce fur coats and consequently they want a ban on breeding and hunting animals for their fur. According to BvD, fur is an unnecessary and cruel product, because nobody needs fur for feeling pretty and being warm (Bont voor Dieren, 2013A). Their work is focused on education, media campaigns, research, societal discussion, juridical procedures and political lobby. BvD cooperates with other animal welfare organisations, such as De Faunabescherming, in the overarching organisation 'Coalition DierenwelzijnsOrganisaties Nederland (CDON)' (Bont voor Dieren, 2013A). Together with Dierenbescherming they worked on the alternative policy document for preventing muskrat digging-damage.

The representative from BvD explained that they want a study on not exterminating animals in a representative area in the Netherlands. This should give a better insight into the consequences and the population development (R27). Regarding animal welfare measures, BvD is not in favour of promoting the less-cruel killing methods. According to the representative from BvD, they strive towards a situation in which muskrats are not exterminated at all. Investing in innovative killing methods leads to the wrong focus. It might lower the pressure on the water boards to invest in alternative measures (R27). She explains that in this respect BvD is a more principle organisation than the Dierenbescherming, because the Dierenbescherming is usually more willing to get to a compromise (R27).

7.2 The interests of the involved actors

Following the approach in chapter 3, in figure 11 the occupation of the different actors with regard to people's responsibility towards nature and animals in specifically is visualised. It is clear that the AC has a management perspective focused on minimising the muskrat population. The executing organisation Muskusrattenbeheer shares

this point of view. As already became clear in the case of the geese, the involved animal advocacy groups have a more protective interest in the issue. In this network these opposite values create two different solution perspectives. The management of species perspective involves killing muskrats in order to minimise the population to decrease damage. The protective individuals/species perspective means taking measures to adjust muskrats' habitat, to minimise the population and/or to prevent damage.

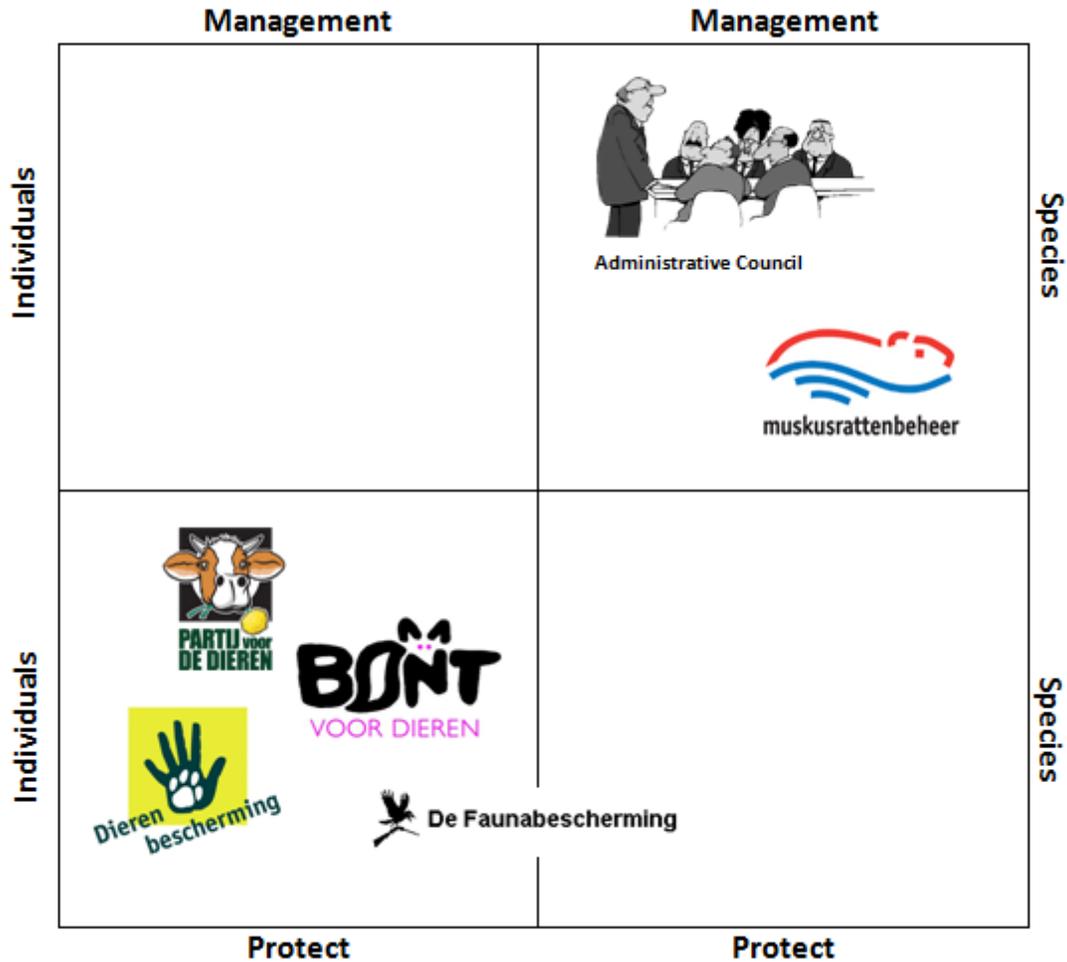


Figure 11. The focus of actors in the policy network surrounding muskrat nuisance

CHAPTER 8

MUSKRAT NUISANCE: POLICY NETWORK ANALYSIS

This chapter gives an analysis of the policy network surrounding muskrat nuisance. Two network characteristics are explored: the type of interaction between actors during the process and the distribution of power among the actors. The type of interaction is determined by giving an outline of important events and the relationships between pairs or coalitions of actors. Second, the power distribution is explained by looking at respondents' judgments about actors' power reputation. These two network characteristics make up a type of network, which can help understand the policy content. The outline of important events is visualised by providing several summarising time-lines in which the crucial types of interaction and power distribution are marked with bold text.

8.1 Important events and interaction

8.1.1 One 'Muskusrattenbeheer' on behalf of six water boards

Due to political developments in 2010 regarding the new Waterwet, various groups took preparation for the transfer of the task of muskrat management to the water boards. On the one hand, the governors of the water boards responsible for muskrat management gathered in the AC to discuss the future muskrat management (Muskusrattenbeheer, 2012). On the other hand, animal advocacy groups took the opportunity to share their vision on the problems and solutions of muskrat digging.

On 16 April 2010 in Lelystad, the Zoogdierenvereniging (mammal association) organised the symposium "Muskusrattenbestrijding kan anders!" (Zoogdierenvereniging, 2010). At this event, the current system of muskrat management was questioned and discussed. According to the head of Muskusrattenbeheer, this symposium produced input for the national field trial, the 'Veldproef' (R24).

Some months after the new Waterwet was accepted by national parliament on 23 November 2010, animal advocacy groups took the opportunity to present their view on the problems and solutions around muskrats. Since by law muskrat extermination is no longer a goal per se, Dierenbescherming, Bont voor Dieren and Faunabescherming published a report in February 2011 on how to prevent nuisance from digging activities from muskrats without killing the animals. They emphasised that the change in law as well as the shift of the task from the provinces to the water boards, created a chance to rethink the current policy of muskrat extermination (Zandberg et al., 2011). The report is a product of national meetings between different animal welfare organisations and two political parties (R11; R17). These people gather several times a year to discuss and make an inventory of the situation of muskrat management (R15), joining forces against the extermination of muskrats (R27). They call this their 'Muskusrattenoverleg' (muskrat council) (R15).

In their report "Muskusrat. Op alternatieve wijze schade voorkomen" they analyse 10 studies from the LCCM (Landelijke Coördinatiecommissie Muskusrattenbestrijding – "National Coordinating Commission Muskrat extermination") that aimed at determining whether killing muskrats with the current intensity is necessary and if possible alternative measures are available. In their report, the writers conclude that digging damage can never be completely prevented by killing muskrats. They elaborate on putting effort in intensive inspections and repair of fragile embankments and to invest in prevention measures. The writers believe that the current extermination is most certainly not ethically just and they wonder why muskrats are nevertheless killed. The writers attribute this to ignorance of board members in the province and the water boards and they point at the fact that the LCCM was founded in order to prevent damage by means of muskrat extermination and not by means of alternative, animal

friendly measures. Furthermore, they point out that there has never been a field experiment to research exactly what happens when animal friendly methods are implemented and muskrats are not killed (Zandberg et al., 2011). According to the writers, this is due to resistance of various parties with an interest in the issue. Several measures designed to prevent the animals from digging and causing damage have not yet been put into practice due to these factors. In addition to this report, the Dierenbescherming gave a talk about alternative to muskrat extermination in August 2011 at AGV and Rijnland (F. Kraaijeveld-Smit, personal e-mail communication, 25 March 2013).

Earlier in 2007, the LCCM already gave an assignment to the research agency Altenburg & Wymenga to design a study on the consequences of not exterminating muskrats (Bos & Tuenter, 2007). They recommended a field trial, that would create more knowledge regarding the expedience of muskrat extermination. With the new Waterwet and the accepted motion from the PvdD to conduct a research, the 'Veldproef' was further elaborated on by the LCCM (PvdD, 2011).

After the new Waterwet was implemented, the water boards decided to centrally organise the task of muskrat management, instead of performing the task at every individual water board. Because of practical reasons, six water boards in the mid-western part of the Netherlands on the one hand and four water boards in the river area on the other hand both created partnerships for muskrat management with respectively HDSR and Rivierenland (WSRL) as the executives (R16; R18; R21). This division was chosen after studying analyses of the desired amount of people per water board regarding efficiency (R20-1, R18). Besides, both HDSR and Rivierenland already had experience with managing muskrats on behalf of the provinces (R13). At first, the water boards from both areas had been involved in discussing the CAO prerequisites for the muskrat exterminators. The two executive water boards share the same logo and the same website for their management organisation Muskusrattenbeheer. The six western water boards were pioneers in creating a joint policy for future muskrat management (R22). The development is in line with recommendations from the consultant agency PriceWaterhouseCoopers, who elaborated on a business case with WSRL and HDSR executing muskrat management on behalf of the other water boards (PWC, 2011).

On 21 September 2011, the AB of HDSR accepted the executive responsibility of muskrats and coypu in the area of the six water boards (HDSR, 2011). With the outsourcing of muskrat management, the individual water boards are still responsible for preventing damage to state waterworks caused by muskrats and coypu, but the execution of muskrat management is transferred to HDSR (R18). Financial agreements on the distribution of contributions took place at the BO (R18; R21).

8.1.2 Creating a shared policy for Muskusrattenbeheer

Several respondents mentioned that it was important to create a common policy for the future of muskrat management at Muskusrattenbeheer (R10; R16) The policy advisor from Rijnland explains that a policy note was necessary in order to have a solid foundation for critical questions from the PvdD (R18). For the head Muskusrattenbeheer at HDSR, the goal of the policy note was to determine the responsibilities of Muskusrattenbeheer and to make clear what the benefits of working in a partnership with one executive organisation for six water boards are (R24).

At the AC, governors from the six water boards decided to create a joint policy note on the future system of muskrat management, which would next be discussed during a conference for all six AB's (R22). It was arranged in this way in order to create a less complex process while still including the AB's of the six water boards. In the regular system, every minor change by any one water board needed to be approved by the other five water boards, which was expected to lead to too much red tape (R22). Therefore the conference was designated as the opportunity for AB members to give their input (R22).

In order to jointly write a policy for the future muskrat management, an official workgroup was created. Every water board sent a deputy to this workgroup, mainly policy advisors, but also several people with a background in muskrat management (R16; R22). The head of HDSR and the field coordinator of Muskusrattenbeheer were involved in this workgroup (S. Groenbos, personal e-mail communication, 22 March 2013). This group of people worked on the policy note steered by the governors of the six water boards (R22; R24).

The first step was to look at the current system of muskrat management of the Noord-Holland and Zuid-Holland provinces (R16). According to the policy advisor of Delfland, the water boards were in a difficult position (R20-1). He explained that the provinces had always focused on reducing the population of muskrats to a minimum. However, the water boards had received the management task with the explicit message that extermination was not a goal per se (R20-1). Besides, the policy advisors were also confronted with various research outcomes that seemed to be contradicting each other (R20-1). The policy advisor of Delfland explained that with this uncertainty, it was too risky to stop exterminating muskrats, because it could have gone at the expense of human lives or a lot of damage (R20-1). That is why they decided instead to wait for the outcomes of further research (R20-1). More policy advisors stated that it was their main priority to continue the course of muskrat extermination (R14; R21) and that a radical new direction was no logical, defensible starting point (R16). HDSR's experience with management strategies was also mentioned as a reason to continue extermination as before (R16; R20-2). However, the policy advisor from HHNK attributed this to the fact that there was high time-pressure and disturbance among the muskrat exterminators. According to him, the outline of the content had to be invented in the first meeting. He stressed that this was not a suitable atmosphere to be very innovative (R14).

According to the policy advisor from AGV, every deputy brought their own wish list for the joint policy. However, overall there was a common idea of what should be included in the policy. Several respondents mentioned that animal welfare was an important focus among the water boards (R16; R18; R21). Even though at HHNK the PvdD was not represented in the AB, they also gave full support for this focus (R16).

The policy advisor from AGV stated that there was no disagreement on the course in muskrat management. Some disagreements were about the format and formulation of the text (R16) or about the depth and the scope of the note (R18). This was also mentioned by the head of Muskusrattenbeheer, who described the difference between very executive and very administrative oriented members of the working group (R24). She attributed this to differences in muskrat problems across different areas. According to her, in the Krimpenerwaard there has been lawsuits with farmers regarding muskrat damage, while HHNK had never really experienced any 'infections' (R24). As an example she stressed that the representative from HHNK worked at a higher aggregation level in comparison to the others (R24). The policy advisor from HHNK confirmed this by describing that he preferred the policy note to consist of main goals and policy aspects, instead of executive management and maintenance aspects (R14). Other disagreements were about the technical aspects of the management strategy, like what kind of catching standards to use (R21).

Between November 2011 and February 2012 the members of the workgroup gathered approximately once a month (R18). The policy advisor from HHNK remembered there to be three meetings, most of the other communication taking place by e-mail (R14). According to the policy advisors from Rijnland, AGV, and HHNK most of the writing was done by representatives from HDSR (R14; R16; R18). The others made comments on several concept versions of the note (R16). In December 2011 the group worked on their three concept version (S. Groenbos, personal e-mail communication, 22 March 2013). In addition, the respondent from HHNK stressed that representatives from HDSR worked on the last concept of the policy note without further content consultation with the policy advisors (R14). According to the policy advisor from Rijnland, in February 2012 the policy note was ready to be discussed at the conference (R18).

It can be noted here that the governors in the AC took a lead in coordinating a workgroup for the creation of the policy note. Therefore, this interaction is marked in bold text in the time line in figure 12. This homogeneous coalition of political governors and state officials had a clear aim: to continue current muskrat extermination in order to protect the embankments against damage from muskrat diggings. This process of working together towards the same ends can be characterised as a cooperative type of interaction.

When the concept version of the policy was finished, the document was presented to the members of the AB in the six water boards for acknowledgement before the conference. In the case of AGV, the concept document was discussed in a commission. The respondent stated that he gave a presentation about the content of the policy to the AB members (R16).

In April 2012 the Dierenbescherming noticed the concept policy and commented on it. After this, the PvdD worked on a reaction on the concept policy (F. Kraaijeveld-Smit, personal e-mail communication, 25 March 2013).

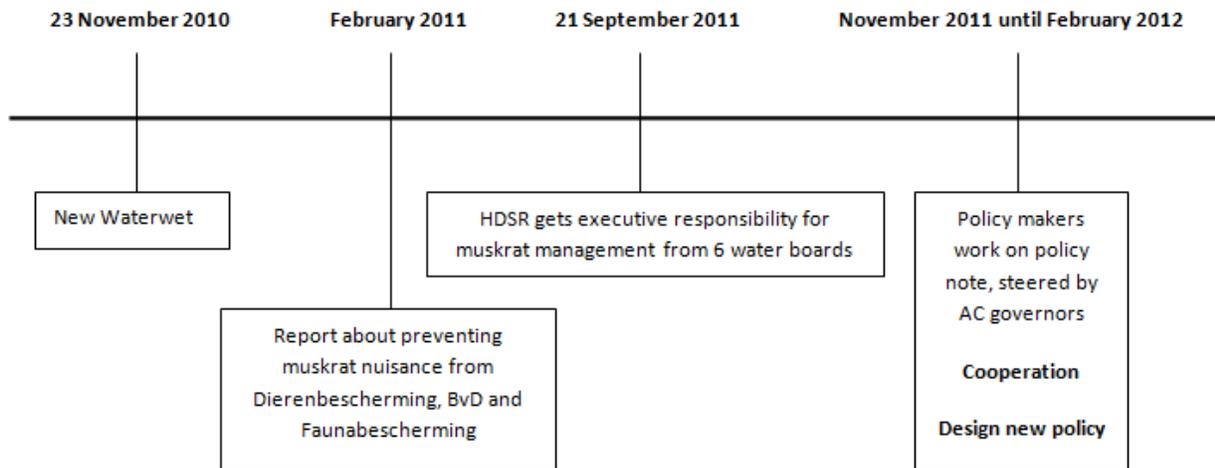


Figure 12. Time line 1 with important events in the policy process surrounding muskrat nuisance

8.1.3 Conference for the policy note for AB's on 13 April 2012

On Friday 13 April 2012 a conference took place in the fort Uitermeer in Weesp, organised by the communication advisor from HDSR (R22). The chair of HDSR explained that it is generally important for him to organise meetings gathering everyone with an interest in a certain issue. According to him, in the case of the muskrat policy, this related to the members of the AB of the six water boards (R23). He wanted to be open to everyone who had an interest in the issue of muskrats within the AB's, and create the opportunity for dialogue (R23). He emphasised on the one hand that this was necessary to sustain sufficient support and on the other hand to enable opponents to speak up (R23). In a preparative document for the conference on 3 April 2012 (S. Groenbos, personal e-mail communication, 22 March 2013), the goals of the conference were described as follows: the AB members understand the importance of one common organisation for muskrat management; the AB members can share their ideas and concerns on muskrat management with Muskusrattenbeheer; and the AB members agree with the policy starting points from Muskusrattenbeheer.

For the conference, a 15-minute introduction by the chair from HDSR was prepared, followed by a 25-minute presentation about the work of muskrat exterminators by the field coordinator from Muskusrattenbeheer. After this, all AB members were invited on a 60 minutes excursion in groups led by team leaders from Muskusrattenbeheer in order to experience the work in the field. Over the next 20 minutes, the policy note "Muskusrattenbeheer 2012-2015" was presented and finally there was 60 minutes reserved for questions and ideas from the AB members and to summarise and conclude the conference. The event was planned to have a lunch at noon. When reading the conference report, it seems that the organisers stuck to this order of events (S. Groenbos, personal e-mail communication, 22 March 2013).

From the six water, all AB members, around 30 to 33 people per water board, were invited to the conference (R22). According to the attendance list and the report on the conference, a total of 34 people signed up for the conference, 31 of which were AB members (S. Groenbos, personal e-mail communication, 22 March 2013). It was emphasised by the communication advisor of HDSR that the four PvdD representatives were relatively overrepresented in comparison to their presence at the AB's (R22).

After the outline of the policy note was presented, the PvdD representative from AGV first spoke on behalf of the PvdD about their desire to focus on dike safety rather than on muskrat extermination, and he handed over a report with comments and 19 recommendations for the policy note (de Vos & van Raan, 2012; S. Groenbos, personal e-mail communication, 22 March 2013). The field coordinator of Muskusrattenbeheer at HDSR described that here it became clear to him that the AB members from the PvdD were very disappointed that the strategy of Muskusrattenbeheer had not changed (R25). According to the policy advisor from the UvW, the PvdD had a lot of criticism that could have been prevented by Muskusrattenbeheer if only they had mentioned the Veldproef in this first version of the policy note. He believes this would have minimised the options for the PvdD to criticise the content (R13).

Others asked questions on why the focus was on catch registration rather than on damage registration. They requested information to be included on striving towards the goal of damage registration with a Geographic Information System (GIS) at the water boards (S. Groenbos, personal e-mail communication, 22 March 2013). Another point of discussion was the implementation of preventive measures for dike safety. Since Muskusrattenbeheer does not have the responsibility to secure dikes, a request was made to include the plan for Muskusrattenbeheer to actively advise the water boards on preventive measures in the policy note (S. Groenbos, personal e-mail communication, 22 March 2013). Furthermore, it was discussed why certain choices were made regarding catch targets. For clarity, the head of Muskusrattenbeheer promised to implement current results, targets and the final goal for every water board in the policy note (S. Groenbos, personal e-mail communication, 22 March 2013). There were also questions regarding the potential for Muskusrattenbeheer to manage other exotics; about the amount of muskrats in nature areas; about the potential help of anglers and nature managers in catching muskrats; about the financial effects of lower catches; about why muskrats in private waters are caught; and finally about possible revenues from commerce in fur or meat (S. Groenbos, personal e-mail communication, 22 March 2013).

Several questions led to a debate between the fieldworkers of Muskusrattenbeheer and the AB members (R23). The chair from HDSR moderated this part of the conference and made sure that everybody had the time to speak (R18; R23). The policy advisor from Delfland experienced the conference as an opportunity to get into dialogue (R20-1). The policy advisor from Rijnland stated that he valued the involvement of the muskrat exterminators at the conference. According to him, it was important that they shared their vision and their approach (R18). Also, he emphasised that for him the conference created a feeling of solidarity, because of the process of collectively outsourcing the task to HDSR (R18).

On the other hand, several respondents made critical remarks about the conference. The PvdD representative from AGV states that he would not define the meeting as a conference, but rather as an informative meeting (R15). This was also experienced by the PvdD representative from Delfland, who described the event as a presentation of the concept policy note with afterwards the time to ask questions (R19-1). According to him, there was no time for a discussion, since the event took just 2,5 hours in the morning (R19-1). Furthermore, the PvdD representative from Rijnland noted that the level of the event was very operational. According to him, there were many people from Muskusrattenbeheer (R17). Aside from comments from PvdD representatives, there was one other critical remark from the policy advisor from HHNK. He did not agree with the process of discussing the policy note at a conference. He would have preferred to see the topic being discussed within the six water boards, in the relevant commissions. According to him, water boards deal with major topics and he believed it was not appropriate to charter a theatre and invite all AB members just for the topic of muskrat management (R14). He stressed that this would have been more appropriate for big themes such as water safety, in which damage prevention would be a small aspect (R14). However, he also admitted that HHNK had a different position than other water boards since they did not have representatives from PvdD in their AB and as such muskrat management was not such a big issue at HHNK (R14).

Regarding the conference, it can be concluded that the representatives from the animal advocacy party PvdD clearly formed a coalition, but that they were alone in recommending a complete different policy course. The incompatible interests between the PvdD coalition and the governing coalition of the water boards seems to be a conflict type of interaction. However, most representatives gave input along the lines of the presented policy, thus working together

towards the same end. This predominant type of interaction can be characterised as a cooperative relation, which is also marked in the time line in figure 13.

8.1.4 Finalising the concept policy for muskrat management

After the 13 April 2012 conference the AB members' input was processed (R16; R20-1; R18; R22). According to the policy advisor from Rijnland, the workgroup gathered again (R16). However, the policy advisors from HHNK, Rijnland and Delfland stated that only the representatives from HDSR made adjustments to the concept version after the conference (R14; R18; R20-1). The respondent from Rijnland explained that it was important to show the PvdD representatives what had happened to their recommendations (R18). Accordingly, on the 7 of June 2012, the head of Muskusrattenbeheer sent a so-called 'compact memo' with the 19 PvdD recommendations and relevant reactions to the AC (van Meelis, 2012). Based on these recommendations, the policy note was adjusted regarding some formulations and an elaboration on several aspects (R18). According to the policy advisor of AGV the PvdD influenced the policy document in the sense that animal welfare signals are explicitly incorporated into the foreword (R16).

The new concept policy note was finalised by the governors in the AC (R18; R20-1) on 7 June 2012 (van Meelis, 2013). It was decided that every water board would follow their own procedures regarding the final submission of the policy and that at the very end HDSR would submit the policy to their AB (van Meelis, 2013).

In the introduction of the policy proposal to their AB, an argumentation regarding the policy adjustments was provided. This part provides an explanation as to why some recommendations at the conference were not included in the policy. For example, it is emphasised that it is not yet possible to give a performance indicator on digging damage, simply because due to a lack of registration there is not enough data on the presence of muskrats and damages. Moving on, sever projects are pointed out as a reaction to some recommendations. For example, it is once again emphasised that though the implementation of preventive digging measures is a responsibility of the individual water boards and not of Muskusrattenbeheer, the note pays attention to advising water boards on preventive measures and to researching the effectiveness of preventive measures in the Veldproef. Furthermore, in the future, HDSR will always have a paragraph on measures for digging damage when planning projects with pier improvements or when creating nature-friendly shores. Also, it is stressed that an assessment framework for preventive measures will be created.

8.1.5 Establishing the final policy 'Muskusrattenbeheer 2012-2015'

It took almost nine months before the policy was approved by all water boards. Only at HHNK and at HHSK a representative from the board immediately approved the final policy on 7 June 2012 (van Meelis, 2013).

At Delfland the final policy was discussed at the commission 'embankments' on 12 June 2012. The related governor had to point out the fact that all questions were already discussed at the conference on 13 April 2012 and were processed in the final note. Following this, the final policy was no longer open to discussion (van Meelis, 2013). In Delfland, the representative from the PvdD could not start another discussion in the commission regarding the final version of the policy, because it was said that they had already had their change during the conference (R19-2).

The 'Verenigde Vergadering' from Rijnland approved the final policy on 26 September 2012 (Rijnland, 2012). All parties appreciated the policy note. However, the PvdD submitted five motions: one was withdrawn, two were held on to, and two were rejected. The withdrawn motion was related to the population dynamics and the extent of extermination, which will be researched with the Veldproef. The motion that called for the development of a safety monitor and the motion that rejected one-sided communication about the issue, were hold on to, because the governor promised to discuss the two motions at the AC (van Meelis, 2013).

At AGV, the final policy was discussed in the commission 'advice and assistance' on 13 September 2012 (van Meelis, 2013). The idea was that if the commission agreed, the policy document could be embraced by the governors in the AC (R16). However, the PvdD asked to discuss the policy in the AB and announced 25 motions (R16). According to van Meelis (2013) they were 21 concept-motions. In the end, the PvdD presented nine motions on 11 October 2012

(van Meelis, 2013), regarding implementing preventive measures instead of killing the animals (R16). All nine motions were rejected by the AB (R16). Consequently, it was not necessary to make any adjustments to the policy note (R16).

After the final policy passed through the other five water boards, it was accepted in the HDSR commission 'Bestuur, Middelen en Zuiveringsbeheer' (Governance, Resources and Purification management) on 29 January 2013. Finally, on 27 February 2013 the policy was submitted and approved at the AB from HDSR (van Meelis, 2013).

Similar to the conference, the interest of the minority group PvdD was not compatible with the interest of the majority coalition. This conflict type of interaction however did not steer the policy content. Most representatives agreed with the main goals and measures of the new muskrat policy, and this can instead continuously be characterised as a cooperative type of interaction. This is shown in figure 13.

8.1.6 Animal advocacy around the establishment of 'Muskusrattenbeheer 2012-2015'

On 22 September 2012 the Faunabescherming wrote a letter to the members of the AB in the six water boards. In this letter they expressed their disagreement regarding the content of the policy. According to them it is justly stated in the policy that the organisation of muskrat management has the assignment to protect the embankments against digging from muskrats and coypu. The Faunabescherming embraces the fact that extermination of muskrats is not a goal. However, according to the Faunabescherming, it is not justifiable that the policy goal is to strive towards the smallest possible muskrat population and that only extermination measures are mentioned in the policy (Faunabescherming, 2012). In the letter it is explained that killing muskrats is not a solution, and that it will not be an effective measure. The rapport "Muskusrat; op alternatieve wijze schade voorkomen", written by Faunabescherming, Dierenbescherming and Bont voor Dieren is pointed out.

Two days later, the Dierenbescherming wrote a letter to the members of the AB in the six water boards (Dierenbescherming, 24 September 2012). They believe the creation of a policy to be a positive development. However, they mention three points of concern. On 16 October 2012, HHSK sent a response to the Dierenbescherming regarding their comments on the policy note. In this response it is stated that the policy note is already final and that HHSK is waiting for a paper version to discuss in their AB (HHSK, 16 October 2012).

On 19 October 2012 the PvdD sent a note to the water boards. They got the same response from HHSK that the Dierenbescherming had received. The response to these two animal advocacy groups, sent from individual water boards, was coordinated by HDSR (R. van der Werf, personal e-mail communication, 23 May 2013).

On 25 October 2012 several representatives from animal welfare groups gathered for the muskrat council "Muskusrattenoverleg". They discussed the finalised policy and explored the possibility of stimulating other water boards to create a policy as well. Furthermore, they talked about the Veldproef and decided to be prepared for the interim evaluation. It was concluded that the Veldproef could bring about interesting results regarding population size and damage. However, the representatives were still waiting for the assignment of a research area where no extermination would take place. A representative spoke about using the Performance Indicator for muskrat extermination, explaining that this indicator is focused on safety instead on minimising the muskrat population. Finally, the representatives talked about updating their website about muskrats with newspaper articles (P. Denekamp, personal e-mail communication, 29 April 2013). The next muskrat council was on 24 May 2013. At this meeting, the policy document from Muskusrattenbeheer was no longer a topic of discussion. The members of the council are now more focused on the Veldproef (R28).

The representative of PvdD in the AB of Delfland stated that after the finalisation of the policy, the PvdD still tried to discuss the system of muskrat management in their relevant commission. However, they often received the reply to wait for the research outcomes of the 'Veldproef' (R19-1; R19-2). The PvdD representatives are now trying to get an interim report of the result of the Veldproef (R19-1).

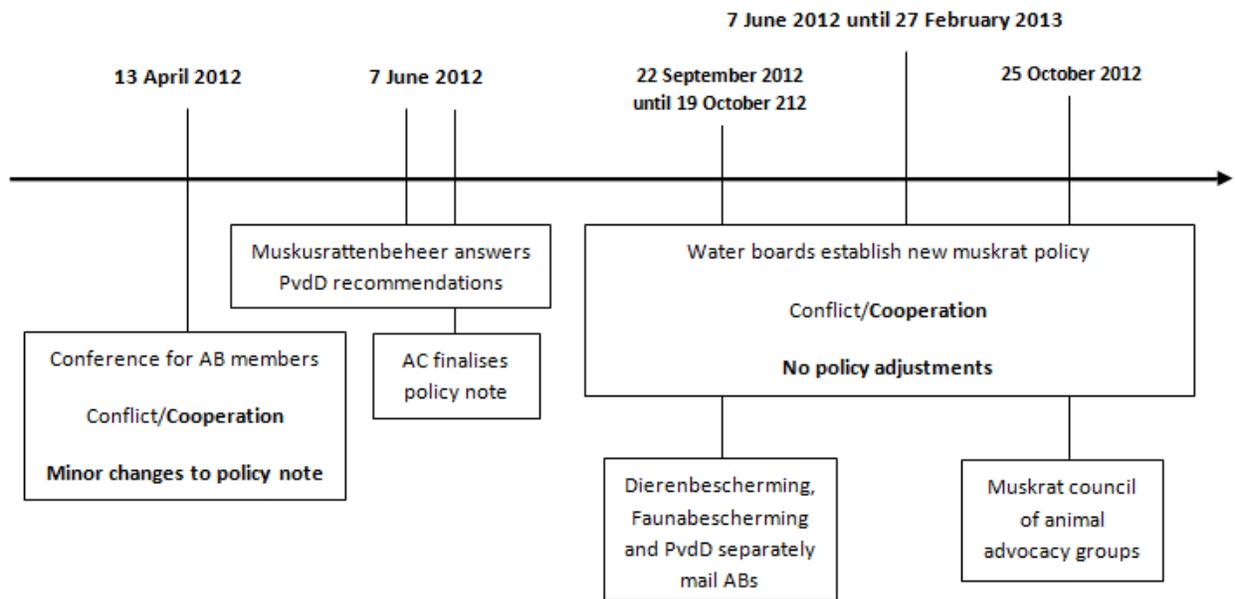


Figure 13. Time line 2 with important events in the policy process surrounding muskrat nuisance

8.2 Distribution of power

8.2.1 Water board politics

As already mentioned in Chapter 2, the water boards are a semi-democratic political constellation with elected and secured seats. Every water board has its own detailed political dynamics, which would have been interesting to study. However, as explained earlier on in Chapter 1, this is beyond the scope of this research. In addition, aside from the input on the conference, the water board politics did not bring many changes to the policy concept. The selection of respondents in this study are expected to have described a gross reflection of the water board politics.

Several respondents made clear that in every water board, the PvdD was a minority group in regard to their conception on muskrat management (R19-1; R17; R20-1). The PvdD representative from Rijnland explained that eight out of 31 seats at Rijnland are secured. On top of this, there is the VVD and the CDA. Together they represent the interests of farmers and corporations, which is an absolute majority. They are seated in the EB and the governors in the EB agree with each other (R17). This is confirmed by the policy advisor from Delfland (R20-1), who explained that the governing coalition always has a majority. As a result, the PvdD has a limited contribution. Many plans will pass, even if the animal party is against (R20-1). The communication advisor from Muskusrattenbeheer attributes this to the fact that the PvdD only represent a small group of people (R22). However, according to several respondents, the governing coalition takes into account the input from PvdD as much as possible (R20-1; R20-2; R23; R22). When something is easily implemented, it will be done. But when something goes against safety, or it costs much more, other parties are often critical. And when it comes to the actual decision-making, the PvdD is not decisive (R20-1; R22).

One part of the policy process was the creation of a workgroup with policy advisors from every water board. Even though all policy makers from the water boards aimed for continuing the policy as usual, two of them questioned the system of muskrat extermination. The policy advisor from HHNK emphasised that in his area it costs 2000 euros to catch one muskrat, and that he wondered whether it would not be more efficient to rather focus on damages and pay for damage compensation in the agricultural areas (R14). He stated that he never asked such difficult

questions in the process of creating the policy, because he was the nth policy advisor in the process, and it was not his main dossier. In addition, he expected that HDSR would go into the topic more thoroughly in the future (R14). The policy advisor from Delfland also questions whether it would not be just as efficient to focus on repairing damage and leaving the animals alone. He pointed out that the Veldproef would need to clear that up (R20-1). Overall, as described in the previous part regarding the structure of the policy network, the policy advisors carried out work as coordinated by the BO members who set the course of the new muskrat policy.

8.2.2 The power of fear

From the interviews it became clear that in two ways fear played a big role in continuing the main course of the muskrat policy. For starters, several respondents mentioned the fear for water breaches as a result of muskrat digging. As already mentioned in chapter 1, different sides disagree on the possibility that muskrat diggings can result in a collapse of dikes. However, it was often mentioned that governors were afraid to take the risk and possibly be guilty of a water breach (R11; R27; R10; R17). The representatives from BvD, Dierenbescherming and the PvdD representative from Rijnland furthermore explained that this fear had even extended to doing trials with not killing muskrats. According to them, this is why in the Veldproef there was no area included where there would be no muskrat extermination (R27; R10; R17). The power of fear for a water breach cannot be attributed to a certain actor within the policy network. Rather, it seems to be a product of risk uncertainty as a result of a lack of knowledge.

Secondly, aside from the fear for a water breach, there is the fear that farmers will take their own measures to exterminate muskrats (R13; R19-1; R21; R18; R17; R26; R25). The representative from the UvW did not expect the farmers to be happy with the 'objectbestrijding' (object extermination) aspect being a part of the Veldproef, because this meant that muskrats would only be exterminated near vulnerable embankments. As a result, he expects this to lead to a lot of digging at grassland and in shores in the future (R13). He describes the possibility that farmers themselves would start exterminating muskrats if water boards refused to take action. It would be a legal form of damage control, protecting their property against digging (R13). He wondered whether this would be conducted in a careful way, with as little suffering as possible, as is now the case at the official organisation. Both the policy advisor from UvW and the field coordinator from Muskusrattenbeheer explained that the official organisation works with a Code of Conduct. It is questionable whether farmers would go and do the same (R13).

The policy advisor from Rijnland also expected vigilantism by farmers to take place: sometimes more animal friendly, sometimes less animal friendly (R18). According to the PvdD representative from Rijnland, the animal suffering could not be overseen anymore. He expected farmers would choose the cheapest extermination option, like using rat poison (R17). The PvdD representative from HDSR pointed at a possible usage of malfunctioning jams that would not immediately kill the animal, but would instead create a situation of double suffering due to pain from the jam and from suffocation (R26). The field coordinator from Muskusrattenbeheer furthermore pointed out that farmers might use drowning cages in a wrong way, by placing them half way down the water. This way, it might take three to five days before a captured muskrat dies (R25).

According to the chair of HDSR and the field coordinator of Muskusrattenbeheer, in general farmers are glad that muskrats are being exterminated (R23; R25). The chair of HDSR explained that on a daily basis farmers experience muskrat damage on their land, leading for example to cows sinking into digging holes (R23). The field coordinator from Muskusrattenbeheer furthermore emphasised that farmers can be very angry when they believe muskrats are not well exterminated (R25). This experience, together with the fear that farmers will take their own measures to exterminate muskrats, put farmers in a strong power position. However, the extent to which farmers use this power position within the water board politics is not researched in this study.

8.2.3 Animal advocacy groups

Even though the PvdD has a minority position within all water boards when it comes to their point of view on muskrat management, several respondents did ascribe a certain power to the party. It is said that due to the PvdD, there is now attention for animal welfare in the policy note (R20-1; R20-2) or for finding ways to move towards a

different system that is still safe (R18). The policy advisor from HHSK stated that the PvdD changed small details in the policy note, like speaking in broader terms of muskrat ‘management’ instead of muskrat ‘extermination’ and an emphasis on animal friendly jams (R21). Also, according to the policy advisor from AGV, the recommendations from the PvdD at the conference are emphatically taken into account in the foreword of the policy note (R16).

Aside from minor influences on the policy note, respondents mentioned that the PvdD had an influence on the Veldproef (R13; R26). Even though the Veldproef is actually not a part of the policy ‘Muskusrattenbeheer 2012-2015’, it is a side-project mentioned in the policy note. The PvdD representative from AGV stated that the PvdD created enough ‘hooks’ around the topic of muskrat management for them to be able continue asking questions. Since by law muskrat extermination is not a goal anymore, this creates more opportunities to push for preventive measures (R15). In order to keep trying to influence the policy process, the PvdD tries to grasp every opportunity for change that comes by to ask questions or discuss the topic of muskrats (R19-1; R17). As a result of this perseverance, the topic is a point on the agenda (R19-2; R17). But since the water boards are waiting for the results of the Veldproef, often the recommendations or questions from the PvdD remain unanswered (R15; R19-2). At Delfland, the representatives from the PvdD several times proposed including preventive measures against muskrat digging at commission meetings about for example an investment plan for pier reinforcement or improvement. However, every time it was rejected with the argument that they had to wait for the Veldproef (R19-2).

The PvdD representatives from HDSR and Rijnland stated that they are glad that the Veldproef is being conducted. According to them it is useful that damage registration is a part of the trial (R26; R17). However, all PvdD representatives think it is unacceptable that there is no area included in the Veldproef where no extermination takes place (R15; R17; R19-2; R26). In addition, the PvdD representative from Rijnland emphasised that in the 3 years of conducting the Veldproef, muskrat management will continually be aimed at exterminating (R17). The head of Muskusrattenbeheer explains that is no good to interfere with a study while it’s conducted (R24). This way the political possibilities for the PvdD are restricted to sporadic remarks during commission meetings (R19-2). It is emphasised by the PvdD representative at Delfland that at this point the Veldproef is the highest thing feasible for the PvdD. According to them, at least something is set in motion with the Veldproef (R19-2).

Next to the involvement of the PvdD with four of the six water boards, the Dierenbescherming, BvD and Faunabescherming also cooperated to influence the decision making process by means of a report, several letters and presentations. However, when analysing the statements from respondents regarding the power of this group of animal advocates, it becomes clear that nobody assigned them a certain influence regarding the new muskrat policy. However, more generally, the Dierenbescherming is mentioned as having contributed to the development of the Veldproef (R20-2; R13; R22; R19-2; R15). Furthermore, the respondent from the Dierenbescherming stated that she was directly involved in the set-up of the Veldproef and that she believes it to be a positive development that the water boards are investing in such a national study (R10).

8.3 Type of network structure: conclusions

The line of events made clear what interactions took place during the policy making process and it uncovered how the interactions between pairs or coalitions of actors influenced the final policy content. The most important interactions that clearly had an impact on the main agreements of the policy ‘Muskusrattenbeheer 2012-2015’ were visualised in bold text in the time lines. Regarding the line of events it can be stressed that the cooperative interaction between policy advisors and between governors of the water boards, and later on between representatives at the conference, are responsible for the main course of the final muskrat policy.

Next, empirical evidence and actors’ power reputation together shed some light on the distribution of power within the policy network. It is clear that the first phase of the policy making process was dominated by the governors in the AC who coordinated the workgroup with policy advisors. This homogeneous coalition of state officials determined the course of the future muskrat policy. Throughout the conference and until after the policy note was finalised, this “policy monopoly” was maintained. From the power analysis it appeared that the continuing extermination of muskrats could be partly explained by a general fear for vigilantism by farmers. However, it is

unclear whether farmers use this power position in the water board politics. Within the water boards the PvdD minority group is attributed low power, only succeeding in influencing small aspects of the policy. However, both the PvdD and the coalition of three animal advocacy groups are attributed the power of enforcing the field study Veldproef and the future elaboration on preventive measures.

All in all, it can be concluded that the power distribution in the policy network is predominantly concentrated around the governors in the AC on muskrat management. This characterises the distribution of power as concentrated, rather than fragmented. When combining this concentration of power with the cooperative type of interaction, the typology of network structures by Adam and Kriesi (2007, p. 135) as presented in table 5 shows that the policy network around “Muskusrattenbeheer 2012-2015” has a dominant network structure of *hierarchical cooperation*. With this network typology, the policy is expected to have a low potential for change and to maintain the status quo. This is in line with the fact that the animal advocacy organisations did not influence the main course of the policy. The concentrated degree of power and the cooperative interaction within the policy network created an unfavourable situation for animal advocacy groups to enforce radical change in future muskrat management.

Distribution of power	Type of interaction		
	<i>Conflict/competition</i>	<i>Bargaining/negotiation</i>	<i>Cooperation</i>
<i>Concentration</i>	Dominance -- Moderate potential for rapid (serial) shift	Asymmetric bargaining -- Low to moderate potential for incremental change	Hierarchical cooperation -- Low potential for change - maintenance of status quo
<i>Fragmentation</i>	Competition -- High potential for rapid (serial) shift	Symmetric bargaining -- Moderate to high potential for incremental change	Horizontal cooperation -- Low to moderate potential for change -maintenance of status quo

Table 5. Predominant type of network structure in the policy network around goose nuisance

CHAPTER 9

COMPARISON OF THE TWO CASES

In this chapter the two studied policy networks are compared to each other. This analysis makes it possible to answer the question: "What similarities and differences can be found in the policy processes of both cases in regard to the network characteristics?". The two cases combined shed some light on the explanatory power of the policy network structures regarding the incorporation of animal welfare measures in policy on human-wildlife conflicts. More specifically, the cases reveal the position of animal advocacy groups within the network structures.

9.1 Comparing the backgrounds

Even though comparing a goose policy network to a muskrat policy network seems like comparing apples and oranges, there are three solid reasons for studying both of them. First of all, they were both concerned with human-wildlife conflict. Second, at the time of starting this research project, they were the only two that recently established a policy note. And third, animal advocacy groups were generally unsatisfied with both the final policies. In order to understand more of the complex policy networks surrounding human-wildlife conflict, these two cases were supposed to describe the network structures and explain the policy content.

It soon became clear that the policies developed out of a different urgency. The policy network around goose nuisance was a result of high dissatisfaction among the different stakeholders regarding the effectiveness of the former safe-zone policy. The policy initiative for muskrat management came forth out of a shift in task responsibility from the provinces to the water boards. In the latter case, there was disagreement on the effectiveness of the former policy. In both cases there was the opportunity to rethink former policies and for animal advocacy groups to put forward their recommendations. However, in comparison to the geese network, the muskrat policy came about with more pressure due to time limitations.

In former policies to reduce goose nuisance, the focus was divided between killing or dislodging geese and allowing them in certain safe-zone areas. More than 10 years ago a policy was in place that banned shooting and compensated aggrieved farmers. Later policies were again focused on the combination of killing and allowing. Former policies to reduce muskrat nuisance were only centred around extermination and digging damage was not well registered over time. When comparing these policy measures to the possible relevant solutions to unbearable human-wildlife conflict by Macdonald & Sillero-Zubiri (2004), as described in chapter 1, it can be concluded that most measures were aimed at controlling the problematic species with lethal removal, and some were focused on compensating the aggrieved people. This is also true for the two new policies. The suggestion from Macdonald & Sillero-Zubiri (2004) to raise people's tolerance towards wildlife, is found in neither one of the cases. Raising tolerance, for example by educating people about the animals and about risk judgement, could soften people's judgement, or make them more realistic. For the goose and muskrat cases this seems to be a difficult task. Regarding muskrats, there is no risk certainty. Regarding geese, on the contrary, there is a clear damage history. Also, it is unclear who would be the educator in both cases.

5.2 Comparing the involved actors

The two networks differ a lot in their actor composition with regard to the type of actors involved and their interest in the issue. While the network surrounding muskrat nuisance mainly existed of governmental actors, the network surrounding goose nuisance was foremost composed of non-governmental organisations. In the first mentioned there were six water boards with each their own political constellation, of which one also had an executive

extermination department. Aside from the water boards, three animal advocacy groups took part in the network. In contrast, the network around goose nuisance was characterised by three agricultural organisations, three nature management organisations, one hunters organisation, three animal advocacy groups and one governmental organisation.

Within the networks, these different types of actors also lead to a variety of actors' interest in the issue. The majority of the involved actors in the muskrat network were in favour of continuing the former muskrat policy with muskrat extermination as the central means to ensure safe dikes. In four out of six water boards there was a minority party that desired a policy without exterminating muskrats, which would rather focus on dike reinforcement and monitoring of holes. Their view was shared by three animal advocacy groups, which places these actors together in a minority position. This clear minority was not the case in the geese network: five stakeholders wanted to solve the problem of goose nuisance by reducing the population with killing methods, while six of them preferred a situation in which alternative measures would decrease agricultural damage. However, within the latter, three nature management organisations with a history in employing hunters on their lands were not principally against killing animals.

The variety in solution perspectives can be related to the actors' focus on either management or protection of animals and on either individuals or species. It is interesting to notice that in both networks the actors in policy monopolies are focused on managing species, which is the exact opposite of most animal advocacy groups, that are concerned with protecting individuals. As described in chapter 1, Heberlein (2004) also pointed out the many stakeholders involved in human-wildlife conflicts. According to him, the different perspectives can be related to the divide between urban and rural interests and between values of using or protecting natural resources. His remark that human-wildlife conflicts have become primarily people-people conflicts, seems to be very much true for the two cases in this study.

The divide in actor's values is especially interesting when looking again at the "wildlife value orientations" that were described in chapter 1. According to Jacobs (2007), inhabitants of the Netherlands are predominantly oriented at wildlife according to the "mutualism" value. This is a focus on trust between humans and animals and on animal rights. However, since the new goose and muskrat policies are mainly created by organisations that advocate the interests of people above those of animals, these findings are not similar. Rather, the dominant value in both policy networks seems to be "materialism", which is the belief that wildlife exists for human use and that wildlife welfare is subordinate to human welfare.

The elaboration on actors' interest in both cases revealed differences in interests among animal advocacy groups. Although all animal advocacy groups are concerned with protecting animals, some believe this is important at an individual level, while others focus on species and natural life-cycles. Aside from this, the animal advocacy groups differ in their approach to influence the decision-making process. As the director from the Vogelbescherming took part of the policy monopoly and made compromises, the representative from Bont voor Dieren does not even want to promote less animal unfriendly killing methods. The former believes that with the compromise many lives are saved, but the latter believes that compromises move the attention away from not killing at all. These different points of view can make a huge difference when it comes to interaction in decision-making processes, as became clear when exploring the network structures.

5.3 Comparing the network structures

The variety in actor types stretches out to differences in important events and interactions. The muskrat policy was created by policy makers from the water boards, coordinated by the AC governors from the six water boards. Next, it was criticised by the AB members at a conference, and finally the water boards accepted the policy. In contrast to this governmental procedure, the goose policy was created by a coalition of non-governmental organisations, consisting of one animal advocacy group, one hunting group, three nature management organisations and three agricultural organisations. After the hunting organisation left the coalition and the involved governmental body joined the network, the policy was established.

Although the lines of events were very different, the dominant types of interaction between the involved actors are more similar. In the network surrounding muskrat nuisance, there was some conflicting interaction between the animal advocacy groups and the governors from the water boards. However, the main type of interaction was the cooperation between AB members, AC governors and the employees at department Muskusrattenbeheer. Since the degree of power was concentrated at the AC governors, who set the course of the new policy, and the predominant type of interaction was cooperative, the main network type was *hierarchical cooperation*. This main type of network structure was also valid for the network surrounding goose nuisance. Here, the degree of power was mainly concentrated at the agricultural organisations and at the animal advocacy organisation Vogelbescherming. Furthermore, the predominant type of interaction was cooperative between the involved actors in the G-8/7 coalition. Aside from this similarity in the type of network structure, the network surrounding goose nuisance can additionally be characterised as *symmetric bargaining*, which characterises the negotiation process with a shared degree of power between the Vogelbescherming and the KNJV. The predominant types of network structures are presented in a summarising box in figure 14.

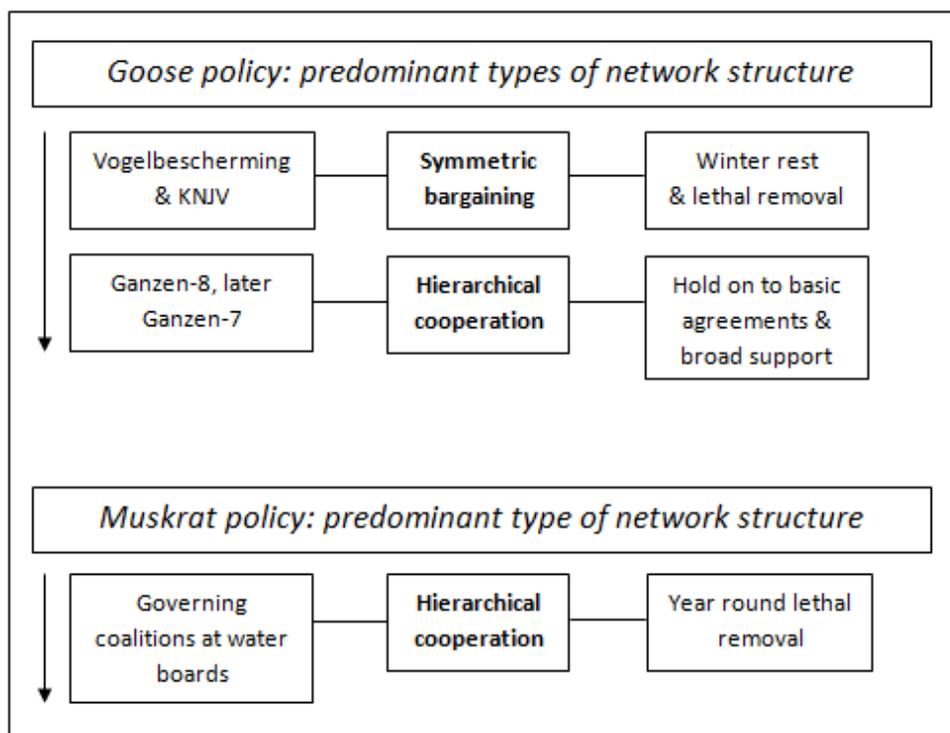


Figure 14. Summarising box with the predominant types of network structure in the two policy networks

From the asymmetric bargaining type of network structure it was expected to see a low to moderate potential for incremental change, while for the hierarchical cooperation type of networks structure the potential for change was expected to be low with probably a maintenance of status quo. Both expectations were found in the results. In case of the *symmetric bargaining* type of network structure, the Vogelbescherming had the change to enforce winter rest. In the predominant *hierarchical cooperation* type of network structures, animal advocacy groups did not succeed in influencing the main policy content. Along these lines it can be concluded that the types of network structures can explain the policy decisions regarding animal welfare measures. On top of these network structure results, there is more to say about the position of animal advocacy groups in the two studied cases.

5.3.1 The position of animal advocacy groups

In both cases there was one animal advocacy group involved in the dominant decision making coalition. In case of the muskrats this was the PvdD, and in case of the geese it was the Vogelbescherming. The involvement of the PvdD in the four AB's led to changes to the policy note, however, it did not influence the main course of the policy. Whereas the involvement of the Vogelbescherming was decisive for the course of the goose policy. Because of their willingness to make a compromise, hibernating geese are protected against shooting and disturbance during the winter.

The other animal advocacy groups were excluded from the policy making process in both cases. This meant that they were limited to sending letters with their recommendations and expressing themselves in press releases. The efforts from the Dierenbescherming did not directly influence the policy note, but it did result in their involvement in the national field trial the Veldproef. In the case of the geese, the animal advocacy groups that were not a part of the actual decision-making were all highly dissatisfied with the final policy. They not only dislike the main measure of killing geese, but they are also disappointed that alternative measures were not guaranteed in the final policy. In the case of the muskrats, those groups were also dissatisfied with the final policy, but some were less dissatisfied due to the fact that they appreciated the Veldproef.

As was described in chapter 1, according to Garner (1998) the influence of animal protection groups depends on several aspects. He mentioned being transparent, for example with advisory reports. In both cases the involved animal advocacy groups published reports with their recommendations and argumentation. He also pointed out that public pressure is a valuable tool in bringing about policy change. This can be underlined by the fact that in the policy network surrounding goose nuisance actors were afraid of negative publicity, especially from the Faunabescherming. However, overall the efforts of animal advocacy groups to reach the public through media attention do not seem to have influenced the main policy content. Garner (1998) also stressed that the unity of the animal movement and the extent of cooperation between different groups is of importance to their influence on the policy output. In both the goose and muskrat cases the close cooperation between animal advocacy groups did not lead to a rapid shift in the new policy. It could be stressed that in the case of the geese, there was no unity of the animal movement anymore, because of the preparedness to compromise of the Vogelbescherming. The fact that sectoral interest predominantly have had overriding influences in the cases of the studies from Lyons (2011) and Garner (1998), can also be found to a certain extent in the two cases of this study. In case of the muskrats, the agricultural sector and corporations have secured seats at the water board government. Also, there is a certain fear towards farmers and their potential to resort to vigilantism. In case of the geese, almost half of the members in the policy monopoly were agricultural organisations. However, this study does not provide enough evidence for claiming that this sector has structural advances.

It is clear why the involved animal advocacy groups were dissatisfied with the two policies. In both cases their ideal solution did not include killing animals. When looking at the two policies, it can be concluded that the other actors did make an effort in describing how they take animal welfare measures into account in the policy. The goose policy emphasises the wellbeing of hibernating geese in the Netherlands, and the involved actors decided that killing geese with CO₂ is the least animal-unfriendly method. The muskrat policy focuses on the goal of minimal animal suffering by managing muskrats at a low population level, and it mentions killing methods with a shorter suffering time. Nevertheless, both policies are characterised by massive killing. Alternative measures that focus on preventing geese or muskrats to breed or to create damage are not concretely elaborated on as part of the policies. In the case of the muskrats, these preventive measures are ascribed to the responsibility of the individual water boards. Also, the Veldproef is often mentioned to possibly clear up several uncertainties and disputes. In the final goose policy, preventive measures are not at all mentioned. During the interviews it became clear that many actors are not convinced that these measures actually work. They explained that these measures will be elaborated on in the 'toolbox'. By comparing the cases of the muskrats and the geese, a pattern in human-wildlife policy development becomes clear. See figure 15.

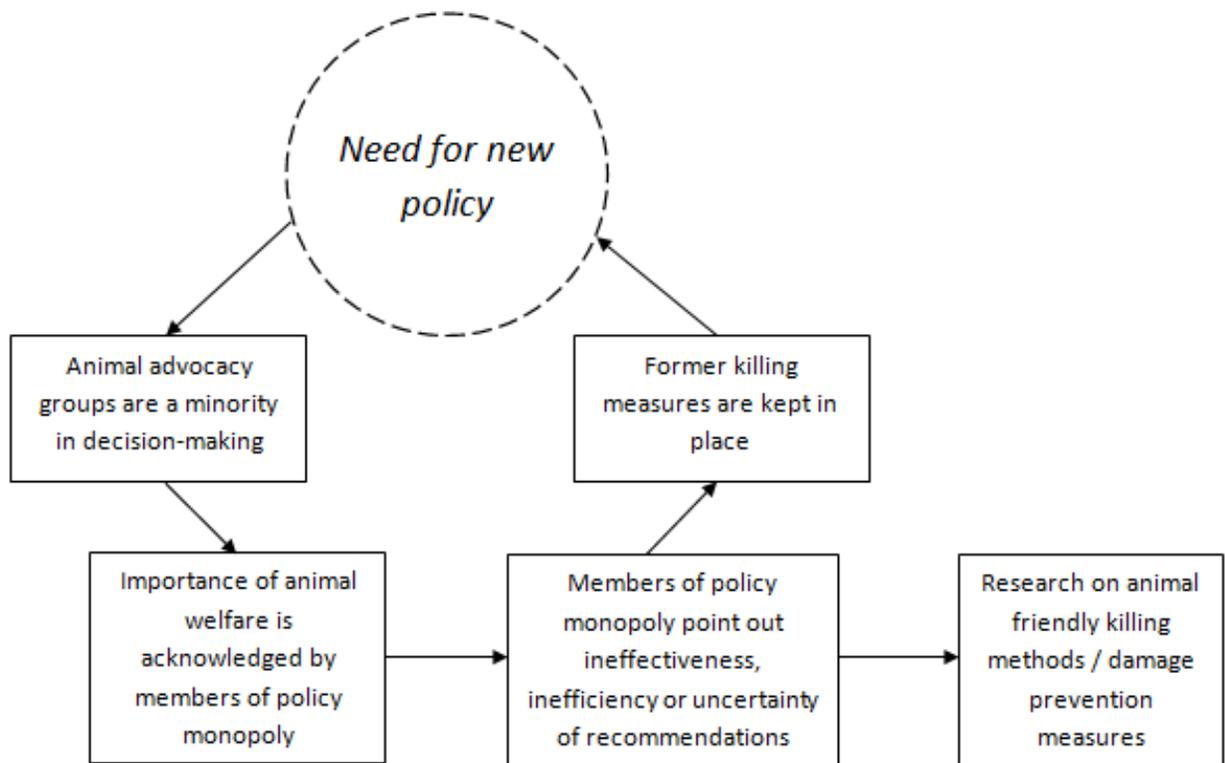


Figure 15. Recurring pattern in human-wildlife policy development: the cases of geese and muskrats

The comparison of the two cases leads to the conclusion that animal advocacy groups are included in the policy making process to a minimal extent. The included groups are a minority in decision-making. Due to the influence of animal advocacy groups there is attention for animal suffering, however, concrete measures regarding habitat adjustments are not incorporated in either one of the policies. Rather, the new geese and muskrat policies are both holding on to their former solution, which is reducing the population by killing animals. It is a hypothesis that this pattern in human-wildlife policy development will continue to lead to conservative policies. It needs to be studied to what extent further research on animal friendly killing methods or on damage prevention measures really contributes to the implementation of these measures. Gaining knowledge might lead to more certainty, but it could just as well evoke more questions and the need for further research.

CHAPTER 10

CONCLUSION AND DISCUSSION

10.1 Conclusion

It was already stressed by Sillero-Zubiri & Laurenson in 2001 that “the best we can hope for may be an uneasy tolerance” for the conflicts between humans and wildlife. In order to get to such an uneasy tolerance, and engage in a more respectful treatment of animals, it is necessary to take into account the interests of animals when creating policies surrounding human-wildlife conflict. The policy area of human-wildlife conflict has become very complex as a result of the amount of advocating groups involved and the variety of their interests. In order to increase the understanding of this policy area, in this study the two most recent policy processes surrounding goose and muskrat nuisance were explored by means of a policy network analysis. Since several animal advocacy groups in the two policy networks were dissatisfied with the two policies, this study is specifically focused on explaining the results regarding animal welfare measures in the two policies based on the policies’ network characteristics.

Hoping for an uneasy tolerance of human-wildlife conflicts is still relevant to the situation in the Netherlands, where most people do not seem to be willing to share their lives with geese and muskrats. In both cases, most animal advocacy groups were dissatisfied with the final policies, because lethal removal is still the main focus. Their solution was centred around preventive measures that would decrease the animals’ breeding opportunities or prevent them from doing damage. This came forth from their focus on protecting animals, which is in contrast to all the other involved actors with a managerial starting point. However, in the goose policy, the welfare of hibernating geese was safeguarded and the amount of animal suffering was taken into account when choosing killing methods. In the muskrat policy, the importance of animal welfare was emphasised by minimising the muskrat population and studying killing methods that are less animal unfriendly. These results regarding animal welfare measures in the two policies can be explained by the policy network characteristics.

In the policy network surrounding goose nuisance, a variety of actors was involved: nature management organisations, agricultural organisations, one hunting organisation and animal advocacy groups. The policy was first outlined by the Vogelbescherming and KNJV in a negotiating interaction in which both organisations accepted the other organisation’s measures with reluctance. Here it was decided that lethal removal would be a measure to reduce the goose population and that hibernating geese would be protected in the winter. This negotiating interaction with a shared degree of power, is called *symmetric bargaining* according to the types of network structures by Adam and Kriesi (2007, p. 135). It is characterised to have a moderate to high potential for incremental change, which is in line with the fact that the Vogelbescherming enforced a new measure of winter rest in comparison to previous policies. Next, the new policy surrounding goose nuisance was designed by a coalition of three nature management organisations, three agricultural organisations, one hunting organisation and one animal advocacy group. This G-8 (later G-7, when the hunting organisation left the coalition) used the Mutual Gains Approach, leading to a cooperative interaction between the actors. Within this cooperating coalition, the degree of power was centred around the agricultural organisations and the Vogelbescherming. This was not an optimal situation for the excluded remaining animal advocacy groups to exercise pressure, because this *hierarchical cooperation* type of network structure is expected to have a low potential for change or to maintain the status quo. The policy making process surrounding goose nuisance underlines this relation between a hierarchical cooperation type of network structure and a maintenance of status quo. This can be seen by the fact that no important changes were made anymore to the main decisions regarding animal welfare measures in the policy.

The policy network surrounding muskrat nuisance consisted of many governmental actors, because the policy

design took place at the six water boards in the mid and west of the Netherlands. The six governments each have their own political dimensions and in four of them there is an animal advocating party present in the AB. Another actor related to the water boards is the executive organisation for muskrat extermination, which is a department from one of the water boards. Apart from the water board actors, there were three animal advocacy groups in the policy network. Most of the policy decisions were made by the AC and elaborated on by the policy makers in the workgroup. This coalition of government actors can be seen as crucial in establishing the course of the muskrat policy. Even though there were conflicting interactions between the opposing animal advocacy groups and the governing parties, the predominant type of interaction in the water board politics and at the muskrat conference was cooperative. Since the degree of power was centred around this governing coalition, the animal advocacy groups did not manage to radically change the main measures in the policy. This is characteristic for the *hierarchical cooperation* type of network structure, which is expected to have a low potential for change or a maintenance of status quo. However, the presence of the animal advocacy party in four of the water boards and the animal advocacy groups in the policy network does seem to have influenced the decision to study less animal unfriendly killing methods.

Apart from explaining the policy decisions regarding animal welfare measures in the two studied policies, the exploration of network characteristics also revealed a pattern in decision-making when comparing the results of the two cases. In both cases the involved animal advocacy groups are a minority in the decision-making coalitions. Their recommendations are valued as ineffective, inefficient or uncertain and as a result the main measures of the former policy are kept in place. The importance of animal welfare is acknowledged by the governing actors, however, concrete alternatives to killing are not elaborated on in the new policy. Rather, in order to gain more knowledge on the effectiveness or efficiency of the alternative measures, studies are conducted. This study concludes with the hypothesis that this is a recurring pattern in human-wildlife decision-making, repeatedly leading to conservative policies.

10.2 Discussion

It seems interesting to start with a reflection on the just mentioned final hypothesis that followed from comparing the policy network analyses. The proposed recurring pattern most certainly needs to be studied in other cases of human-wildlife conflict in order to find out whether it is truly a general development around this topic of decision-making. Next to improving the reliability of the model, it is also important to elaborate on its different phases. For example, the reasons for not adopting alternative measures are divided between ineffectiveness, inefficiency and uncertainty. These are not very refined reasons, because the detailed content of actors' disagreements was not a topic of this study. Nevertheless, understanding these disagreements might be a valuable addition to the policy network analysis. This could lead to an even better understanding of the implementation of animal welfare measures in human-wildlife policy.

As a result, it could be argued whether another type of analysis would have been more suitable for this study. However, it was during the course of the study when it became clear that a lack of information on the one hand and disagreements on available information on the other hand, played a role in the decision-making process. Policy network analysis was still expected to be a good tool in explaining policy content and it was also not a realistic option to extend the study with an extra analysis. Subsequently, it needs to be emphasised that an additional study on the role of knowledge and uncertainty in human-wildlife conflicts would contribute to the understanding of this complex policy area. In comparison to policy network analysis, the Advocacy Coalition Framework does include this role of technical information in analysing policy decision-making (Sabatier and Weible, 2007). It deals with problems involving "substantial goal conflicts, important technical disputes, and multiple actors from several levels of government" (Hoppe and Peterse 1993, from: Sabatier and Weible, 2007). Using this framework might reveal how different coalitions of actors use information to empower their goals. It could explain how involved actors estimate the severity of risks and the effectiveness of alternative, preventive measures. After studying the types of interaction and the distribution of power in the policy networks, these aspects regarding the role of information are still left untouched.

It was stated earlier on in chapter 1 that "empirical analysis still has to prove that networks do not only exist in European and national policy making but are also *relevant* for policy processes and policy outcomes" (Börzel, 1998, p. 267, from: Adam and Kriesi, 2007, p.147). This study can be part of the proof that networks are relevant for policy processes and for the policy decisions. In both cases it was very clear that some actors' coalitions established policy monopolies, which shaped the new policies. Also, studying the policy networks instead of just the policy decision-makers, made clear that sometimes animal advocacy groups work together to influence the policy process. It led to the recognition of a recurring pattern in decision-making in both cases. On top of the overall method of policy network analysis, the framework "Typology of Network Structures" from Adam and Kriesi (2007, p. 135) specifically needs some remarks. For this study the framework is valued as a good tool to help focus on the right aspects of a policy process, because it provided a simple step-by-step plan to conduct network analysis. This led to a structured study, focusing first on the important events and interactions and next on the power distribution among actors. Yet it must be mentioned that the types of interaction are very much open to the researchers' own interpretation. The authors of the framework do not provide an operationalisation of the types of interaction, and as a result of intensive and conceptual research that only complicated the situation, it was chosen to hold on to Oxford definitions of conflict/competition, bargaining/negotiation and cooperation. Also, types of interaction could be applicable to a coalition in relation to other actors, pairs or coalitions in the network, or it could be applicable to the interaction between actors within that coalition. Because these different points of view could bring about confusion, it was explicitly mentioned in the outline of important events and interactions which relation was intended by certain types of interactions.

Regarding the network types of interaction, it was not possible in the muskrat case to analyse the type of interaction and the distribution of power within the governing AC at the water boards. This was due to the fact that only the chair from the AC was interviewed for this study. As a result, he was expected to speak on behalf of the other members. However, it remains unclear whether all other members agreed with continuing the current system of muskrat extermination. The study would have had more representative power if the chairs from other water boards were also included. Rather, it was expected to take up too much time to arrange interviews with the chairs, while at the same time it was assumed that the policy makers would provide a clear reflection of their related chairs. This was not the case. Also, it was explicitly decided not to analyse the internal politics of the six involved water boards, because this was far outside the scope of this study. In the end this seems to be a right choice, as it would have distracted the researcher from the influential events that took place at an aggregated level.

Finally, it is worth discussing which events and interactions were included or excluded in the outlines of important events. The researcher decided to include events that had an influence on the policy decisions and events that related to animal advocacy. However, not all events related to animal advocacy were included, because this would have made the study too elaborative. For example, in the case of the goose it was decided not to include the national political party PvdD in the policy network. There were two reasons for this limitation: their influence was only mentioned to a minimal extent by the other actors in the network and their parliamentary questions did not have an impact on the final policy content. Also, sometime after the policy was established, the party visited the Vogelbescherming to discuss their disappointment in the policy. However, this also did not influence the policy content. It is however interesting for further research to study the disputes among the involved animal advocacy groups and the way these disagreements influence the unity power of the animal movement in policy processes surrounding human-wildlife conflict.

REFERENCES

LITERATURE AND REPORTS

Adam, S., Kriesi, H. (2007). The network approach. In P.A. Sabatier (Ed.). *Theories of the policy process* (pp. 129-154). Boulder, CO: Westview Press.

AD/Rivierenland (3 January 2012). Graven in dijk funest. Retrieved from <http://academic.lexisnexis.eu/>

AGV (2013D). Begrippenlijst (letter M). Retrieved 4 March 2013 from <http://www.agv.nl/waterschap/begrippenlijst/muskusrat>

Algemeen Dagblad (9 January 2013). Ganzen zorgen voor overlast bij boeren. Retrieved from <http://academic.lexisnexis.eu/>

APnl (2011). APnl de nieuwe organisatie in het groen. Document ten behoeve van persmap voor bijeenkomst op 8 april 2011 (05-04-2011.WdR.lh). Retrieved from <http://span-rivierenland.nl/upload/File/APnl.pdf>

Bont voor Dieren (2013A). Organisatie. Retrieved 5 March 2013 from <http://www.bontvoordieren.nl/organisatie>

Bos, D. & Tuenter, T. (2007). Muskusratten zonder bestrijding? Ontwerp van een onderzoek aan de gevolgen van niet bestrijden. Attenburg & Wymenga Ecologisch Onderzoek BV: Veenwouden

CBS, PBL, Wageningen UR (2012). Muskusrat, 1950-2011. (Indicator 1067, version 08, 13 July 2012). www.compendiumvoordeleefomgeving.nl. CBS: Den Haag, Planbureau voor de Leefomgeving; Den Haag/Bilthoven en Wageningen UR: Wageningen.

CDON (11 June 2011). Reactie op advies Ganzen-7. Sent to Ministerie van Economische Zaken, Landbouw en Innovatie, t.a.v. dr. H. Bleker, staatssecretaris. Coalitie DierenwelzijnsOrganisaties Nederland: Amstelveen. Retrieved from http://faunabescherming.nl/fb_docs/Brief%20CDON-Bleker%20ganzen.pdf

Copernicus Instituut (2013). Research group Environmental Governance. UU. Retrieved from: <http://www.uu.nl/faculty/geosciences/EN/research/institutesandgroups/researchinstitutes/copernicusinstitute/research/environmentalgovernance/Pages/default.aspx>

Curry, P. (2007). *Ecological ethics, an introduction*. Polity Press: UK

Dagblad van het Noorden (30 March 2013). Ganzenplaag? Schieten helpt niet. Retrieved from <http://academic.lexisnexis.nl/>

Dahl, R. A. (1957). The concept of power. *Behavioral Science* 2(3): 201-15

Dayer, A. A., Stinchfield, H., & Manfredo, M. J. (2007). Stories about wildlife: developing an instrument for identifying wildlife value orientations cross-culturally. *Human Dimensions of Wildlife*, 12(5): 307-315

De12Landschappen (2013A). Kerntaken. Retrieved 26 February 2013 from

- <http://www.de12landschappen.nl/organisatie/kerntaken/>
- De 12Landschappen (2013B). Samenwerken. Retrieved 26 February from <http://www.de12landschappen.nl/vrijepagina/samenwerken/>
- De Jong, A.P. (7 June 2011). Alternatief advies voor het beheer van ganzen. *Faunabescherming*. Retrieved from <http://www.faunabescherming.nl/>
- Delfland (2013B). Muskusratten. Retrieved 4 March 2013 from <http://www.hhdelfland.nl/doet-delfland/stevige-dijken/muskusratten/>
- De Stentor/Veluws Dagblad (30 March 2013). Wezep zit onder de vogelpoep. Retrieved from <http://academic.lexisnexis.nl/>
- De Vos, D. & van Raan, L. (12 April 2012). Commentaar en aanbevelingen op de Nota 'Muskusrattenbeheer: beleidsnota 2012-2015'. Partij voor de Dieren.
- DHV B.V., 2006. Gevolgen van graverij door muskusratten en beverratten voor de veiligheid van waterkeringen. Registratienummer: WG-SE20060948.
- DHV B.V., 2007a. Populatieontwikkeling en veiligheid: Nader onderzoek naar de relatie tussen graverij van muskusratten en de veiligheid van waterkeringen. Registratienummer: WG- SE20070876.
- Dierenbescherming (2011). Zomerganzenvisie Dierenbescherming. Structurele, diervriendelijke oplossingen om overlast van zomerganzen te verminderen.
- Dierenbescherming et al. (February 2011). Muskusrat. Op alternatieve wijze schade voorkomen. Dierenbescherming, Bont voor Dieren and Faunabescherming.
- Dierenbescherming (25 September 2012a). Success: waterschappen wijzigen beleid muskusratten. *Dierenbescherming*. Retrieved from <http://www.dierenbescherming.nl/nieuws/3094>
- Dierenbescherming (7 December 2012b). Ganzenakkoord: werk alternatieven uit! *Dierenbescherming*. Retrieved from <http://www.dierenbescherming.nl/nieuws/3174>
- Dierenbescherming (18 January 2012). Reactie Dierenbescherming op ganzenakkoord. Dierenbescherming: Den Haag. Retrieved from http://www.dierenbescherming.nl/fileupload/nieuws/Reactie_DB_voor_op_definitieve_ganzenakkoord.pdf
- Dierenbescherming (24 September 2012). Brief betreft 'Beleidsnota muskusrattenbeheer' aan HHN, Rijnland, HHSK, Delfland, HDSR en AGV. Dierenbescherming: Den Haag.
- Dierenbescherming (2013A). Organisatie. Retrieved 26 February 2013 from <http://www.dierenbescherming.nl/dierenbescherming-algemene-informatie>
- Dierenbescherming (2013B). Grondbeginselen. Retrieved 26 February 2013 from <http://www.dierenbescherming.nl/grondbeginselen>
- Dierenbescherming (2013C). Dieren in 't wild, onze visie. Retrieved 20 February 2013 from <http://www.dierenbescherming.nl/dieren-in-t-wild-onze-visie>

- Dierenbescherming (2013D). Muskusratten. Retrieved 5 March 2013 from <http://www.dierenbescherming.nl/muskusratten-alternatieven-bestrijding>
- Directie Kennis (2009). Evaluatie Opvangbeleid 2005-2008 voor overwinterende ganzen en smienten. Directie Kennis, Ministerie van Landbouw, Natuur en Voedselkwaliteit. Rapport DK nr.2009/dk120
- Ebbinge, B., Lok, M., Schrijver, R., Kwak, R., Schuurman, B., Müskens, G. (2003). Ganzen opvangbeleid. Internationale natuurbescherming in de landbouwpraktijk. Alterra-rapport 792, Alterra: Wageningen
- Ebbinge, B.S., (2003). Advies aan Faunafonds inzake heropening jacht op Kolgans, Grauwe Gans en Smient. Alterra-rapport 802. Alterra: Wageningen
- EL&I (16 December 2011). Brief betreft Ganzenbeheer in Nederland. Directie Natuur, Landschap en Platteland, Team Biodiversiteit, Ministerie van Economische Zaken, Landbouw en Innovatie. Referentie 238369
- Faunabescherming (7 June 2011). Alternatief advies voor het beheer van ganzen. Sent to Bleker / college van GS. Faunabescherming: Amstelveen.
- Faunabescherming (22 September 2012). Response to concept-beleidsnota Muskusrattenbeheer 2012-2015. Sent to HHN, AGV, Rijnland, HHSK, Delfland, HDSR. Faunabescherming: Amstelveen.
- Faunabescherming (7 December 2012). Ganzenakkoord: onacceptabel en zinloos. *Faunabescherming*. Retrieved from <https://www.faunabescherming.nl/2012/12/07/ganzenakkoord-onacceptabel-en-zinloos/>
- Faunabescherming (2013A). Uitgangspunten. Retrieved 5 March 2013 <http://www.faunabescherming.nl/uitgangspunten/>
- Faunabescherming (2013B). Waterschappen houden vol: muskusrat moet dood. Retrieved 5 March 2013 <http://www.faunabescherming.nl/2012/11/03/waterschappen-houden-vol-muskusrat-moet-dood/>
- Faunabescherming (2013C). Ganzenactie 2011. Retrieved 9 August 2013 from <http://www.faunabescherming.nl/ganzenactie-2011/>
- FPG (2013A). Over FPG. Retrieved 16 February 2013 from http://www.grondbezit.nl/organisatie_fpg.html
- Gaaff, A., de Graaff, R., Michels, R., Reinhard, S., & H. Vrolijk, 2007. Economische schade als gevolg van graverij en vraat door muskusratten. Rapport 4.07.05, LEI, Den Haag.
- Ganzen-7 (23 May 2011). Nederland Ganzenland. Een gezamenlijke landelijke en regionale visie.
- Ganzen-7 & IPO/provincies (6 December 2012). Akkoord uitvoering ganzenbeleid.
- Ganzen-8 (3 May 2011). Nederland Ganzenland. Een gezamenlijke landelijke en regionale visie.
- Garner, R. (1998). *Political animals: animal protection politics in Britain and the United States*. London: Macmillan Press.
- Guldmond, A., Rijk, P.J., Dijkman, W. (2010). Winterganzenbeleid: het roer om? : ex ante evaluatie kosteneffectiviteit opvangbeleid winterganzen. CLM Onderzoek en Advies, LEI Regionale Economie en Ruimtegebruik (Wageningen UR). Rapport 10-040.
- HDSR (2013). Beheerorganisaties in Nederland. Retrieved 5 February 2013 from

<http://www.hdsr.nl/muskusrattenbeheer/snel/beheerorganisaties>

HDSR (2013B). Melding muskusrat. Retrieved 4 March 2013 from

http://www.hdsr.nl/digitaal_loket/melding_calamiteit/meldingen/melding_muskusrat

HDSR (2013C). Muskusrattenbeheer noodzaak. Retrieved 4 March 2013 from

http://www.hdsr.nl/digitaal_loket/melding_calamiteit/meldingen/melding_muskusrat/muskusrattenbeheer

HDSR (21 September 2011). Notulen vergadering algemeen bestuur d.d. 21 september 2011. HDSR

Bestuurszaken / 47139. Retrieved from

http://www.hdsr.nl/algemene_onderdelen/zoeken/@217853/notulen_ab_21/

Heberlein, T.A. (2004). 'Fire in the Sistine Chapel': how Wisconsin responded to chronic wasting disease. *Human Dimensions of Wildlife* 9: 165–79.

Heidinga, D., 2006. Pluizige plaagdieren: Onderzoek naar de ecologie en bestrijding van de muskus- en beverrat in Nederland vanuit een populatiedynamisch perspectief bekeken. Rapport 70, Wetenschapswinkel Biologie, Rijksuniversiteit Groningen.

Heijne, S. (30 November 2011). Vogels zijn groot risico bij Schiphol. *Volkskrant*. Retrieved from

<http://www.volkskrant.nl/>

HHNK (2013). Samenstelling algemeen bestuur. Hoogheemraadschap Hollands Noorderkwartier. Retrieved 5

August 2013 from http://www.hhnk.nl/bestuur_en/bestuur/bestuur/algemeen_bestuur/samenstelling

HHNK (2013A). Bestuur en organisatie. Retrieved 4 March 2013 from http://www.hhnk.nl/bestuur_en

HHNK (2013B). Muskusrat. Retrieved 4 March 2013 from

http://www.hhnk.nl/digitale_balie/meldingen/meldingen/muskusrat

HHSK (16 October 2012). Brief kenmerk 2012.07988. HHSK: Rotterdam

HHSK (26 October 2012). Brief kenmerk 2012.09611. HHSK: Rotterdam

HHSK (29 November 2012). Muskusrattenbestrijding. Hoogheemraadschap Schieland en de Krimpenerwaard.

Retrieved 4 March 2013 from

http://www.schielandendekrimpenerwaard.nl/wat_doet_hhsk/waterkeringen/item_34073

Ijmuiden Courant (2 January 2013). Klachten over ronddwalende herten duingebied houden aan. Retrieved from

<http://academic.lexisnexis.eu/>

Inglehart, R. (1997). *Modernization and postmodernization*. Princeton, NJ: Princeton University Press.

IPO (2013A). Missie. Retrieved 5 March 2013 from <http://www.ipo.nl/over-het-ipo/missie>

IPO (2013B). Wat doet het IPO? Retrieved 5 March 2013 from <http://www.ipo.nl/over-het-ipo/wat-doet-het-ipo>

IPO (2013C). Organisatie. Retrieved 5 March 2013 from <http://www.ipo.nl/over-het-ipo/organisatie>

IPO (2013D). Vitaal platteland. Retrieved 5 March 2013 from <http://www.ipo.nl/vitaal-platteland>

- Jacobs, D. H. (2007). Wildlife value orientations in the Netherlands. *Human Dimensions of Wildlife: An International Journal*, 12(5): 359-365
- Jacobsen, C., Cohen, A. (1986). The power of social collectivities: towards an integrative conceptualization and operationalization. *The British Journal of Sociology*, 37 (1): 106-121
- Janssen, C. (19 June 2008) 'Criminele ruimers op het moordeiland Texel'. *Volkskrant*. Retrieved from <http://www.volkskrant.nl/>
- KNJV (2011). Ganzen in Nederland, Beleidsstandpunt van de Koninklijke Nederlandse Jagersvereniging (KNJV). Landelijk Bestuur.
- KNJV (2013A). KNJV. Retrieved 27 February 2013 from <http://www.knjv.nl/page.asp?id=19>
- KNJV (2013B). WBE's. Retrieved 27 February 2013 from <http://www.knjv.nl/page.asp?id=828>
- KNJV (2013C). Ganzen in Nederland. Retrieved 27 February 2013 from <http://www.knjv.nl/page.asp?id=1925&menu=5273>
- KNJV (6 February 2013D). Persbericht. Jagers geven op onderdelen uitvoering aan Ganzenakkoord. Retrieved from <http://www.knjv.nl>
- Leeuwarder Courant (28 February 2013). Het regent spreeuwenpoep. Retrieved from <http://academic.lexisnexis.nl/>
- Leidsch Dagblad (9 January 2013). Luidruchtige ganzen moeten weg. *Leidsch Dagblad*. Retrieved from <http://www.leidschdagblad.nl/>
- LNV (2004). Uitvoering van het Beleidskader Faunabeheer in verband met overwinterende ganzen en smienten vanaf 1 oktober 2004 (geactualiseerde versie). Ministerie van Landbouw, Natuur en Voedselkwaliteit: Den Haag.
- LNV (April 2012). Jacht en beheer en schadebestrijding. Over de Flora- en faunawet in Nederland. Ministerie van Landbouw, Natuurbeheer en Visserij
- LTO (2013A). Over LTO Nederland. Retrieved 26 February 2013 from http://www.lto.nl/templates/dispatcher.asp?page_id=25222771
- LTO (2013B). Internationaal. Retrieved 26 February 2013 from http://www.lto.nl/templates/dispatcher.asp?page_id=25222773
- Lyons, D. (2011). Protecting animals versus the pursuit of knowledge: the evolution of the British animal research policy process. *Society & Animals* 19, pp. 356-367
- Macdonald, D.W. (2001). Postscript: science, compromise and tough choices. In J.L. Gittleman, S.M. Funk, D.W. Macdonald & R.K. Wayne (Eds). *Carnivore Conservation* (pp. 524–38). Cambridge University Press, Cambridge.
- Macdonald, D.W. & Sillero-Zubiri, C. (Eds.). (2004). *The biology and conservation of wild canids*. (pp. 353–72). Oxford University Press, Oxford.
- Manfredo, J. & Dayer, A.A. (2004). Concepts for exploring the social aspects of human–wildlife conflict in a

global context. *Human Dimensions of Wildlife* 9: 317–28.

Ministerie van Economische Zaken (2013). Jagen. Het LNV Loket, Dienst Regelingen, Ministerie van Economische Zaken. Retrieved 7 August 2013 from <http://www.hetlnvloket.nl/onderwerpen/vergunning-en-ontheffing/dossiers/dossier/flora-en-faunawet/jagen>

Moschitz, H., Stolze, M. (2009). Organic farming policy networks in Europe: context, actors and variation. *Food Policy* 34: 258-265

Muskusrattenbeheer (2012). Jaaroverzicht 2012. Retrieved from http://www.hdsr.nl/asp/download.aspx?File=/contents/pages/214553/gerelateerd_aan_jaarrek_1_jaaroverzicht_mrb.pdf

Muskusrattenbeheer (2013). Werkgebied en organisatie. Retrieved from http://www.hdsr.nl/contents/pages/212559/hdrs_flash_muskusrattenbeheer2.swf

Natuurmonumenten (2013A). Natuurmonumenten. Retrieved 26 February 2013 from <http://www.natuurmonumenten.nl/natuurmonumenten>

Natuurmonumenten (2013B). Het Korhoen. Retrieved 8 August 2013 from <http://www.natuurmonumenten.nl/dossier/het-korhoen>

Nijland, R. (6 August 2011). Zwijnenbende in de keurige gemeente Epe. *Volkskrant*. Retrieved from <http://www.volkskrant.nl/>

NOS (28 June 2008). Brandstichting bij Duke Faunabeheer in Lelystad. *NOS*. Retrieved from <http://nos.nl/audio/3497-brandstichting-bij-duke-faunabeheer-in-lelystad.html>

NOS (18 October 2008). Texel mag grouwe ganzen vergassen. Retrieved from NOS on 15th July 2008 from: <http://nos.nl/audio/9621-texel-mag-grouwe-ganzen-vergassen.html>

Oxford Dictionaries (2013). Dictionary. Retrieved from <http://www.oxforddictionaries.com/>

Poeder, J., Bouterse, J. (2000). Omgang met dieren en met de natuur – een ‘Ecovisie’ van de stichting de Faunabescherming. *Argos*. Retrieved from <http://edepot.wur.nl/116990>

PvdD (September 2008). Dierenwelzijn, al seen paal boven water! Verkiezingsprogramma Partij voor de Dieren Waterschapsverkiezingen 2008. Retrieved from <https://www.partijvoordedieren.nl/departij/partijprogrammas>

PvdD (23 November 2010). Meer oog voor de muskusrat dankzij amendement en drie moties. Retrieved 24 July 2013 from <https://www.partijvoordedieren.nl/recent/news/i/5027>

PvdD (14 February 2011). Inbreng Schriftelijk Overleg Uitvoering moties Ouwehand over muskusratten. Partij voor de Dieren. Retrieved 26 July 2013 from <https://www.partijvoordedieren.nl/tweedekamer/speeches/i/743>

PvdD (4 May 2011). Vragen over het grootschalig afschieten van ganzen. Retrieved from <https://www.partijvoordedieren.nl/tweedekamer/kamervragen/i/2210>

PvdD (12 October 2012). Nieuw hoofdstuk in muskusrattenbeleid. *Partij voor de Dieren Waterschap Amstel, Gooi en Vecht*. Retrieved from

<http://amstelgooienvecht.partijvoordedieren.nl/recent/news/i/6839/gemiste-kans-muskusrattenbeheer>

- PWC (October 2006). Effectieve en efficiënte bestrijding van de muskusratten in Nederland gebaat bij een landelijke organisatie onder de vlag van de waterschappen. Onderzoek naar de organisatie van de muskusrattenbestrijding in Nederland. PriceWaterhouseCoopers: Utrecht
- PWC (24 March 2011). Businesscase muskusrattenbestrijding WSRL en HDSR. Efficiency door samenwerking. U -2011-0488/PT/jg/ih. PriceWaterhouseCoopers
- Rijnland (26 September 2012). Besluit Nr. 12.34485. De Verenigde Vergadering van het Hoogheemraadschap van Rijnland: Leiden.
- Rijnland (2013A). Muskusrattenbeheer. Retrieved 26 February 2013 from http://www.rijnland.net/rijnland_0/taken/veiligheid/muskusrattenbeheer
- Rijnland (2013B). Rijnland start proef 'preventie muskusratten'. Retrieved 4 August 2013 from http://www.rijnland.net/actueel/nieuws/@235102/rijnland_start_proef/
- Rivierenland (2013). Vraagbaak (FAQ) Organisatie. Waterschap Rivierenland. Retrieved 5 August 2013 from [http://www.waterschaprivierenland.nl/digitaal_loket/vraagbaak_\(faq\)?RubIdt=10246](http://www.waterschaprivierenland.nl/digitaal_loket/vraagbaak_(faq)?RubIdt=10246)
- Sanders, M.E., W. Geertsema, M.E.A. Broekmeijer, R.I. van Dam, J.G.M. van der Grefte-van Rossum & H. Blitterswijk (2004). Beleidsevaluatie Ecologische Hoofdstructuur en ganzenbeleid. Achtergronddocument bij Natuurbalans 2004. Wageningen, Natuurplanbureau — vestiging Wageningen, Planbureau rapporten 11.
- Schiphol (April 2012). Vogelwacht op Schiphol. Birdcontroller waakt over vogels en vliegtuigen.
- Serdült, U., Hirschy, C. (2004). From process to structure: developing a reliable and valid tool for policy network comparison. *Swiss Political Science Review* 10 (2): 137-156
- Sevil, M. (26 March 2013). ProRail gaat konijnen aanpakken en spuit hollen vol schuim. *Parool*. Retrieved from <http://www.parool.nl/>
- Sillero-Zubiri, C. & Laurenson, M.K. (2001). Interactions between carnivores and local communities: conflict or co-existence? In J.L. Gittleman, S.M. Funk, D.W. Macdonald & R.K. Wayne (Eds.). *Carnivore Conservation* (pp. 282–312). Cambridge University Press: Cambridge.
- Sillero-Zubiri, C., Sukumar R. and Treves, A. (2006). Living with wildlife: the roots of conflict and the solutions. *Macdonald/Key Topics in Conservation Biology*, pp. 255-272
- SOVON (2010). Hoeveel overzomerende ganzen telt Nederland? Nieuws jaargang 23 (2010) nr 2
- Staatsblad van het Koninkrijk der Nederlanden (23 June 2011). Jaargang 11, nr. 302. Besluit van 9 juni 2011, houdende vaststelling van het tijdstip van inwerkingtreding van de wet tot wijziging van de Waterwet en de Waterschapswet en intrekking van de wet van 18 december 1985, houdende enige voorzieningen van muskusrattenvangers, tot regeling van de zorgplicht ter voorkoming van schade aan waterstaatswerken veroorzaakt door muskusratten en van financiële bijdragen aan verbetering van primaire waterkeringen van de waterschappen. Retrieved from <https://zoek.officielebekendmakingen.nl/stb-2011-302.pdf>

- Staatsbosbeheer (2013A). Organisatie. Retrieved 27 February 2013 from <http://www.staatsbosbeheer.nl/Over%20Staatsbosbeheer/Organisatie.aspx>
- Staatsbosbeheer (2013B). Over Staatsbosbeheer. Retrieved 27 February 2013 from <http://www.staatsbosbeheer.nl/Over%20Staatsbosbeheer.aspx>
- Staatsbosbeheer (2013C). Visie en missie. Retrieved 27 February 2013 from <http://www.staatsbosbeheer.nl/Over%20Staatsbosbeheer/Visie%20en%20missie.aspx>
- Teel, T. L., Dayer, A. A., Manfredo, M. J., & Bright, A. D. (2005). *Regional results from the research project entitled "Wildlife Values in the West." Project report for the Western Association of Fish and Wildlife Agencies.* Human Dimensions in Natural Resources Unit. Fort Collins: Colorado State University.
- Teel, T. L., Manfredo, M. J., Stinchfield, H.S. (2007). The need and theoretical basis for exploring wildlife value orientations cross-culturally. *Human Dimensions of Wildlife*, 12(5): 297-305
- Trouw (28 June 2008). 'Dierenactivisten achter loodsbrand Lelystad'. *Trouw*. Retrieved from <http://www.trouw.nl>
- Tweede Kamer (24 November 2010). Overzicht van stemmingen in de Tweede Kamer, afdeling Inhoudelijke Ondersteuning. Betreffende wetsvoorstel: 32474. Wijziging van de Waterwet en de Waterschapswet en intrekking van de wet van 18 december 1985, houdende enige voorzieningen ten behoeve van de inzet en bekostiging van muskusrattenvangers, tot regeling van de zorgplicht voor de muskusrattenbestrijding en van financiële bijdrage aan verbetering van primaire waterkeringen van de waterschappen. Retrieved from <http://www.eerstekamer.nl/9370000/1/j9vvhwbtbnzpbzcc/vikkirxgwemw/f=y.pdf>
- UvW (4 November 2009). "Stormbrief" aan Staatssecretaris Verkeer en Waterstaat. Unie van Waterschappen.
- UvW (2010). Storm Werkdocument. Uitwerking voor een doelmatiger waterbeheer. Projectteam Storm.
- UvW (10 September 2012). De muskusrat. Bestrijding muskusrat nodig voor veiligheid van de dijken. Retrieved from <http://www.uvw.nl/download.php?f=c216ed700a60f179daba325537971d04>
- UvW (2013A). Muskus- en beverratten. Retrieved 5 February 2013 from <http://www.uvw.nl/beleidsveld-muskus-en-beverratten.html>
- UvW (2013B). Vereniging. Unie van Waterschappen. Retrieved 5 August 2013 <http://www.uvw.nl/vereniging.html>
- Van Meelis, M. (7 June 2012). Verwerking aanbevelingen PvdD in de nota Muskusrattenbeheer 2012-2015. Aan: Bestuurlijk Overleg MRB. Muskusrattenbeheer, kenmerk 555268.
- Van Meelis (7 February 2013). Bijlage 4 AB-voorstel 27 februari 2013. MEMO. Vragen en antwoorden commissie BMZ van 29 januari 2013. Betreffende de Beleidsnota Muskusrattenbeheer 2012-2015. Kenmerk DM 617356. In: HDSR (27th February 2012). Voorstel aan het Algemeen Bestuur agendapunt 11. Nummer 585701.
- Vermaat, A. & Zuidervaart, B. (28 June 2011). Geen zwerfafval? Dan ook geen ratten. *Trouw*. Retrieved from <http://www.trouw.nl/>
- Vermeulen, W., Bootsma, M. (2011). Study Guide 2011-2012. Master Sustainable Development. Utrecht:

- Vlaswinkel, M., van Wijk, K., Uijthoven, W. (2011). Faunaschade ganzen 2010. Eerste inventarisatie van schade en extra kosten op een aantal akkerbouwbedrijven met ganzenvraat in granen en graszaad. Wageningen, Praktijkonderzoek Plant & Omgeving B.V.
- Vogelbescherming Nederland (2009). Overwinterende ganzen in Nederland. Evaluatie van het ganzenopvangbeleid. Factsheet n.a.v. een rapport van bureau Alterra in opdracht van het ministerie van LNV.
- Vogelbescherming Nederland (2012). Vragen en antwoorden. *Vogelbescherming*. Retrieved from http://www.vogelbescherming.nl/service__vragen/vragen__antwoorden/q/fq_id/54
- Vogelbescherming Nederland (2013A). De organisatie. Retrieved 27 February 2013 from http://www.vogelbescherming.nl/over_ons/de_organisatie
- Vogelbescherming Nederland (2013B) Wie zijn wij? Retrieved 27 February 2013 from http://www.vogelbescherming.nl/over_ons/de_organisatie/wie_zijn_wij
- Vogelbescherming Nederland (2013C). Schadebestrijding. Retrieved 27 February 2013 from http://www.vogelbescherming.nl/over_ons/standpunten/schadebestrijding
- Vogelbescherming Nederland (2013D). Ganzen en smienten. Retrieved 27 February 2013 from http://www.vogelbescherming.nl/over_ons/standpunten/ganzen_en_smienten
- Vogelbescherming Nederland (2013E). Ganzen kijken. Retrieved 27 February 2013 from http://www.vogelbescherming.nl/vogels_kijken/ganzen
- Vogelbescherming Nederland (2013F). Ganzen herkennen. Retrieved 27 February 2013 from http://www.vogelbescherming.nl/vogels_kijken/ganzen/ganzen_herkennen
- Vogels en de wet (2013). Ganzeneieren schudden: is dat toegestaan? Retrieved 7 August 2013 from http://www.vogelendewet.nl/Veelgestelde_vragen/H:_Ganzeneieren_schudden,_populatiebeheer
- Volkscrant (25 August 2012). Rattenplaag teistert deel Amsterdam. *Volkscrant*. Retrieved from <http://www.volkscrant.nl/>
- Waterschap Hollandse Delta (24 November 2010). Waterschappen nemen muskusrattenbestrijding over van de provincies. Retrieved from http://www.wshd.nl/beheerstructuur/uitgelicht/waterschappen_nemen
- Waterschap Reest en Wieden (1988). Handboek muskusrattenbestrijding. Retrieved from: <http://www.waterwizz.nl/images/upload/files/muskusratten.pdf>
- Waterschap Rieverenland (2013). Herkomst muskusrat en beverrat. Retrieved 5 February 2013 from http://www.waterschaprivierenland.nl/muskusrattenbeheer/herkomst_muskusrat
- Waterschap Velt en Vecht (2013). Beverratten- en Muskusrattenbestrijding. Retrieved 5 February 2013 from http://www.veltenvecht.nl/item-678/taken/item_1099
- Waterschap Zuiderzeeland (2013). Muskusrattenbestrijding. Retrieved 5 February 2013 from http://www.zuiderzeeland.nl/veiligheid/item_36447

WBE Duin- en Bollenstreek (18 May 2011). Bestuur KNJV zegt 'nee' tegen ganzenakkoord. Retrieved 9 August from <http://www.wbeduinenbollenstreek.nl/2011/index.php/115-knjv-nieuws/110-bestuur-knjv-zegt-nee-tegen-ganzenakkoord>

Wildbeheereenheid Haarlemmermeer (2013). WBE Algemeen. Wbehaarlemmermeer. Retrieved 3 August 2013 from http://www.wbehaarlemmermeer.nl/html/wbe_algemeen.html

Zandberg, F., de Jong, P., Kraaijeveld-Smit, F. (2011) [Red: van Lunteren, J.]. Muskusrat. Op alternatieve wijze schade voorkomen. Bont voor Dieren, De Faunabescherming, Nederlandse Vereniging tot Bescherming van Dieren.

Zoogdierenvereniging (3 May 2010). Symposium: "Muskusrattenbestrijding kan anders!" Zoogdierenvereniging. Retrieved from <http://www.zoogdierveniging.nl/node/916>