

MASTER THESIS

Public Administration, Policy and Governance
Faculty of behavioural, management and social sciences (BMS)
University of Twente

Topic: The influence of actor beliefs on unobvious policy decisions for the development of new roads in demographic decline regions
Status: Definitive
Date: 25-08-17

Author

Name: Inge Rohaan
Study programme: Master Public Administration
Specialization: Policy and governance
University: University of Twente, Enschede
Student number: s1497642
E-mail: i.rohaan@outlook.com

University of Twente

Drienerlolaan 5
Postbus 217
7500 AE ENSCHEDE

**UNIVERSITY
OF TWENTE.**

Examination committee

Dr. F.H.J.M. Coenen
E-mail: f.h.j.m.coenen@utwente.nl

Dr. P. Stegmaier
E-mail: p.stegmaier@utwente.nl

Source image front page: photo of the construction of the N18 Varsseveld-Enschede made by J. de Wit (JdW Studio's, 02-08-2017)

PREFACE

For the master's programme in Public Administration at the University of Twente, conducting a research is the final part of this master. With my interest in spatial developments and my background of Urban and Regional Planning (University of Applied Sciences), for this master thesis I have chosen a research topic that addresses this. The topic of this research is: the explanation of unobvious policy decisions for the development of new roads in Dutch demographic decline regions. A topic that will appeal to many people when it comes to public decision-making processes for major spatial developments, as well as current developments of demographic decline, from professional or personal experience.

In consultation with my first supervisor Frans Coenen, I have prepared and conducted the research. First, I would like to thank him for his critical feedback, support and patience. I would also like to thank my second supervisor Peter Stegmaier for his support, useful additions to conduct this research and his feedback. Besides, for this study, interviews were conducted with participants from practice. I would like to thank these participants for their time, effort and the interesting conversations I have had with them. Finally, I would like to thank Bart, my mother, my family and others interested, for their support, encouraging confidence, patience and interest in conducting this research, but also for following and completing this master's programme. In the end, the period of writing the master thesis, was a long journey and a learning experience for me, on the level of conducting a master's research and also on a personal level.

I hope you will enjoy reading this report.

Inge Rohaan

Neede, August 2017

TABLE OF CONTENTS

Abstract

1. Introduction	7
1.1. Background	8
1.2. Relevance of this research	9
1.3. Purpose	10
1.4. Problem statement	10
1.5. Research questions	10
1.6. Outline of this research	10
2. Theoretical framework and key concepts	12
2.1. Actors in the public policy process	12
2.2. Theory for the explanation of the unobvious policy decision to keep developing new roads in demographic decline regions	13
2.3. Actor beliefs	15
2.4. Conclusion	17
3. Methodological framework	18
3.1. Research design	18
3.2. Sampling strategy: case selection	18
3.3. Data collection	19
3.4. Analysis of the empirical data	20
4. Road development in the Netherlands	21
4.1. A century of road development	21
4.2. Current trends in Dutch road development and road use	22
4.3. The importance of road development	23
4.4. 'The Netherlands competitive, accessible, liveable and safe'	24
4.5. Procedures for development of national and provincial roads	26
4.6. Relevance of the context of actor beliefs	27
4.7. Conclusion	27
5. the role of road development, accessibility and mobility in developments of demographic decline	28
5.1. Demographic decline in the Netherlands	28
5.2. Consequences of demographic decline for infrastructure and mobility	30
5.3. Role of the development of roads and the maintenance and improvement of the accessibility and mobility in Dutch policy for demographic decline	31
5.4. Relevance of the context of the actor beliefs	34
5.5. Conclusion	34
6. Actor beliefs in the cases De Centrale As and N18 Varsseveld-Enschede	36
6.1. Case I: 'De Centrale As' (N356)	37
6.2. Actor beliefs - Case I	39

6.3.	Case II: N18 Varsseveld-Enschede	47
6.4.	Actor beliefs - Case II	51
6.5.	Conclusion	62
7.	The influence of actor beliefs on the unobvious policy decision	63
7.1.	Decision-making processes: problems, goals and solutions	63
7.2.	Actor beliefs	66
7.3.	The influence of actor beliefs on the unobvious policy decision to keep develop new roads in demographic decline regions	71
8.	Conclusions and discussion.....	73
8.1.	Conclusions	73
8.2.	Discussion.....	77
9.	List of references	79
Appendix 1: Questionnaire (Dutch)		
Appendix 2: Table personal communication		

ABSTRACT

Decisions of governmental authorities for the development of new public policy or change of existing public policy can be made to account for or to respond to certain economic, demographic, technical or social developments. Policy decisions made in decision-making processes are logically in line with the new or changed policy. In particular cases, policy decisions in new or running decision-making processes do not converge with the new or changed policy and therefore, are different than expected. These policy decisions can be considered unobvious: when policy has been developed or changed because of new developments, but this policy change does not lead to changes in specific policy decisions in decision-making processes. However, an obvious policy decision can be considered as a decision in line with new developed or changed policies. The unobvious policy decisions can be explained as a problem of non-implementation of actors or actors involved with the decision-making, do not agree with assumptions behind the new or changed policy, held on to the policy decisions and therefore policy decisions do not change. Actors may also have other priorities, which leads to different policy decisions than expected. The purpose of this research is:

To explain how, in particular cases, actor beliefs influence unobvious policy decisions, although policy has been changed

For this case study, the decision is made to explain the unobvious policy decision to keep developing new roads in some Dutch demographic decline regions. In several demographic decline regions, policy decisions have been taken for the development of new roads, despite the development of new demographic and regional policies. Because it is expected that there would be other decisions made, because of new demographic and regional economic policies, these policy decisions are considered unobvious. The unobvious policy decisions are examined on the basis of the influence of actor beliefs involved in the policy process, as alternative assumptions for the assumptions in the policy theory. This has led to the formulation of the problem statement:

How do actor beliefs influence unobvious policy decisions, in particular in the case of keep developing new roads in some Dutch demographic decline regions?

The expectation in this research is that the developed policies are not followed, but actors held on to the decision for the mean of developing a road, to achieve the goals that have been set. For the explanation of these unobvious policy decisions to develop roads in demographic decline regions, parts of the Advocacy Coalition Framework are used. In this theoretical framework many different actors with their policy beliefs can interact to achieve goals and influence policy decisions by governmental authorities. This can lead to policy change over a long period of time, but in this case study the theory is used to explain no changes in policy decisions. For the elaboration of the research, specific theoretical concepts 'context of the actor beliefs' and the 'actor beliefs, about the importance of the development of roads in demographic decline regions', are used. The context of the actor beliefs is about the trends and developments regarding the development of main roads in the Netherlands and the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands. The influence of actor beliefs consists of three aspects: the usefulness and necessity of the development, the role of demographic decline in the usefulness and necessity discussion, and the effects of the development. Both concepts are based on parts of the Advocacy Coalition Framework.

In this research, the cases of the influence of actor beliefs on policy decisions for the development of De Centrale As and N18 Varsseveld-Enschede in the Dutch demographic decline regions Noordoost Friesland and the Achterhoek have been examined. In two long-term policy processes, involving many different actors with their beliefs, policy decisions are made for the development of new roads. This research is carried out by the extensive elaboration of both, the context of the actor beliefs for the cases and the actor beliefs about the importance of road development in both cases. The context of the actor beliefs may have had an influence on the beliefs of actors in the cases of De Centrale As and N18 Varsseveld-Enschede.

The policy decisions that have been made to keep developing De Centrale As and the N18 Varsseveld-Enschede, can be partly explained to be not in line with the demographic and regional policies. Only during the decision-making processes, demographic decline started to play a role and policy has been developed for the regions Achterhoek and Noordoost Friesland. Both developments are partly based on goals of spatial and

regional economic development and partly based on goals to solve problems related to these roads, such as the liveability, traffic safety and traffic intensity on both existing roads in villages. The problems related the roads have not changed due to the demographic developments and development of demographic policy. Based on those problems, it seems logical that actors still choose to construct a road. Accessibility and mobility are still part of the new policies for demographic decline regions and here the mean might still serve the right goals, also as a local solution to the problems. But if regional economic development is used as an argument and as an underlying idea to reverse demographic decline, then these are against the new demographic policy to adapt to demographic developments. Demographic decline is about maintaining and strengthening the accessibility and economic activity, but not about major developments such as the development of a new road. Such developments would be more important in core regions, where mobility is seen as more important and has more priority, instead of peripheral regions dealing with demographic decline.

Demographic policies, developed in response to demographic developments, have not affected the policy decisions for the development of roads in two specific cases. No new or changed decisions are taken, in road development processes in regions affected by demographic decline, while this would be expected. The conclusions have shown that other actor beliefs about solving local infrastructure problems, have played a role in the decision-making by governmental authorities. This research has added that when policies change, this does not immediately lead to other policy decisions in ongoing decision-making processes, if the original problems are still there and the development of roads is seen as means for solving these problems. For further research and other interesting results, it may be interesting to study cases which are at an earlier stage of the process, in which decisions have changed during the process because of policy change or decisions which have led to non-development, because of the development or change of demographic policy or other policies. Besides, on a more general this study may be interesting for other situations of policy decisions which are different than expected on the basis of new or changed policy or in situations where new or changed policies have led to other decisions.

1. INTRODUCTION

1.1. Background

Certain developments cause governmental authorities to decide to conduct new public policies or change existing public policies, to take account of or to respond to these developments, because of new priorities. These developments can be for example economic, technical, social or environmental. Logically, policy decisions in decision-making processes will be made in line with this new or changed policy. However, in particular cases, policy decisions in new or running decision-making processes do not connect to the new policy, although this is expected. These policy decisions can be considered 'unobvious': when policy has been developed or changed because of new developments, but this policy change does not lead to changes in specific policy decisions in decision-making processes, because actors have different underlying policy assumptions. This means that, sometimes policy decisions are different than expected on the basis of these new or changed policies, because policy decisions do not converge with the new or changed policy. This can be a problem of non-implementation (1). When actors do not implement the new policy because of lack of capacity, power, information or resources, as described in the literature of policy implementation. Another explanation can be that the problem lies in the fact that actors, involved with the decision-making, simply do not agree with the assumptions behind the new or changed policy, the policy theory¹, held on to the policy decisions and therefore policy decisions do not change (2). In this study, the focus is on the second case. An example of cases might be that, despite sustainability policy, the government still continues to invest in the production of gas or oil. In addition, a recent example is about the increase of costs for hiring external staff within the Dutch government authorities, while this exceeds the standards of the national government.

Another example of such a development, which causes a change in policy of governmental authorities, is the demographic decline in the Netherlands. For decades, Dutch governmental policy was based on the expected growth of the population in the Netherlands and the stimulation and facilitation of the growth of cities, villages and industrial areas (Haartsen, Krikke, Hooimeijer, & van Waveren, 2014). However, since the late nineties several Dutch border and rural regions are confronted with different forms of demographic decline (Rijksoverheid, n.d.a; Verwest & van Dam, 2010). This demographic decline consists of three different aspects (Verwest & van Dam, 2010):

- decline of the number of the population
- decline of the number of households
- decline of the potential working population

Large Dutch cities and the Randstad continue to grow, but the demographic situation in several rural regions changes also due to the trend of urbanization (Harms, Olde Kalter & Jorritsma, 2010; Rijksoverheid, VNG & IPO, 2009). It turns out that the demographic decline and its consequences for the next decades in rural regions also has consequences for addressing spatial and socio-economic policy and developments for the national, provincial and municipal governments (Hilbers et al., 2011; Ritsema van Eck, van Dam, de Groot, & de Jong, 2013; Verwest & van Dam, 2010).

Therefore, in recent years, at multiple levels of public policy making (national, provincial and regional) there is attention for the approach of this demographic development. This developed demographic policy is, in general, aimed at minimizing negative consequences in rural regions and adaptation to demographic change, instead of combating the demographic decline (Haartsen et al., 2014; Verwest & van Dam, 2010). Also, the Government of the Netherlands has appointed specific regions which, to a greater or lesser extent, (have to) deal with this demographic decline (Rijksoverheid, 2015a). Adaptation to demographic decline can also mean that the investment in new spatial developments for expansion in regions dealing with demographic decline will be no longer a matter of course, because of the changing demands (Rijksoverheid, VNG & IPO, 2009; Verwest & van Dam, 2010).

For road developments, the situation appears to be different. In several appointed demographic decline regions still main roads (national or provincial N-roads) are constructed or changed, such as the main roads N18 (province of Gelderland and Overijssel), N33 (province of Groningen and Drenthe), Buitenring Parkstad

¹ Policy theory (Van Heffen, 2008)

Limburg, N62 (province of Zeeland) and the De Centrale As (province of Friesland)². The expectation on the basis of the policy approach for demographic decline is that there will be not (any longer) chosen to invest in the construction of roads in these regions, but still decisions are made for the construction or adjustment of new roads. This means that no change occurs in these new or ongoing decision-making processes, despite changes in demographic policy and other coherent policy. Therefore, these policy decisions can be seen as unobvious. An obvious policy decision would have been not to invest in the development of a new road and to adapt to demographic decline.

Although, Harms et al. (2010) and Ritsema van Eck et al. (2013) expect that demographic decline will not automatically lead to a decline in mobility in rural areas, it is interesting to explore practical cases of policy processes for road development. These policy processes for road development are often long-term, due to the scale of the development, the number of involved actors, the decision-making and, in addition, the legal procedures to which the responsible government is bound. Has there already been talk of demographic decline when the policy process started, or was the policy process for road development a 'historic train that passes', while demographic decline has deployed? How are these unobvious decisions made to develop new roads in these regions? Has the demographic decline policy been taken into account in these processes or not and does it affect the decisions that are being made?

This research will be conducted to provide insight in and explanations for unobvious public policy decisions made to develop new roads in demographic decline regions, despite the developed demographic policy. It is often interesting when decisions change because of new policy, which may lead to change in a policy process or the termination of a policy process, but in this case it is interesting why something has not changed and processes continued. The unobvious policy decision to develop new roads in demographic decline regions will be examined on the basis of actor beliefs involved in two practical cases. In this research, it is expected and assumed that actor beliefs play an important role in the decision-making in these policy processes. The question is how actors involved in the policy process view this particular development and which role the demographic decline plays in these beliefs. On the one hand, the development of roads in these regions can be considered in line with adaption to demographic decline (e.g. maintaining the liveability and the accessibility of facilities) and, on the other hand, with combating demographic decline (e.g. the road as a tool to stimulate spatial and socio-economic development). Often there are not only advocates and opponents, but these processes can also involve actor beliefs which may partially overlap or which are based on different interpretations of the problem, the policy process or the solution, which ensures that various beliefs are intertwined. To explain the influence of actor beliefs on unobvious policy decisions to develop new roads in demographic decline regions, the choice is made to use parts of the Advocacy Coalition Framework. The Advocacy Coalition Framework shows that policy beliefs of actors influence the development of policy decisions by governmental authorities (Sabatier and Weible, 2014).

1.2. Relevance of this research

Besides providing insight into the issue of unobvious policy decisions and in particular the development of roads in demographic decline regions, this study can contribute to the current knowledge of unobvious policy decisions made by government authorities. In the literature is little knowledge about policy processes and unobvious policy decisions for spatial developments such as road development, especially in demographic decline regions. In contrast, this does not apply to decision-making processes, policy decisions, the development of infrastructure or the phenomenon of demographic decline in itself. In recent years, research regarding demographic decline has been conducted in the Netherlands on current developments and future expectations. Besides, in a more general way, the goal is to learn from this research, to get a better understanding of these unobvious policy decisions and processes, actor beliefs behind these decisions and the influence of changing policies on running or starting policy processes.

² Main road projects under the control of Rijkswaterstaat for national roads and the provinces of Zeeland, Limburg and Friesland for provincial roads

1.3. Purpose

The purpose of this research is:

To explain how, in particular cases, actor beliefs influence unobvious policy decisions, although policy has been changed

In this research, 'unobvious policy decisions' implies policy decisions made in the policy processes that are not easy to understand, not evident or in the line of expectation.

1.4. Problem statement

In this research, the influence of actors on unobvious policy decisions for the development of new roads in a demographic decline region has been studied. Therefore the following problem statement is formulated:

How do actor beliefs influence unobvious policy decisions, in particular in the case of keep developing new roads in some Dutch demographic decline regions?

The concepts 'actor beliefs', 'policy decisions' and 'demographic decline regions' need an explanation:

- **Actor beliefs:** this implies *beliefs of actors about the importance of the development of roads in demographic decline regions*. This concept consists of three aspects: the usefulness and necessity of development of roads (in demographic decline regions) and the effects of the development of roads present in the policy process.³
- **Policy decision:** this comprises the entirety of decisions made by responsible governments in the policy process and as part of legal procedures for the development of roads.
- **Demographic decline region:** Dutch rural regions in which multiple neighbour municipalities will face structural forms of demographic decline now or in the near future (Verwest & van Dam, 2010). Demographic decline regions and anticipating regions have been identified by the national government based on expected decline and changes (Rijksoverheid, n.d.b).

1.5. Research questions

The problem statement will be answered via the following sub questions:

1. *Which theories can describe or explain the influence of actor beliefs on unobvious policy decisions, in particular to keep develop new roads in demographic decline regions?*
2. *What are the developments regarding the development of main roads in the Netherlands?*
3. *What is the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands?*
4. *Which actor beliefs are involved in the policy processes of two cases for the development of the new road Dutch demographic decline region?*
5. *How did actor beliefs influence the unobvious policy decision in the cases to keep develop new roads in demographic decline regions?*

1.6. Outline of this research

This research consists of several chapters. For the structure of the research, every chapter addresses a research question. To start with chapter 2, the theoretical framework for the explanation of the issue and relevant key concepts will be introduced and described (SQ 1). Then, in chapter 3 a description follows of the

³ Operationalization of 'actor beliefs' in chapter 2: Theoretical framework and key concepts

methodological framework of this research. Chapters 4 and 5 together provide a basis for the further case study (SQ 2 and 3). In chapter 4, the development of the main road infrastructure, the importance of road development and the procedures for the development of national and provincial roads will be described. Chapter 5 addresses the demographic decline, its consequences, the expectations for road development and the role of road development, mobility and accessibility in relevant demographic decline policy. This is followed by chapter 6 with a description of the two cases of policy processes for the development of main roads in regions dealing with demographic decline (SQ 4). This extensive chapter also focuses on the actors involved and especially the identification of actor beliefs that played a role in the policy process. In chapter 7, the explanation of the road development in demographic decline regions, influenced by actor beliefs, will be described and a comparison of the cases will be made (SQ 5). The final chapters of the research include the conclusion and discussion. In the conclusion in chapter 8, the problem statement will be answered and subsequently in chapter 9, the research will be discussed.

2. THEORETICAL FRAMEWORK AND KEY CONCEPTS

In this chapter the theoretical framework and key concepts for this research will be described. The main goal of this theoretical framework is to interpret the collected empirical data and provide possible explanations for the realisation of unobvious policy decisions. Therefore, the first sub question has been formulated: *which theories can describe or explain the influence of actor beliefs on unobvious policy decisions, in particular to keep develop new roads in demographic decline regions?*

Based on several definitions of the concepts 'obvious' or 'not obvious'⁴, '*unobvious policy decisions*' can be defined as policy decisions made in the policy processes that are not easy to understand, not evident or in the line of expectation. Policy decisions can be considered unobvious, when policy has been developed or changed because of new developments, but this policy change does not lead to changes in specific policy decisions in decision-making processes, because actors have different underlying policy assumptions. This means that decisions are made that do not converge with the new or changed policy. In order to clarify the concept, an obvious policy decision would be that new developed or changed policies would lead to changes in specific policy decisions in decision-making processes, in line with these policies. To explain these unobvious policy decisions, parts of the Advocacy Coalition Framework by Sabatier will be used. This theory describes that with (shared) policy beliefs many different actors can interact to achieve goals and influence policy decisions by governmental authorities, that lead to policy change over a long period of time (a decade or more) (Sabatier, 1998). However, in this research it will be used in a different way, because there are no changes in the decisions in policy processes in line with changed policies.

There might be many explanations why unobvious policy decisions are made, such as power and resources. In this research, the explanation for these unobvious policy decisions will be examined on the basis of the influence of the *beliefs of actors* involved in the decision-making process. *Actor beliefs*, derived from the policy beliefs as part of the Advocacy Coalition Framework, may be a good source of explanation and play an important role in the realization of policy decisions by governmental authorities. The question is how these actor beliefs influence these unobvious policy decisions? The explanation of policy decisions can be that the problem lies in the fact that actors, involved with the decision-making, do not agree with the assumptions behind the new or changed policy, the policy theory, and held on to the policy decisions and therefore policy decisions do not change. The policy theory is the whole of normative and empirical assumptions of policy actors that relate to the policy issue (Van Heffen, 2008, pp. 205-206). However, actors can also have other priorities. The expectation in this research is that the developed policies are not followed, but actors held on to the decision for the development of roads (means), to achieve the goals that have been set, because of these assumptions.

The actor beliefs form the basis of the theoretical framework. In this theoretical framework, the focus is on three aspects: actors in the public policy process (paragraph 3.1), the context of actor beliefs and aspects of actor beliefs. In paragraph 3.2 the theory used for this operationalization will be introduced. Subsequently, the concepts 'context of actor beliefs' and 'actor beliefs' will be further operationalized for carrying out the research in paragraphs 3.3 and 3.4. This chapter ends with a conclusion and answer to the sub question.

2.1. Actors in the public policy process

Public policy processes are multi-actor processes, because often a variety of actors is involved, each with its actions and arguments. Actors in the policy process need to interact, formal and informal, with each other to promote the process (Birkland, 2001). Besides the involvement of actors, these policy processes also contain other characteristics (Hoogerwerf, 2008): the dynamics or movement (activities and events), interaction of factors (information and power), the sequence of stages and a recognizable pattern of these stages. Within these processes, actors, individuals or groups move with clear or less clear goals and resources (knowledge, information or money) (Hoogerwerf, 2008). The resources that actors have, and in particular resources unreachable to others, determine, among other things, the power of actors (Birkland, 2001). These actors can conduct policy and make decisions more or less well-considered (Colebatch, Hoppe & Noordegraaf, 2010; Hoogerwerf, 2008).

⁴ Based on definitions of 'obvious' in the Oxford Dictionary (2017)

The actors involved in the public policy process do not all share the same understanding of the issue, they have distinct concerns and agendas, which means the policy process to achieve the goal is complex (Colebatch, 2006). When a situation is considered a problem or not, depends on normative and empirical assumptions (perception of the situation)⁵, not only of one actor but also of the broader society (Hoogerwerf, 2008; Hoppe, 2011; Van Heffen, 2008). How policy should be formulated already begins with differences in the perception of the policy issue (Bressers & Klok, 2008). For the development of policy it is important that the understanding of the problem is shared (Colebatch et al., 2010). Relationships may arise between actors based on shared understanding of the policy area, trust and mutual interdependence, and because of that 'advocacy coalitions' can be formed (Colebatch et al., 2010). A shared understanding of the problem can be achieved by coming to agreement on the nature of a public issue or problem, where people's understanding about the situation sometimes needs to change (Hoppe, 2011). The role of the media can be important in determining the problem, because they can help ensure that issues get more attention and that issues come on the public agenda, policy agenda or decision-making agenda (Birkland, 2001; Herweijer & Pröpper, 2008).

The range of actors involved in the policy process can be distinguished in two categories: official and unofficial actors (Birkland, 2001). Official actors are involved in public policy processes due to their legal or constitutional responsibilities and have the power to make and enforce policies (legislative, executive and judicial) (Birkland, 2001). Governmental agencies such as the Government of the Netherlands (including Rijkswaterstaat), provinces and municipalities are official actors in the process. Unofficial actors are involved in the policy process without having any explicit legal authority (or duty) to participate, except the rights as a participant in the public process (Birkland, 2001). These are citizens, private organizations, the media or companies.

According to Stone (2002), actors that are affected by an issue or involved with it have an interest. These interests are sides in politics, for example, focused on a problem (Stone, 2002). Actors can be involved in more than one policy process. Some actors are more permanent players and others are only involved in a specific issue (Colebatch et al., 2010). These interests can be conflicting if there is disagreement (Birkland, 2001). It may also happen that people are mistaken about their interests, when they actually have or don't have an interest in the policy process (Stone, 2002). There are three different ways to distinguish between interests (Stone, 2002):

- real interests (problems and needs of people) and political demands (what people ask for from the government)
- passive interests (being affected by) and active interests (trying to affect)
- objective interests (actions or policies that affect people, consciously or unconsciously) and subjective interests (actions or policies of which people think they are affected by it)

Part of the public policy process is the decision-making. In all stages of the policy processes (agendas, policy preparation, policy making, policy implementation and implementation, compliance and enforcement, policy evaluation), there can be moments of decision-making. The decisions are concerning the achievement of goals and the use of policy instruments, but also times, tempo and time order (Bressers & Klok, 2008). In public policy processes, the decision-making lies with the official actors, among others as part of legal procedures. However, citizens have the possibility to influence the public policy directly or indirectly (Herweijer & Pröpper, 2008). For example via formal or informal participation, or indirectly via political parties, the media or interest groups. This contribution by citizens can determine the policy content (Herweijer & Pröpper, 2008).

2.2. Theory for the explanation of the unobvious policy decision to keep developing new roads in demographic decline regions

The specific interest of this study, is in the unobvious policy decisions to develop new roads in demographic decline regions and why demographic policy did or does not lead to a change in decision-making processes for road developments. Where it was expected that there would be other decisions made because of new demographic and regional economic policies, policy decisions did not change. These unobvious policy decisions will be examined on the basis of the influence of the beliefs of actors involved in the policy process.

⁵ These elements are part of the policy theory (Van Heffen, 2008)

This has led to the formulation of the problem statement:

How do actor beliefs influence unobvious policy decisions, in particular in the case of keep developing new roads in some Dutch demographic decline regions?

To explain policy decisions to keep develop new roads in demographic decline regions on the basis of the influence of actor beliefs, aspects of a theory will be used. There are several theories that could be useful to explain policy change. In this case, theory for policy change will be used to explain the occurrence of no change in policy decisions in the decision-making process despite changing policy. Theoretical framework parts of the Advocacy Coalition Framework provide a good source of explanation.

2.2.1. Advocacy Coalition Framework

The Advocacy Coalition Framework (ACF) is a theoretical model developed by Sabatier to understand and explain long-term processes (of a decade or more) of policy change and to deal with complex public policy problems and solutions (Weible & Sabatier, 2007, pp. 123-124). According to Hoppe and Peterse (1993), the framework can also be seen as a 'lens' to look towards and gain insight into policy change and explain belief and policy change when there is goal disagreement and there are technical disputes in which multiple actors are involved. It is thought that this connects well to this case study. Figure 1 shows that this theory provides a diagram to identify which factors (and their motives) mainly have been of importance in the policy process in bringing about this change (Sabatier, 1998)

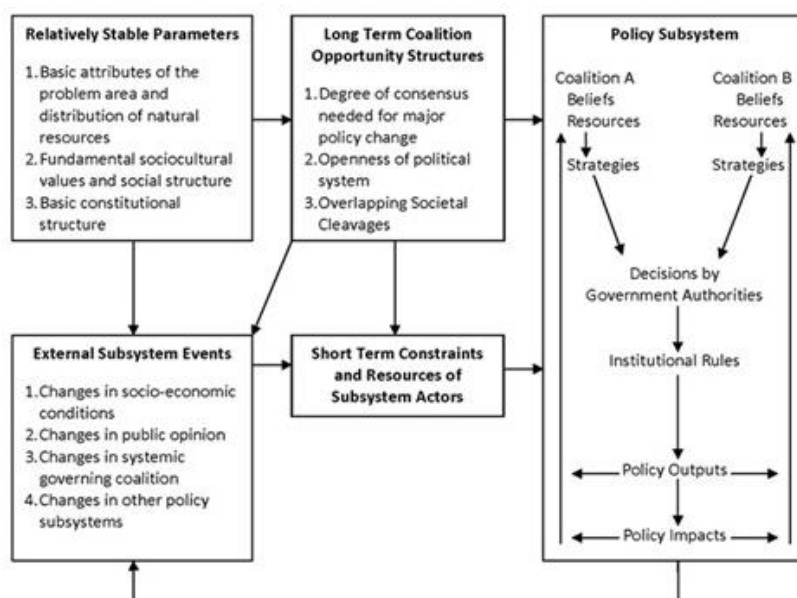


Figure 1: 'Flow diagram of the Advocacy Coalition Framework' (Sabatier and Weible, 2014, p. 189)

The Advocacy Coalition Framework appears to be very useful for this case study, because it can explain how and why certain unchanged policy decisions come about and why particular policy decisions and outcomes are different than expected and will be implemented, despite changing policies (the circumstances) or because of unchanged actor beliefs. Moreover, it provides theoretical parts for examining actor beliefs and the context of these actor beliefs influencing the actor beliefs that play a role in the decision-making process in the cases.

2.2.2. Policy theory

In this case the 'policy theory' is also very relevant. The assumptions of the policy theory form the basis of policies (Van Heffen, 2008). The assumptions consist of normative assumptions (problem perception, the origin of policy goals, the acceptability of the policy instruments and their effects) and empirical assumptions about the actual situations and developments in the policy environment (actual assumptions), the causes and consequences of the policy problem, relationships between factors (causal assumptions) and the achievement of a goal by particular means (final assumptions) (Van Heffen, 2008). This case study is about

the influence of actor beliefs on unobvious policy decisions. The expectation is that the assumptions of actor beliefs are not in line with the assumptions behind the new or changed policy, the policy theory. Demographic developments have led to changes in assumptions of actors, which in turn have led to the development of demographic decline policy. It appears that assumptions of actors about the implementation of this policy have changed. However, assumptions regarding the construction of roads do not match the assumptions regarding the demographic decline policy for these regions. The explanation can be that actors involved with the decision-making may have different underlying assumptions than the policy assumptions of the new or changed policy, because actors do not agree with the assumptions behind the new or changed policy, the policy theory, or because actors have other priorities. The expectation is that the developed policies are not followed, but actors held on to the decision for the mean of developing a road, to achieve the goals that have been set.

2.3. Actor beliefs

The beliefs of actors are a central part of the Advocacy Coalition Framework (figure 1). The ACF shows that policy beliefs of actors influence the development of policy decisions by governmental authorities (figure 1). Many different actors regularly interact in the policy subsystem to effectively achieve goals together with allies, if necessary over a long period of time in advocacy coalitions (a decade or more), to influence the policy formulation and implementation within a particular policy area, directly or indirectly (Sabatier & Jenkins-Smith, 1999; Weible & Sabatier, 2007). The extent and consistency of the involvement and influence of these actors can vary (Sabatier, 2007). Involved actors share a set of beliefs in the policy subsystem (Sabatier, 1999). The actors are amongst others motivated by belief systems through which actors simplify the world (Weible & Sabatier, 2007). This means that actors filter or ignore information that is inconsistent with their beliefs and incorporate information that is consistent with their beliefs and reinforces them, even if this information is on the one hand very uncertain or on the other hand of high-quality (Weible & Sabatier, 2007). At this point, important in this research is the shared belief of not taken into account demographic developments and developed policies in the decision-making process for the development of roads.

2.3.1. The context of actor beliefs

In the Advocacy Coalition Framework, two sets of 'exogenous factors': the relatively stable parameters and the external subsystem events are distinguished. Together these environmental elements form the 'broad societal context of the policy subsystem' and affect policy beliefs in the policy subsystem (figure 1) (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999; Weible & Sabatier, 2007). The policy subsystems in this research are the policy processes for the development of roads.

Relatively stable parameters

The relatively stable parameters are social, cultural, economic, physical, or institutional structures which form the basic frame of the policy making process in the policy subsystem (Weible & Sabatier, 2007). There are four types of relatively stable parameters (Sabatier & Jenkins-Smith, 1999): basic attributes of the problem area (good) (1), the basic distribution of natural resources (2), fundamental sociocultural values and social structure (3) and the basic constitutional structure (4). Those structures or circumstances are extremely difficult to change (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999). These parameters are stable for long periods of time, from several decades to over 100 years (Weible & Sabatier, 2007). Because they are so resistant to change, they cannot be strategically influenced by actors in the policy process (Weible & Sabatier, 2007).

External subsystem events

The second set of exogenous factors are the external subsystem events. The external subsystem events are about changes faster in time, periods of about a decade (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999). This means that the external subsystem events are much more dynamic than the relatively stable parameters. The four categories that are distinguished in the framework are (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999): changes in socioeconomic conditions (e.g. the demographic decline), changes in public opinion (e.g. the choices regarding the spending pattern of the government or the approach of societal problems), changes in systematic governing coalition (e.g. new governing coalitions following the elections) and policy decisions and impacts from other subsystems (e.g. changes in the organisation of public transport). These

developments can influence the actor beliefs, which can lead to changes in the policy decisions made by governmental authorities, as in this case study, the decision for the development of roads (figure 1).

The context in the ACF can be elaborated extensively. For this research the decision is made to look very specific at relevant aspects of the context of actor beliefs for the cases and what role these aspects might have had in the influence of actor beliefs. In this study the trends and developments regarding the development of main roads in the Netherlands and the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands will be discussed. Therefore sub question 2 and 3 are formulated, which will be described in chapter 4 and 5:

- *What are the developments regarding the development of main roads in the Netherlands?*
- *What is the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands?*

2.3.2. Aspects of actor beliefs

In the Advocacy Coalition Framework three main types of policy beliefs of individuals are distinguished: deep core beliefs, policy core beliefs and secondary aspects.

Deep core beliefs (principal beliefs)

The deep core beliefs are very resistant to change and are about the normative or fundamental values which individuals consider important, which appears in almost all policy areas and which is also about the political position and behaviour of the individual (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999; Weible & Sabatier, 2007).

Policy core beliefs (policy and preferences)

The policy core beliefs are more specific, are less resistant to change than the deep core beliefs and include views about the entire policy subsystem: causes of problems and seriousness of problems, the ability to solve problems and the effectiveness of solutions to address these problems (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999). It is assumed that policy change happens through coordinated activity among individuals with the same policy core beliefs (Weible & Sabatier, 2007). Therefore, this type of beliefs can be considered to be most important (Sabatier & Jenkins-Smith, 1999). These empirical elements may change over a period of time by new information and arguments (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999).

Secondary aspects (policy instruments)

The secondary aspects are related to the implementation of policy. Contrary to the two other types of beliefs, these beliefs are most likely to change and change in response to new information, events or because of changing strategies, whether or not self-decided (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999). These secondary aspects are empirical beliefs and policy preferences that relate to a substantive or territorial subcomponent of the policy subsystem such as beliefs about specific problems within the subsystem or the choice of policy instruments that are deployed (Sabatier, 1998; Sabatier & Jenkins-Smith, 1999). The development of new roads is an example of a policy instrument to utilize regional economic growth or to combat demographic decline or mitigate demographic decline.

In this research, the interest is in the influence of actor beliefs on unobvious policy decisions for the development of roads in demographic decline regions, in two cases. The term actor beliefs is derived from 'policy beliefs' in the Advocacy Coalition Framework. Therefore, the definition of actor beliefs is as follows: *beliefs of actors about the importance of the development of roads in demographic decline regions*. In this research the actor beliefs will be examined on the basis on three aspects:

- Usefulness and necessity of the development
- The role of demographic decline in the usefulness and necessity discussion
- Effects of the development

The usefulness and necessity of the road, including the role of demographic decline is about whether actors appoint the road development as useful or necessary, that something has to be done to solve the problem and whether the road is the solution to this issue. This connects especially to the policy core beliefs (policy

preferences), but also to the secondary aspects (policy instruments) and deep core beliefs (principal beliefs) at a higher level. In addition, the effects of both cases are intended to identify beliefs of actors about the consequences of the development of the road. This is about how actors look at the expected effects of the development, positive and negative side effects of the development. This connects mainly to the secondary aspects (policy instruments), which can also be based on deep core beliefs (principal beliefs).

In this research, actor beliefs will be collected and analysed. Examples of actor beliefs can be: "the development of a new road is unnecessary and a waste of money in demographic decline regions" or "the development of a new road is needed to prevent demographic decline", even though the latter is against the demographic policy. The fourth and fifth sub question in this research focus on the collection and influence of actor beliefs:

- *Which actor beliefs are involved in the policy processes of two cases for the development of the new road Dutch demographic decline region?*
- *How did actor beliefs influence the unobvious policy decision in the cases to keep develop new roads in demographic decline regions?*

2.4. Conclusion

In this chapter, the theoretical framework has been described. For this purpose, the following question has been formulated: *which theories can describe or explain the influence of actor beliefs on unobvious policy decisions, in particular to keep develop new roads in demographic decline regions?* In this research, it is presumed that policy decisions to keep developing new roads in demographic decline regions can be considered unobvious. These policy decisions can be considered unobvious, because (demographic) policy has been made or changed because of new developments, but the policy change did or does not lead to changes in specific policy decisions in decision making processes. The explanation of policy decisions can be that actors may have different underlying assumptions than the policy assumptions of the new or changed policy, because of disagreement with the assumptions behind the new or changed policy or because actors have other priorities. The expectation in this research is that actors held on to the decision for the development of roads (means), to achieve the goals that have been set, despite the new demographic and regional economic policy goals.

There might be several ways to explain the unobvious policy decisions, but in this research, the unobvious policy decisions will be examined on the basis of the influence of the *beliefs of actors* involved in the decision-making process. To explain these unobvious policy decisions parts an existing theory will be used. The Advocacy Coalition Framework appears to be very useful for this case study, because it describes that many different actors with their policy beliefs can interact to achieve goals and influence policy decisions by governmental authorities, that lead to policy change over a long period of time (a decade or more). However, in this research, it will be used to explain that no changes were made in decision-making processes, despite the change in policies.

The Advocacy Coalition Framework is an extensive framework. In this case study, the decision is made to focus on the specific concepts 'context of the actor beliefs' and the 'actor beliefs'. The context of actor beliefs focuses on relevant aspects, as part of the environmental elements in the theoretical framework: trends and developments regarding the development of main roads in the Netherlands and the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands. The concept of actor beliefs is derived from the policy beliefs of actors in the Advocacy Coalition Framework and concerns beliefs about the importance, usefulness and necessity of the development of roads in demographic decline regions. The actor beliefs consists of three aspects: the usefulness and necessity of the development of roads, the role of demographic decline in the usefulness and necessity discussion and the effects of the development of roads in the cases.

3. METHODOLOGICAL FRAMEWORK

In this chapter is described how this study is designed and conducted. The first paragraph starts with a description of the research design. This is followed by a paragraph in which the case selection and introduction of the selected cases are described. Paragraph 3.3 includes the methods for the collection of the data and in paragraph 3.4 the strategy for the analysis of the data will be clarified.

3.1. Research design

This research has a qualitative character. The research strategy which is used to conduct this research is case study design. Two cases are examined to provide insight into and an explanation for the research topic: the influence of actor beliefs on unobvious policy decisions, in particular for the development of roads in demographic decline regions. The units of analyses in this study are the decision-making processes of road development in demographic decline regions. This connects to the Causal Process Tracing approach, one of the case study approaches described by Blatter and Haverland (2012). In this approach the goals are to provide explanations for the outcome (results of a process) and to understand whether and how something influenced the outcome (Blatter & Haverland, 2012, pp. 84-85). In order to explain the issue and the collected empirical data from both cases, a theoretical framework is used. Initially the cases are studied separately. Later, the results of the cases will be interpreted and compared.

3.2. Sampling strategy: case selection

In this research, the focus is on two cases for road development in a demographic decline region. For the practicality and comparability of this study the choice has been made to have a maximum of two cases. The cases are deliberately selected, but also meet a number of criteria. Both cases are decision-making processes of developments of the Dutch national or provincial road network (only N-roads). This excludes either highways (A-roads) or municipal roads from the case selection. Furthermore, both road developments are partially or entirely located in an identified Dutch demographic decline region. In addition, in both cases an official moment of decision-making regarding whether or not continue the development of roads must have taken place.

3.2.1. The road developments of De Centrale As (N356) and N18 Varsseveld-Enschede

In this research, two Dutch cases De Centrale As (N356) and N18 Varsseveld-Enschede are chosen to examine by means of a reconstruction of the cases and especially present actor beliefs about the importance of road development in demographic decline regions. De Centrale As (N356) is a provincial road which is already developed and located in the region Noordoost Friesland, in the northeast of the province of Friesland. The national road N18 Varsseveld-Enschede is currently in construction and is located partly in the region Achterhoek in the province of Gelderland and partly in the region Twente in the province of Overijssel. For the readability of this study the cases are numbered:

- Case I: De Centrale As (N356)
- Case II: N18 Varsseveld-Enschede

Demographic decline regions

Since several years the regions Noordoost Friesland and Achterhoek to a certain extent have to deal with demographical decline. Both regions are officially identified as demographic decline region by the Government of the Netherlands. The region Achterhoek has been appointed as demographic decline region in 2014 and since June 2015 this also applies to the region Noordoost Friesland (Rijksoverheid, 2015b; Rijksoverheid, n.d.a).

Long-term decision-making processes

Long-term, complex and extensive decision-making processes and procedures went prior to the construction of both roads. The start of the official procedure for the development of De Centrale As was in 1999 and in 2016 the road has been opened for use. The beginning of the process for the development of the N18 Varsseveld-Enschede was in 1992, but this case has had a long run-up and starting period at the beginning of

the process. The construction of the N18 has started in 2016. The decision-making has already taken place in both cases.

Differences between the cases

On the basis of the appointed criteria the cases appears to be quite similar, but there are also some differences between the cases. One of the differences is the government responsible for the policy process for the development and for the maintenance of the road. The Dutch Ministry of Infrastructure and the Environment is responsible for the development of the N18 Varsseveld-Enschede and the province of Friesland is responsible for the development of De Centrale As (N356). In addition, there are also differences regarding the project and the location and function of the road. This will appear in chapter 6.

3.2.2. Policy processes

In this research the concept of 'policy processes' will be frequently used. This also applies to the concept of 'decision-making processes'. For the data collection, in this case both refer to the part of the processes between the first moment the responsible government regarded the initial infrastructural situation as a policy problem and the moment when the plan for the development became irrevocable (completion of the legal procedure). This means that other phases which are usually considered as a part of the policy process, such as the implementation of the plan (construction of the road) and the evaluation are not included in this study.

3.3. Data collection

To be able to answer the research question and sub questions, two methods of data collection are used: document analysis and interviews. This data collection is important for the reconstruction of the issue, including the processes and actor beliefs about the importance of road development in demographic decline regions. In this research, data is collected through a combination of desk research and conducting interviews. The choice for more than one method and data from several sources can ensure a more in-depth view, because of more complete information and confirmation (Verschuren & Doorewaard, 2007, p. 184).

3.3.1. Document analysis

The collection and analysis of data from (policy) documents is very important for answering the sub questions and for the reconstruction of the actor beliefs about the importance of road development in demographic decline regions. For sub question 2 and 3, mainly information from documents is collected. This includes reports, governmental policy documents and books regarding road infrastructure and demographic decline. The information from reports is amongst others gained through organisations and institutions such as the Environmental Assessment Agency (*Dutch: Planbureau voor de Leefomgeving*) part of the Government of the Netherlands) following demographical, spatial and economic developments which, over the years, have been described in various reports. These used (policy) documents are published in the past ten years and / or part of current policy and therefore relevant to use for this study.

In addition, (policy) documents and reports are collected for the elaboration of sub question 4 and 5 (chapter 6 and 7). The aim of this data was to make a reconstruction of the process and to collect the actor beliefs that have played a role in the process. This also applies to the collection of data through interviews, which will be discussed below. For this reconstruction, (policy) documents about the cases established or commissioned by the responsible government and reports drafted during legal procedures of the cases are used. Especially for the reconstruction of the actor beliefs reports of public response (*Dutch: Nota's van Antwoord*) in both cases have been very useful to collect the written arguments and to create a complete picture. Some of these reports are not accessible to check, because these are part of personal communication. The information for these sources is included in Appendix 2.

3.3.2. Interviews

Besides the collection of information from textual material, also information from interviews is collected. These interviews have been useful in gathering more substantive information from actors involved in the decision-making process, to collect the actor beliefs about the importance of road development in demographic decline regions, to provide an overview of the actors involved, for information about the issue,

process and the decision-making. The interviews were also important to strengthen and complement the collection of information from textual material and have helped in obtaining other useful documentation. The information from the interviews is mainly used for answering sub question 4 and 5 (chapter 6 and 7).

For the collection of adequate information semi-structured interviews have been prepared. This structure has determined the direction of the interview and what needs to be addressed during the interview (Boeije, 2005, pp. 57-59). Not all formulated questions were asked in each interview, because some questions were not relevant for all respondents. An overview of the interview questions is included in Appendix 1.

In order to conduct the interviews a 'snowball method' is applied. This means that with the help of other respondents, contact can be made with new respondents (Boeije, 2005, p. 53). For this research eight interviews have been conducted with actors (governmental actors and other actors) involved in the processes, of which three interviews for the case De Centrale As and five interviews for the case N18 Varsseveld-Enschede. The interviews have been conducted in the period from November 2016 until the beginning of February 2017. Seven interviews are transcribed in its entirety and one interview is not transcribed in detail. In this study a coding is used for the source listing of the interviews and the references in this research. An overview of the information can be found in Appendix 2.

3.4. Analysis of the empirical data

The empirical data from documents is collected for the description of sub question 2 and 3, the context of the actor beliefs (chapter 4 and 5). This description is directly made on the basis of the sources. In addition, for the reconstruction of the processes in both cases the information from documentation is processed directly on the basis of the sources. For the description of the actor beliefs about the importance of road development in demographic decline regions and partly the reconstruction of the process, the analysis of the data from interviews, reports of public response (*Dutch: Nota's van Antwoord*) and some other relevant documents, is carried out by open coding. For coding and structuring the data the programme Atlas.ti is used. First, these documents are labelled on the basis of new chosen labels and in-vivo coding, which means that labels arise from the data (Boeije, 2005, p. 92). Several labels are provided with a comment in order to clarify the label. If possible, labels with the same meaning are merged into one label. Categories have been used for the elaboration of sub question 4 (chapter 6), especially the three aspects of actor beliefs which arise from the theoretical framework: actor beliefs about the usefulness and necessity of the development (including economic development), the role of demographic decline in the usefulness and necessity discussion and the effects of the developments. On the basis of chosen categories (main labels), labels have been structured and divided among the categories. Because of structuring and dividing labels, there are also labels which do not fit in one of the categories and therefore do not prove to be necessary in the analysis. The elaboration in chapter 6 is used for the explanation and comparison of the influence of actor beliefs on unobvious policy decisions for road development in demographic decline regions in chapter 7 (sub question 5).

4. ROAD DEVELOPMENT IN THE NETHERLANDS

During the last century in the Netherlands in the field of road infrastructure a lot has changed. This concerns the size of networks, improvement of the accessibility and mobility, but also the user and use of the network, development of vehicles and the development of these networks by responsible actors concerned with the infrastructure (Mom & Filarski, 2008). Therefore, in this chapter sub question 2 will be answered: *what are the developments regarding the development of main roads in the Netherlands?* This is the first part of the context of the actor beliefs, about the importance of the development of roads in demographic decline regions, in the cases. The theory in chapter 3, based on the Advocacy Coalition Framework, mentions that changes in policy come about due to developments in the context of actor beliefs influencing policy decisions. For actor beliefs influencing the policy decision about the development of roads in demographic decline regions, the context in the field of road infrastructure is important to describe.

To answer the sub question, the development of road infrastructure in recent decades (4.1), the current trends in road development (4.2), the importance of the development of the Dutch main road network (4.3) and the development of roads in Dutch national policy (4.4) will be discussed. In addition, considering the cases, paragraph 4.5 addresses the most important legislation regarding the construction or modification of main roads (national and provincial). In paragraph (4.6) the relevance of the context of the actor beliefs will be discussed and the chapter ends with a conclusion in paragraph 4.7. First the concepts accessibility and mobility need more attention, because both will be frequently used in this chapter and throughout this study. For this thesis, the following existing definitions of 'mobility' and 'accessibility' are used:

- **Mobility:** " . . . the number of movements made during a certain time period. . . . These movements may vary in journey time, distance, the mode(s) of transport used . . . and motive (commuting, recreational, . . . etc.)" (CROW, 2013, p. 185)

Based on this definition, '*changes in mobility*' can be interpreted as more trips in a given period of time, because of shorter travel time or distances, different modes of transport, travel motives or a combination of several travel motives.

- **Accessibility:** "*the combination of the amount of time, cost and effort it takes to get from one place to another and the amount of activities that can be found on this place*" (Geurs, 2013, p. 23)

In this study '*improving the accessibility*' can be interpreted as reducing time, cost or effort in order to get from one place to another. It could also mean: increase in the amount of activities on the location to be reached.

4.1. A century of road development

The development of the road network started in the first decades of the 20th century which had notably to do with the development and first use of the automobile, which came up during that time (Mom & Filarski, 2008). At that time the first national road plans were made, the first motorways were constructed, the quality of existing roads has been improved and roads for short and long distances had to be separated (Mom & Filarski, 2008). Around 1950, further development of the road network was initiated (Mom & Filarski, 2008). The increase of mobility in the Netherlands has had a huge impulse because of the increase of car use (Harms, 2008; Mom & Filarski, 2008). Significant changes in the approach of motorway infrastructure were necessary due to the 'mobility explosion' late 50s and early 60s (Mom & Filarski, 2008). Part of this enormous development was the substantial increase of the possession of mopeds and later also cars (Mom & Filarski, 2008). In the period from 1945 to 1970 there have been a lot of physical changes in the Netherlands, including the formation of cities, urban sprawl and land consolidation, in which roads played a crucial role (Mom & Filarski, 2008). Since 1970 the road network was already very similar to the structure as it is today (Mom & Filarski, 2008). The road system of the Netherlands has been developed into the current dense traffic network (figure 2).

This growth is clearly reflected in the figures. From the late 60's, the road network has increased from about 88,000 km and approximately 108,000 km in 1980 to more than 139,000 km in 2016 (Mom & Filarski, 2008; Statistics Netherlands, 2016). The road network is important for commuting, commercial transportation, to

school, leisure activities, reaching facilities, services and social visits (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). The traffic volume is high because of the dense population and road cargo (Statistics Netherlands, 2015).

Het Nederlands hoofdwegennet, 2016



Figure 2: Dutch network of main roads, 2016 (red = national road, yellow = provincial road)
(Compendium voor de Leefomgeving, 2016)

The growth of the mobility and road network in recent decades has various causes. There are four key motives that can explain the growth of the mobility (Harms, 2003):

- **Demographic developments:** growth of the population, migration;
- **Socio-economic developments:** the increase of prosperity, the increase of consumer spending, falling and rising costs;
- **Spatial developments:** the expansion of the road system and the separation of living and working;
- **Socio-cultural changes:** changes in family formation, marriage, the position of women, educational and professional perspectives and leisure.

4.2. Current trends in Dutch road development and road use

The Ministry of Infrastructure and the Environment (and Rijkswaterstaat), the provinces, municipalities, water boards and other parties (port operators, 'Dutch Railways' etc.) are responsible for the Dutch road network. Together they manage, maintain and develop this network. Still existing roads are being expanded or new roads will be developed. However, since the beginning of the 21st the growth of the network slows down. In recent years the increase of new kilometres is between 100 and 500 per year (Statistics Netherlands, 2016). Also the mobility still increases, but in contrast to the last decades, the growth of the (car) mobility flattens both in travel speed and in the number of kilometres travelled (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). The increase and decrease of the car mobility is determined by the behaviour of users (mobility behaviour, choice of transport, time use), developments in the prosperity of the regional economy, traffic and transport policy, road cargo, weather, road works, capacity and technological developments (Verwest & van Dam, 2010). For example, because of growth in income and changing needs, the work location and residential location have been spread out and car use and ownership have increased (Geurs, 2013). Besides, demographic developments play an important role, such as developments in the number and composition of households and age composition of the population (Geurs, 2013; Verwest & van Dam, 2010). Especially smaller households provide for more movements and a longer travel time (Harms, 2003). Also, in the near future, because of the increase of elderly people (65 and over), a larger group of these people will keep travelling by car (Harms, 2003).

In the next years more regional differences in mobility will arise (growth, stagnation, decline) and the size of the growth of mobility will be uncertain (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). With the exception of the Randstad and other central regions, it is expected that the growth of mobility in a large part of the Netherlands will stabilize or decrease after 2020 (Hilbers et al., 2011). In its entirety, the mobility continues to increase until 2040, but at a slower pace. The declining growth can partly be explained by the lower growth of the population and lower economic growth (which also has consequences for road cargo), but also by the aging population and car use among young people (Nijland, 2014). Not only the car mobility, but also the growth of road cargo decreased in recent years compared to the preceding decades (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). Also, the average travelled distance of trucks has decreased (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016).

Because of the changes in the growth of the mobility, the choice for capacity expansion of the Dutch road network to improve the accessibility and mobility seems no longer obvious. Facilitating the growth of mobility is no longer the point of focus, particularly in demographic decline regions, as opposed to the preservation of the accessibility (CROW, 2013). This also has implications for current and future policy on infrastructure (Nijland, 2014). The uncertainty regarding the mobility task, and thus the benefits of capacity expansion, ensures that it is necessary to look for flexible ways to improve the accessibility (Hilbers et al., 2011). Investments in the expansion of the road network are precious, will be less profitable and probably only really lead to benefits if the flow on certain places improves substantially (Nijland, 2014; Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). The emphasis will shift from constructing new roads to the management and maintenance of the existing network (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016).

4.3. The importance of road development

In this paragraph the importance of road development in the Netherlands will be addressed. Also, the development of roads has various effects. Additionally, in the environment-mobility-feedback cycle, the interaction between environment, need of transportation and social developments will be made clear.

4.3.1. The purpose of road development

There are several purposes for the construction of roads and the expansion of the road network: decrease in travel time, increasing the reliability of travel time (by decreasing congestion) and improving the accessibility (of regions) (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). In addition, increasing road safety by improving the flow, decrease of traffic density and protection of the living environment may play a role (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). The road infrastructure can also be changed or extended to stimulate regional economic development. However, the effects on the economy in regions are often not clear or this is at the expense of other surrounding regions (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). In contrast, there are costs for the development of roads and the future management and maintenance of infrastructure (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). These costs are high, in which often good integration must be taken into account and must outweigh the benefits (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016).

4.3.2. Effects of road development

The effects of the development of road infrastructure can be positive or negative and may be different in every case. One of these effects is (traffic) safety. The safety either increases or decreases because of the construction of new roads (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). In addition, new infrastructure can lead to a decrease of traffic congestion and an improved traffic flow and accessibility. Although, in the long term capacity could also attract new traffic which means that the effects are less significant (Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). Other effects of the expansion of infrastructure are nuisance during construction, environment pollution, air pollution and noise disturbance. Also, the economic activity can be affected by improvement in mobility through the development of infrastructure. Improved mobility offers people more options regarding location choices for living, work, companies and entrepreneurs and participation in society, which together contributes to economic growth and prosperity (Van Maarseveen & Romijn, 2015; Centraal Planbureau & Planbureau voor de Leefomgeving, 2016). Through enhanced mobility, other choices can be made regarding travel and transport.

4.3.3. The environment-mobility-feedback cycle

The expansion and change of road infrastructure are not isolated. The environment and mobility are strongly interconnected (Geurs, 2013). Developments in the construction or adjustment of the road network interact with the accessibility, locations of activities and land use, but are also connected to needs for transportation and social development. In the environment-mobility-feedback cycle in figure 3, these interactions are displayed. The cycle also shows how social developments (economic, demographical, technological, environmental and developments regarding liveability and socio-cultural), transport needs and opportunities both influence each other. But also how the needs and abilities may cause developments in traffic, transport, accessibility, land use and locations of activities. Governments have the ability to influence this with, among others, policies for traffic, transport and spatial planning (Geurs, 2013).

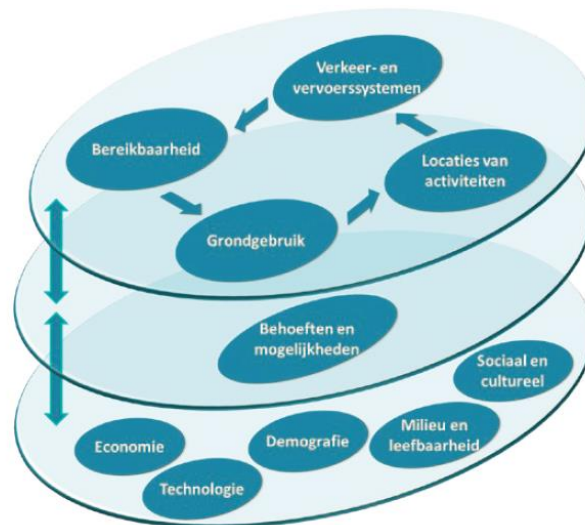


Figure 3: The interaction between environment and mobility, need of transportation and social developments (Geurs, 2014)

4.4. 'The Netherlands competitive, accessible, liveable and safe'

The Government of the Netherlands is involved with and responsible for the development of the national road network and the development of infrastructural policy. This paragraph will describe the importance of the expansion of existing roads and the construction of new roads, its consequences and solutions for accessibility and mobility problems. In 2012, the Ministry of Infrastructure and the Environment prepared the structural vision 'Structuurvisie Infrastructuur en Ruimte – Nederland concurrerend, bereikbaar, leefbaar en veilig' (English: 'National Policy Strategy for Infrastructure and Spatial Planning – the Netherlands competitive, mobile, liveable and safe'). This national policy document is focused on the entirety of environmental and spatial policy such as energy, spatial development, environmental quality, external safety and infrastructure. The vision contains ambitions of the national government for the Netherlands in 2040, taking into account current developments (Ministerie van Infrastructuur en Milieu, 2012). For example, demographic or economic developments. With this plan, the government wants to provide in general more regional solutions and a more central position for the user (decentralized policy by governments, citizens, businesses and organizations), prioritize investments and better connect spatial developments and infrastructure (Ministerie van Infrastructuur en Milieu, 2012). For the medium term (until 2028), the Government of the Netherlands has determined three main goals (Ministerie van Infrastructuur en Milieu, 2012):

- Increasing the competitiveness of the Netherlands by strengthening the spatial-economic structure of the Netherlands;
- Improving and spatial ensuring the accessibility in which the user must be central;
- Ensuring a liveable and safe environment in which unique natural and cultural heritage values will be preserved.

4.4.1. Importance of development of roads in national policy

Compared to other countries, the Dutch infrastructure is very heavily burdened (Ministerie van Infrastructuur en Milieu, 2012). According to the Ministry of Infrastructure and the Environment (2012), this means that the user depends on well-functioning infrastructure and therefore, good management and maintenance of existing infrastructure is of great importance. For replacement or renovation of roads the Dutch government takes into account the size and composition of traffic, the intensity of road use, the type of infrastructure and other (local) conditions (Ministerie van Infrastructuur en Milieu, 2012). Every year the Government of the Netherlands spends between 2.5 and 3 billion on average for the construction and improvement of the road network (Rijksoverheid, n.d.a). According to the Government of the Netherlands, the social benefits for the construction or expansion of road infrastructure in infrastructural projects often exceed the costs (Ministerie van Infrastructuur en Milieu, 2012). There are many reasons for these investments (Ministerie van Infrastructuur en Milieu, 2012):

- **Improving traffic flows:** prevention of bottlenecks, solve or prevent congestions;
- **Capacity:** sufficient capacity at peak times for the short and long term, more travel comfort through reducing capacity utilization (e.g. public transport), improving the utilization of the capacity of the existing mobility system, reduction of the need for high investments in peak capacity;
- **Improving the accessibility:** door-to-door accessibility, reliable travel times;
- **Improving networks:** construction of missing links or nodes in the network, strengthening the coherence of networks, connections between mobility networks and nodes for people and goods;
- **Quality of infrastructure:** replacement or renovation of vulnerable old infrastructure;

4.4.2. Goals and solutions

In the structural vision, 13 national interests are appointed on which the Government of the Netherlands wants to achieve results. The four interests that focus on infrastructure are (Ministerie van Infrastructuur en Milieu, 2012): a robust network of roads, railways and waterways, around and between the major urban regions, including the hinterland connections (1), better use of the capacity of the existing transport system (2), maintaining the main network of roads, railways and waterways to ensure the functioning of the transport system (3) and careful and transparent decision-making regarding spatial and infrastructural decisions(4).

The government has the intention to create a robust and consistent mobility system, with more choices for the user and sufficient capacity for the growth of the mobility, for the medium term (2028) and long term (2040) (Ministerie van Infrastructuur en Milieu, 2012). This should be achieved through investments and collaborations between governments (Ministerie van Infrastructuur en Milieu, 2012). In this way, a reliable network can arise, also in case of accidents, circumstances of extreme weather or other disturbances (Ministerie van Infrastructuur en Milieu, 2012). For a more integrated approach, the Government of the Netherlands wants to improve the different mobility networks (road, rail and water) and the connections between these networks, the so-called 'chain mobility' (*Dutch: 'ketenmobiliteit'*), in conjunction with other spatial developments (Ministerie van Infrastructuur en Milieu, 2012). Three instruments the Ministry of Infrastructure and the Environment can deploy for this purpose are (2012):

- **Accessibility indicator:** intends to gain insight in the quality of the accessibility for the entire mobility system in conjunction with economic and spatial developments. In this way, it becomes clear where possible accessibility problems are located, where most efficiency can be achieved (highest benefit), which areas have priority to invest and hence choices may be better justified.
- **Policy mix:** smart investments, innovation and maintenance, to improve the accessibility. Smart investing means, among other things, that investments are user-centered and the spatial economic performance of the regions and the Netherlands as a whole will be taken into account. Due to the increase of regional differences the deployment of the policy mix is effective.
- **'Better utilization' (*Dutch: 'beter benutten'*):** this is a programme to look at other, more effective, options in addition to the necessary investment in the transport system, in order to increase the capacity of the existing network, increase options for the user, optimize and achieve reliable journey times and reduce peak times.

4.5. Procedures for development of national and provincial roads

For the development of new roads or alteration and improvement of existing Dutch roads, there are specific legal procedures. The procedure which is applicable, depends on the government which is responsible for the intended road development. In the Netherlands there are different procedures for the construction or adjustment of national roads (case N18 Varsseveld-Enschede) and provincial roads (case De Centrale As): the extensive and regular Infrastructure Act procedure for national roads and a procedure for provincial roads via the provincial embedding plan (*Dutch: provinciaal inpassingsplan*). This is determined in the Infrastructure Act (*Dutch: Tracéwet*) and the Spatial Planning Act (*Dutch: Wet ruimtelijke ordening*). In view of the decision-making processes in the cases, both procedures will be shortly described.

It is important to mention that also other regulations relating to public procedures, development of roads, nature, the environment and expropriation apply to the cases, but these are less relevant to address. Besides, the Ministry of Infrastructure and the Environment prepares the new Environment and Planning Act (*Omgevingswet*), in which the current regulations for environmental and spatial projects will be integrated and simplified (Rijksoverheid, n.d.e). Currently, these are all part of several existing acts such as the Infrastructure Act and Spatial Planning Act (Rijksoverheid, n.d.e). As expected, the Environment and Planning Act will take effect in 2019.

4.5.1. Infrastructure Act

The Infrastructure Act (*Tracéwet*) is a Dutch law which is adopted in 1993. This law sets out rules for the decision-making process regarding the construction and adjustment of main roads, national railroads and main waterways (*Tracéwet*, 1993). The Infrastructure Act consists of two possibilities for the construction or adjustment of roads (Rijkswaterstaat, n.d.): an extensive procedure for the construction of new main roads or an adjustment of an existing main road, which means the road will be widened with more than two lanes (art. 2 *Tracéwet*) and a regular procedure for adjustments of existing roads. The Infrastructure Act procedure consists of the following steps (Rijkswaterstaat, n.d.; *Tracéwet*, 1993):

1. Starting decision (art. 2 *Tracéwet*, 1993)
2. Exploration (art. 3 *Tracéwet*, 1993)
3. Decision of preference
4. Design record of decision of the route
5. Record of decision of the route and final decision by the Minister of Infrastructure and the Environment
6. Implementation
7. Evaluation and test of completion

There is a difference in the number of consultation opportunities. The extensive Infrastructure Act procedure contains three official moments of consultation: at the design structural vision (*ontwerpstructuurvisie*) and environmental impact assessment, as part of the third step, the design record of decision and the record of decision (Rijkswaterstaat, n.d.). Also after the starting decision and the exploration there can be a moment of consultation (Rijksoverheid, n.d.d). During the regular procedure there is only the possibility to consult in the design record of decision and the record of decision.

4.5.2. Provincial embedding plan

The Spatial Planning Act (*Dutch: Wet ruimtelijke ordening, Wro*) has followed the previous Spatial Planning Act in 2008 (*Dutch: Wet op de ruimtelijke ordening, WRO*). This law includes new rules about the procedure for the development of provincial roads such as the provincial embedding plan. The Spatial Planning Act states that, besides municipalities, also provinces and the Government of the Netherlands have the authority to make zoning plans (*Wet ruimtelijke ordening*, 2006). The two possibilities are the national embedding plan (*Dutch: rijksinpassingsplan*) or the provincial embedding plan. An embedding plan can be made if there is a provincial or national intention to construct or change a provincial road, to make this legally possible and to spatial record these interests (art 3.26, art. 3.28 *Wet ruimtelijke ordening*, 2006). The rules set out in section 3.1., 3.2 and 3.3 of the Spatial Planning Act for establishing a municipal zoning are also applicable to the preparation of an embedding plan. In the case of a provincial embedding plan, the provincial council and provincial executive

council are responsible for the decision-making process (art. 3.36 lid 2 Wet ruimtelijke ordening, 2006). During the procedure the concerned municipal council(s) will be consulted in making decisions and can collaborate, but the provincial or Government of the Netherlands is responsible for this procedure (art. 3.26 lid 1 Wet ruimtelijke ordening, 2006). When it comes to cross-border developments, Dutch provinces can also collaborate to make a structural vision (art 2.2 lid 4 Wet ruimtelijke ordening, 2006). The procedure for the provincial embedding plan consists of several phases:

- preparatory decision (voorbereidingsbesluit) (art. 3.7, 3.8 and 3.9, Wet ruimtelijke ordening, 2006)
- preliminary design embedding plan (not official part of the procedure) (voorontwerp inpassingsplan)
- design embedding plan (ontwerp inpassingsplan)
- adoption of the embedding plan (inpassingsplan)
- irrevocable embedding plan

There are several moments of consultation during this procedure: at the preparatory decision, the preliminary design embedding plan, the design embedding plan and embedding plan (Provincie Gelderland, n.d.; Wet ruimtelijke ordening, 2006).

4.6. Relevance of the context of actor beliefs

In this chapter, several relevant aspects of the context of actor beliefs, about the importance of road development in demographic decline regions, have been described. The aspects of the context of actor beliefs in the field of road infrastructure, which can be important for the formation of the actor beliefs in the cases, are the trends in road development and the importance of road development: why roads are being constructed, why roads are necessary and the advantages and disadvantages. An example are the changes in the increase or decrease of mobility and its causes and impacts (accessibility and traffic safety), which may play a part in actor beliefs. In addition, the policy for infrastructure and a change of these policies can play a part in the beliefs of involved actors. This can be aimed at solutions of expanding the infrastructural network or improving the existing network, but also the focus of policy (geographical, type of infrastructure) and available budgets. A change in infrastructural policy due to developments and the decision for other policy solutions, might affect actor beliefs about the importance of road development in demographic decline regions. This is what this research is about. Laws and regulations and legal procedures are expected to be much less important for the actor beliefs about the usefulness and necessity, demographic decline in usefulness and necessity and the effects of road development.

4.7. Conclusion

In this chapter, sub question 2 is elaborated: *what are the developments regarding the development of main roads in the Netherlands?* This elaboration shows that, in the 20th century, the Dutch road network has been expanded considerably. Still, roads are being constructed and adjusted, but the pace of the expansion has declined significantly. The investment in roads is important to maintain and improve the heavily burdened infrastructure and networks for its users. This is also reflected in the structural vision (2012) of the Ministry of Infrastructure and the Environment. However, in the field of road construction, change occurs and the choice of road expansion seems no longer obvious. Alternative approaches to maintain and improve the road network appear to be more and more important. Besides, in the coming years more and larger differences between regions are expected and the mobility changes due to demographic and economic trends. Legislation for the construction or adjustments of national (Case II N18 Varsseveld-Enschede) and provincial roads (Case I De Centrale As) is included in the Infrastructure Act (Tracéwet) and the provincial embedding Plan (Spatial Planning Act). In the elaboration, there has been specific attention to the context of the actor beliefs in the cases. The aspects of the context that could influence the actor beliefs about the importance of the development of roads in demographic decline regions, or can be important for the formation of these actor beliefs, are the trends in road development, the importance of road development, based on actual advantages and disadvantages and in addition changes in policy for infrastructure.

5. THE ROLE OF ROAD DEVELOPMENT, ACCESSIBILITY AND MOBILITY IN DEVELOPMENTS OF DEMOGRAPHIC DECLINE

Since the late nineties, and in particular since the start of the 21st century, several Dutch border and rural regions are confronted with demographic decline (Verwest & van Dam, 2010; Rijksoverheid, n.d.a). This demographic decline consist of several aspects and has several causes and expected consequences for regions dealing with this demographic decline. In this chapter, sub question 3 will be answered: *what is the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands?* This is the second part of the context of actor beliefs, about the importance of the development of roads in demographic decline regions, in the cases. In the theoretical framework (chapter 3), based on the Advocacy Coalition Framework, is described that changes in policy come about due to developments in the context of actor beliefs influencing policy decisions. For actor beliefs influencing the policy decision about the development of roads in demographic decline regions, the context in the field of demographic decline and especially the role of road development in relevant (policy) documents for demographic decline regions, is important to describe.

At first the phenomenon of demographic decline and the causes and expected consequences of the demographic decline for the Netherlands will be introduced (5.1). Then, specific attention will be paid to the expected consequences of the demographic decline on mobility and infrastructure (5.2). Subsequently, current policy documents, relevant for the demographic decline regions Achterhoek and Noord Oost Friesland, are used to describe the role of development of road infrastructure, the accessibility and mobility in policy for demographic decline regions (5.3). In paragraph 5.4 the importance and relevance of the context of the actor beliefs will be discussed and in paragraph 5.5 the conclusion will be described.

5.1. Demographic decline in the Netherlands

Several border and rural regions in the Netherlands have to deal with demographic decline. Nevertheless, a declining population is not a new phenomenon in the Netherlands. At the end of the 20th century some regions were already facing a decline and also previously there have been different places in the Netherlands dealing with a decline of the population (Van Dam, de Groot & Verwest, 2006). According to forecasts of the Dutch Environmental Assessment Agency and Statistics Netherlands (*Dutch: Centraal bureau voor de Statistiek*), until 2040 in more than a quarter of the municipalities in the Netherlands, the number of inhabitants will decline (Verwest & van Dam, 2010). This involves a quarter of a million inhabitants, in particular in Dutch border regions and rural regions. In contrast, the population in municipalities in the central (urban) parts of the Netherlands, including the Randstad, will increase by more than 1.25 million people (Verwest & van Dam, 2010). Among other things, due to this development the differences between regions increases (Ritsema van Eck et al., 2013). The expectation is that after 2040 a nation-wide decline will take place (Ritsema van Eck et al., 2013; Verwest & van Dam, 2010). Figure 4 illustrates the growth and decline forecasts per municipality, which may change in time.

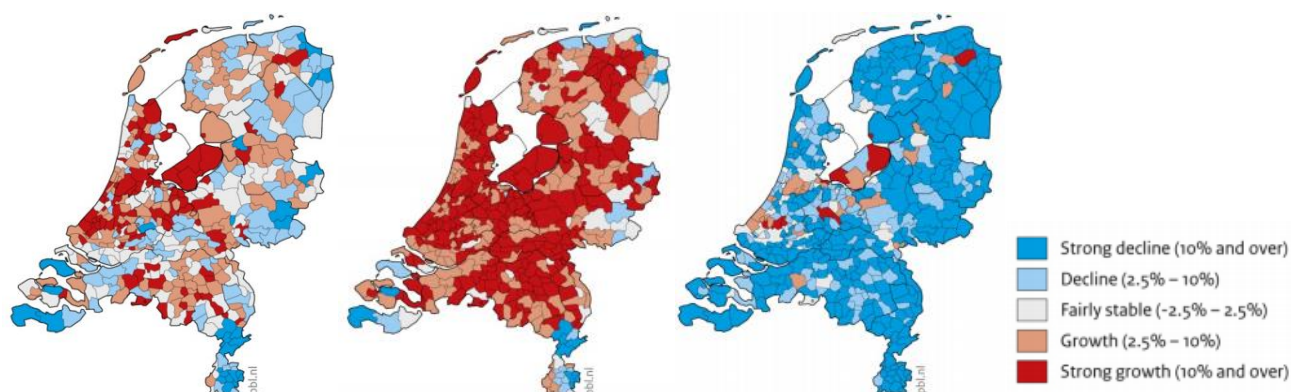


Figure 4: Forecasts population development (left), development in household numbers (middle), development in the potential labour force (right) (per municipality between 2008 and 2040) (Verwest & van Dam, 2010)

This decline of the population is one aspect of the demographic decline in the Netherlands. A demographic decline is more complex and comprises numbers of the population and households, as well as demographics (age, ethnicity) and household composition (according to size, life stage, income) (Van Dam et al., 2006). The three main aspects of a demographic decline are *the decline of the number of the population*, *a decline of the number of households* and *a decline of the potential working population* (Verwest & van Dam, 2010). The extent of presence of these three main aspects varies between regions (Van Dam et al., 2006).

The national government has indicated the regions dealing with a demographic decline. Most of these regions are located in the borders of the Netherlands (figure 5) (Hilbers et al., 2011; Verwest & van Dam, 2010). The Government of the Netherlands makes a distinction between demographic decline regions (*Dutch: krimpregio's*) and anticipating regions (*Dutch: anticipieerregio's*) (Verwest & van Dam, 2010). These regions are determined on the basis of (future) demographic trends (Ritsema van Eck et al., 2013). Demographic decline regions are rural areas where it is expected that the population until 2040 will decline to 16% (Rijksoverheid, n.d.b). In these regions multiple neighbour municipalities will face structural forms of demographic decline now or in the near future (Verwest & van Dam, 2010). This applies to the regions Achterhoek (Case II) and Noordoost Friesland (Case I). In addition to the demographic decline regions, anticipating regions are identified. These are regions in which the population and the number of households not yet declines structurally, but a chance exists that this will happen in the future. It is expected that until 2040 this decline will be about 4% (Rijksoverheid, n.d.b; Verwest & van Dam, 2010). Especially for those anticipating regions the forecasts are uncertain (Ritsema van Eck et al., 2013).

Figure 5: Demographic decline regions (red) and anticipating regions (yellow) (Rijksoverheid, 2015a)

The demographic decline in Dutch rural regions is caused by socio-cultural (individualism, emancipation), (regional-) economic (labour participation, employment opportunities, economic conditions and trust therein) and spatial developments (housing) (van Dam et al., 2006). Sociocultural factors affect the natural population trends, migration, an aging population and a decreasing number of young people. The migration is also influenced by (regional) economic and spatial factors. According to van Dam et al. (2006), the relation between social-cultural, economic and demographical developments is reciprocal and complex. The most important causes of the demographic decline in rural regions are a stable but low birth rate against higher death rates, an aging population and migration to cities and urban areas (Haartsen et al., 2014; Harms et al., 2010; Hilbers et al., 2011; Ministerie van VROM, Ministerie van BZK, IPO, & VNG, 2009; Verwest & van Dam, 2010).

These developments can have consequences for demographic decline regions and, to a lesser extent, for anticipating regions. Verwest and van Dam (2010) indicate that at least one out of three municipalities have to deal with a declining population and 1 in 10 municipalities will experience a decrease in the number of households. In addition, in many municipalities the labour force will decline (Verwest & van Dam, 2010). The decrease in the (working) population, households and migration of the population leads to a change in the composition of the population (Hilbers et al., 2011). There are especially spatial effects expected in terms of housing, jobs, economic activities, facilities and mobility (Ritsema van Eck et al., 2013). The demographic decline may lead, among other things, to an oversupply of housing and changes in the housing market, changes in supply and demand of the labour force and decreasing use of and demand for facilities such as shops and schools, which may cause an oversupply of these facilities (Ministerie van VROM et al., 2009; Rijksoverheid, VNG & IPO, 2009; Verwest & van Dam, 2010). Especially a decrease of the number of households will have significant spatial consequences, such as for the demand for housing (Verwest & van Dam, 2010). Demographic decline may not only have an impact on spatial, socio-cultural and economic developments, but also on current policy and finances of governments and other parties. According to respondent Fr4, the demographic decline can also mean a decline to a previous level and that this temporary growth in some regions is not well managed (Fr4).

"We call that we face a demographic decline, but in fact ... did not manage our temporary peak well. Is it? Because of course we return to a level where we were." (Fr4)

Not all identified demographic decline regions and anticipating regions will face the same specific forms of decline (Verwest & van Dam, 2010). Also the degree of which decline occurs in regions can vary widely (Rijksoverheid, VNG & IPO, 2009). This depends on the composition of the population in a region, but is also determined by regional factors such as location, availability of space and sectoral composition (Hilbers et al., 2011). This means that the effect of demographic decline per region can vary considerably, because of specific forms of demographic decline (Ritsema van Eck et al., 2013; Verwest & van Dam, 2010). In addition to these specific forms of decline there is also the possibility that decline and growth in a region occur at the same time (Ritsema van Eck et al., 2013). Finally, also the pace at which the decline develops in various forms is of influence on the differences between regions (Verwest & van Dam, 2010).

The expectation is that demographic developments also lead to the increase of differences between regions and regional differences become larger (Planbureau voor de Leefomgeving, 2016; Provincie Groningen et al., 2016). Living conditions in demographic decline regions are under pressure by demographic change, the affordability of public facilities, mobility and accessibility and economic vitality (Provincie Groningen et al., 2016). According to the Environmental Assessment Agency, these socio-economic differences are the result of the focus of the national government on strong cities and top sectors and now there is more and more a spatial dimension (Planbureau voor de Leefomgeving, 2016). Not only between urban and rural regions, but also between urban regions (Planbureau voor de Leefomgeving, 2016). By investing in urban growth rather than in the remaining regions, regions cannot keep up with the growth, which leads to greater economic inequality (Planbureau voor de Leefomgeving, 2016; Provincie Groningen et al., 2016). The questions are whether these differences should be reduced or do people agree with these differences (moral / normative question) and which policy options can be applied (Planbureau voor de Leefomgeving, 2016).

5.2. Consequences of demographic decline for infrastructure and mobility

The effects of rural population decline on mobility and accessibility in these regions are expected to remain small in the coming years (Harms et al., 2010). The mobility and car use in particular will keep growing in the next five to fifteen years, also in regions where the population is declining (Hilbers et al., 2011; Ministerie van Infrastructuur en Milieu, 2012). Alterations in the magnitude of mobility can be determined by (Harms et al., 2010):

- changes in the size and composition of the population
- changes in behaviour: different lifestyles and living patterns by socio-economic or socio-cultural developments (e.g. increase in prosperity, cultural developments, mobility behaviour)

Changes in the size and composition of the population may lead to less crowds at rush hours, because of a decline in labour force or an increase in socio-recreational traffic, which is caused by the increase of the proportion of seniors (Ritsema van Eck et al., 2013; Verwest & van Dam, 2010). In that way, the pressure on main roads may change in the future, due to developments in the regional car mobility (Ritsema van Eck et al., 2013). The decline in population and decrease in the number of households do not provide a proportional growth or decrease in mobility (Ritsema van Eck et al., 2013). However, the increase in the number of single-person households due to the individualisation may lead to an increase of the number of movements per person (Ritsema van Eck et al., 2013). Nevertheless, changes in the size and composition of the population are not the most important factor. Along with the changes in behaviour, changes in road capacity, traffic policy, road construction, technical developments and the regional economy (supply of labour and labour force) are more important factors determining mobility (Harms et al., 2010; Ritsema van Eck et al., 2013; Verwest & van Dam, 2010).

As well as the car mobility, the demographic decline has little effect on the mobility of commercial transportation (Harms et al., 2010). Due to population developments, economic activity in a region may change and therefore possibly also the size of commercial transportation may change, but that also depends on origin and destination of the commercial transportation and the regional market (Harms et al., 2010). The demand for public transport can be determined by changes in behaviour, such as the decline in public support for traditional forms of public transport, the rising car ownership and possession of driving licenses and thereby the increasing car use (Harms et al., 2010; Ritsema van Eck et al., 2013). This means that only a small part of car mobility, mobility of commercial transportation and public transport mobility can be explained by the demographic decline (Ritsema van Eck et al., 2013).

The demographic decline does not lead automatically to a decline in mobility, but in time this may lead to an attenuation of the growth or decline in demographic decline regions (Harms et al., 2010; Ritsema van Eck et al., 2013). As expected until 2020 the mobility will increase in almost all Dutch regions, in particular car use (Hilbers et al., 2011). After 2020, (car)mobility will continue to grow, will stabilize or decline. This is due to the development of the population, employment and development of income in regions (Hilbers et al., 2011). A possible decline of the mobility is uncertain. However, especially for peripheral (demographic decline) regions in Limburg, the North of the Netherlands, Overijssel, Gelderland, and other regions that possibly have to deal with a decline of the labour force, the change exist that the mobility will decline (Hilbers et al., 2011; Ritsema van Eck et al., 2013). According to Hilbers et al. (2011) the question rises if it is still necessary after 2020 and in the future to continue with expansion of road infrastructure and structural improvement of the road network. On the one hand, the decision not to develop yields a great saving, and on the other hand, the expansion apparently goes not fast enough to be able to cope with the growth or in the long run the expansion appears not to be necessary.

5.3. Role of the development of roads and the maintenance and improvement of the accessibility and mobility in Dutch policy for demographic decline

In recent years, demographic decline more and more has appeared on Dutch policy agendas. There is attention to this development of demographic decline, its effects and various policy documents have been established by governmental authorities concerned with demographic decline. In this paragraph the development of roads in demographic decline regions, the maintenance and improvement of the accessibility and mobility in these regions and goals for maintenance and improvement of the accessibility and mobility will be described. In line with the cases, the current and relevant policy documents for the region Achterhoek and the region Noordoost Friesland are used for this description.

5.3.1. Policy for demographic decline

The national government, the provinces of Gelderland and Friesland and regions Achterhoek and Noordoost Friesland have established policy documents regarding demographic decline. In order of date of publication, the most important and actual policy documents (published in the period 2009-2016) that will be used, are:

1. **Krimpen met kwaliteit (Demographic decline with quality):** intergovernmental action plan established by the Dutch ministry of the Interior and Kingdom Relations, the Association of Dutch Municipalities and the Association of Dutch Provinces (Rijksoverheid, VNG, & IPO, 2009)

2. **'Fan mear nei better' - 2010-2020 (From growth to quality – 2010-2020)**: the environmental vision established by the province of Friesland (Koöperaasje Fryslân, 2010)
3. **Agenda Netwerk Noordoost 2011-2030 (Programme Network Noordoost 2011-2030)**: a programme established by the municipalities which are part of the region Noordoost Friesland (Netwerk Noordoost, 2011)
4. **Projectplan 'Fan mear nei better' - 2013-2015 (Project plan 'From growth to quality' – 2013-2015)**: a description of the implementation of the policy task 'Fan mear nei better' (Provincie Friesland, 2013)
5. **Regioconsultatie demografische ontwikkelingen (Regional consultation demographic developments)**: established in cooperation with the province of Friesland and with support from the Ministry of the Interior and Kingdom Relations (Regio Noordoost-Fryslân, Provincie Fryslân, Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2013)
6. **Grenzen aan de krimp (Limitations to demographic decline)**: a review on the period 2009-2014 and a look towards the future with accompanying recommendations (Haartsen et al., 2014).
7. **Uitvoeringsagenda Achterhoek 2020 (Implementation agenda Achterhoek 2020)**: an approach for a vital, economic powerful and future-proof Achterhoek and to respond early to demographic trends (Stuurgroep Achterhoek 2020, 2014)
8. **Omgevingsvisie Gelderland (Environmental vision Gelderland)**: vision established by the Province of Gelderland (Province of Gelderland, 2015)
9. **Actieplan Bevolkingsdaling (Action Plan Population Decline)**: contains collaborative agreements for a structural approach in demographic decline regions and anticipating regions (Rijksoverheid, 2016).

5.3.2. General policy goals regarding demographic decline

One of the main goals that, in general, returns in these policy documents is: to establish, develop and implement an approach to adapt to the demographic developments, to prevent the effects of demographic decline or minimize the effects and to respond to these developments in time. Besides, also maintaining and enhancing the liveability and vitality is an issue that emerges in several ways in policy.

More specifically, the policy goals and plans on the one hand focus on the approach and implementation of the policy in an administrative way. This concerns awareness, collaboration and communication between government actors and other actors about (possible) approaches, developing and sharing knowledge, making plans, choices for projects, division of roles, phasing in the implementation of policy approach and finances.

5.3.3. Accessibility, mobility and road infrastructure in demographic decline regions

In policy documents with regard to demographic decline at national, provincial and regional level, there is no specific attention to the development of new roads in demographic decline regions and how this will be addressed. However, the projects N18 Varsseveld-Enschede and De Centrale As are both mentioned as developments which lead to an improvement of the road infrastructure and accessibility for both regions (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2013; Netwerk Noordoost, 2011; Provincie Gelderland, 2015; Provincie Fryslân, 2013).

Maintaining and enhancing the accessibility is seen as most important, with regard to the effects of demographic decline, to maintain the liveability in demographic decline regions. The first point that emerged from the policy documents is the importance and maintenance of the accessibility of facilities in regions such as education, (health) care facilities, (shopping)centres and work locations (Haartsen et al., 2014; Koöperaasje Fryslân, 2010; Provincie Gelderland, 2015; Regio Noordoost-Fryslân et al., 2013; Rijksoverheid, VNG & IPO, 2009; Stuurgroep Achterhoek 2020, 2014). Because of the demographic developments, changes are expected in the structure of facilities in regions (Koöperaasje Fryslân, 2010; Rijksoverheid, 2016). For example, the reduction in the number of facilities or a clustering of facilities. However, the mobility may actually increase (Rijksoverheid, VNG & IPO, 2009). Also the accessibility and mobility in regions therefore may have more influence on the choice of housing location (Koöperaasje Fryslân, 2010). According to the Government of the Netherlands (2016), improving the accessibility will be more important and can contribute to the liveability and economy in regions. Good infrastructure can contribute to the maintenance of the accessibility in regions (Haartsen et al., 2014).

Second, also for the economic vitality of regions good accessibility within and between regions turns out to be important (Haartsen et al., 2014; Provincie Gelderland, 2015). The accessibility of regions can be crucial for

maintaining and strengthening a good economy, a good business climate, but also for the accessibility of higher education in regions (Stuurgroep Achterhoek 2020, 2014).

Third, maintenance of the accessibility in demographic decline regions is not only about accessibility by car or commercial transportation, but also about public transport on small distances in or between villages, organized school transport and proper links of regional transport (Koöperaasje Fryslân, 2010; Rijksoverheid, 2016;). By connecting networks of different modes of transport (e.g. car, train, bus), these networks can strengthen each other and the accessibility in regions (Provincie Friesland, 2013; Provincie Gelderland, 2015).

5.3.4. Solutions for the maintenance and improvement of the mobility and accessibility

To maintain and improve the accessibility and mobility, in the used policy documents for the approach of demographic decline there is a number of possible solutions that emerge. These possibilities concern on the one hand the physical accessibility and mobility and on the other hand the digital accessibility. The four main solutions for maintaining and improving the accessibility in demographic decline regions are addressing public transport, ICT network connections, optimizing the road and rail network and also to find new alternatives.

Public transport

The improvement of public transport is one of the points that mostly returns in the policy to ensure that the accessibility remains in demographic decline regions to reach facilities and maintain the economic vitality (Haartsen et al., 2014; Provincie Friesland, 2013; Rijksoverheid, 2016; Regio Noordoost-Fryslân et al., 2013). In general, the aim is a reliable and coherent network for public transport both via road and rail (Provincie Gelderland, 2015; Rijksoverheid, 2016; Stuurgroep Achterhoek 2020, 2014). Also with regard to the maintenance of public transport, the expansion of the frequency of public transport and the reduction in travel time (Provincie Gelderland, 2015; Stuurgroep Achterhoek 2020, 2014). Public transport can be improved by adjusting transport supply, offering new public transport arrangements, but also by customized transport on the basis of transport needs within a region, such as the local bus (*Dutch: buurtbus*) or regional taxi (*Dutch: regiotaxi*) (Haartsen et al., 2014; Netwerk Noordoost, 2011; Provincie Friesland, 2013; Regio Noordoost-Fryslân et al., 2013; Stuurgroep Achterhoek 2020, 2014).

ICT-network connections (digital accessibility)

In addition to the improvement of public transport, also the digital accessibility is considered important for the maintenance and improvement of the accessibility in demographic decline regions (Haartsen et al., 2014; Koöperaasje Fryslân, 2010; Netwerk Noordoost, 2011; Provincie Friesland, 2013; Provincie Gelderland, 2015; Regio Noordoost-Fryslân et al., 2013; Stuurgroep Achterhoek 2020, 2014). The digital accessibility is primarily the accessibility via internet and mobile phones. Where the physical accessibility is inadequate, the digital accessibility can serve as a solution for example in health care, businesses and for citizens (Haartsen et al., 2014; Netwerk Noordoost, 2011; Provincie Gelderland, 2015). For households, businesses, entrepreneurs and farmers in rural and demographic decline regions, good digital connections are necessary (Haartsen et al., 2014; Stuurgroep Achterhoek 2020, 2014).

Road and rail network (physical accessibility)

With regard to the maintenance and improvement of the road network, there are some points that can be derived from the policy documents. These are achieving a good accessibility by road, rail and water, proper connections of the local, regional and national road network and rail network, less travel time for traffic, optimizing the cycling network (regional and recreational) and also encouraging cycling (Netwerk Noordoost, 2011; Provincie Friesland, 2013; Provincie Gelderland, 2015; Stuurgroep Achterhoek 2020, 2014). Especially, information regarding the construction of new roads or expansion of existing roads is important in this study. De Centrale As and the N18 Varsseveld-Enschede are both mentioned as developments which can enhance the accessibility in the demographic decline regions Noordoost Friesland and Achterhoek in the coming years (Netwerk Noordoost, 2011; Provincie Gelderland, 2015; Regio Noordoost-Fryslân et al., 2013; Stuurgroep Achterhoek 2020, 2014). Moreover, in these policy documents the construction of new roads and adjustments of existing roads both are not mentioned as (most obvious) solution in improving the accessibility and mobility in demographic decline regions.

Alternatives

In addition to these possibilities, there is also the aim to find alternative ways to improve the accessibility. This will be found in technical provisions and mobility alternatives for older people, more demand-driven modes of transport, because of the increase of the elderly population and decrease in the proportion of young people, and small transport units such as cycling or carpooling (Haartsen et al., 2014; Koöperaasje Fryslân, 2010; Provincie Friesland, 2013).

5.4. Relevance of the context of the actor beliefs

In this chapter, several relevant aspects of the context of actor beliefs, about the importance of road development in demographic decline regions, have been described. The aspects of the context of actor beliefs, in the field of demographic decline and developed policies, which may have an influence on the actor beliefs in the cases, are the consequences of the demographic decline in general, and in addition, the consequences for infrastructure and mobility in demographic decline regions. In particular, public policies developed or changed for regions dealing with demographic decline are of importance. These developed public policies developed should influence the decision to develop new roads. However, the expectation is that these public policies developed or changed for regions dealing with demographic decline are not followed in the decision-making for road development. As a consequence, it is not the case that improvements of roads are not necessary, but the goals for constructing new roads are not in line with adapting to demographic decline, rather to try to reverse or stop demographic decline.

5.5. Conclusion

In this chapter, sub question 3 is elaborated: *what is the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands?* To answer this question, the demographic decline, its causes and consequences, specific consequences of the demographic decline on mobility and road infrastructure and the role of road development, accessibility and mobility in relevant policy documents for demographic decline are discussed.

For several years, Dutch rural and border regions have to deal with demographic decline. This includes a decline of the population, the number of households and the potential working population. The main reasons for this decline are a stable but low birth rate, higher death rates, an aging population and a migration from rural to cities and urban areas. The demographic decline generally has an impact on the composition of the population and more specifically for housing, jobs, economic activities, facilities and mobility, but does not automatically lead to a decline in mobility. Rather, changes in mobility are caused by changes in road capacity, traffic policy, road construction, technical developments, the regional economy and the changes in individual behaviour (increase in prosperity, cultural developments, mobility behaviour), than by demographic decline (changes in the size and composition of the population). However, in time, the demographic decline may lead to an attenuation of the growth or decline in demographic decline regions. Because the expectation is that mobility in parts of the country after 2020 will stabilize or possibly decline (including demographic decline regions), the question rises if it is still necessary to continue with the expansion of road infrastructure and structural improvement of the road network.

During the past years, there are several policy documents published by the Government of the Netherlands, Dutch provinces and regions on addressing demographic decline. This policy is aimed at anticipating to the demographic developments, to prevent the effects of demographic decline or minimize the effects and to respond to these developments in time. The documents show that maintaining and improving the accessibility and mobility in demographic decline regions is seen as one of the most important elements. However this is not the same as building new roads for regional economic development and try to reverse or stop demographic decline, by attracting new economic activities and inhabitants to come to or stay in the region. This is not aimed at anticipating demographic decline and minimizing demographic effects. Among other things, to maintain the liveability, to keep (a decreasing number of) facilities accessible and for the economic vitality of the regions. This applies to access by car, public transport, commercial transportation and other modes of transportation. To maintain and improve the accessibility and mobility in demographic decline regions there are four solutions, namely via (1) improving public transport, (2) digital accessibility, (3) physical accessibility and (4) alternative technical or mobility solutions. The construction of new roads or expanding existing roads

is hardly mentioned in the used policy documents, except in terms of the maintenance of existing networks and current development projects N18 Varsseveld-Enschede and De Centrale As (N356).

The aspects of the context in this sub question, that may have an influence on the actor beliefs about the importance of the development of roads in demographic decline regions, are the consequences of the demographic decline in general, especially for infrastructure and mobility in demographic decline regions. Public policies developed or changed for regions dealing with demographic decline should influence the decision to develop new roads. The consequence is not that no road improvements are necessary, but constructing new roads for the goal of regional economic development is not anticipating to demographic decline, but trying to reverse or stop demographic decline.

6. ACTOR BELIEFS IN THE CASES DE CENTRALE AS AND N18 VARSSEVELD-ENSCHEDA

The cases in this study are the Dutch road developments De Centrale As (N356) and N18 Varsseveld-Enschede. De Centrale As is a new developed road in the region Noordoost Friesland and the N18 Varsseveld-Enschede is currently under construction in the region Achterhoek and partly in the region Twente (figure 6).⁶ Preceding to the construction of both road developments, long-term and extensive processes have taken place. Since a number of years the regions Achterhoek and Noordoost Friesland have to deal with demographic decline.⁷ To explore the cases and collect the present actor beliefs, sub question 4 will be answered: *which actor beliefs are involved in the policy processes of two cases for the development of the new road Dutch demographic decline region?*

This chapter provides an extensive description of these cases: the policy problems, (policy) goals, both developments, the processes for the development of the road, the involved actors, followed by the actor beliefs which played a role in both cases. The concept 'actor beliefs' is previously defined as '*beliefs of actors about the importance of road development in demographic decline regions. This concept contains three aspects: the usefulness and necessity of development of roads, the role of demographic decline in the usefulness and necessity discussion and the effects of the development of roads present in the policy process*'. These three aspects will be addressed in this chapter for each case. The description of the actor beliefs in this chapter most clearly indicates when it comes to a response from the interviews, for example respondent Fr1 or Ah1, from the documents of public response by public respondents, or when it is a description based on the documentation⁸. Throughout this chapter the two cases are described separately.



Figure 6: Map of a part of The Netherlands with the location of Case I: De Centrale As (north) and Case II: N18 Varsseveld-Enschede (east) (Google, 2017)

⁶ Region Achterhoek in the province of Gelderland and region Twente in the province of Overijssel

⁷ The regions Achterhoek and Friesland are appointed by the Government of the Netherlands as demographic decline region in 2014 and 2015 (see chapter 2)

⁸ Sources of personal communication can be found in Appendix 2: Table personal communication

6.1. Case I: 'De Centrale As' (N356)

De Centrale As is a provincial road that has been constructed in the northeast of the province of Friesland in the north of the Netherlands (figure 6). The road is a connection between north and south in the centre of the region Noordoost Friesland (Fr1, Fr2). This development is a project of the province of Friesland and the municipalities Dongeradeel, Dantumadeel and Tytsjerksteradiel (Fr6). Since October 2016, De Centrale As is open for use.

6.1.1. Policy problem

The N356 was an existing provincial road connection between Holwerd (north) and the N31 near Nijega (south) (figure 6). The road has a total length of approximately 35 kilometres and in order passes the villages Garyp, Sumar, Burgum, Hurdegaryp, Veenwouden, Damwoude and Dokkum. In Burgum, Veenwouden and Damwoude the road crosses the village. This road was the main access of the region Noordoost Friesland, important for neighbouring villages and together with the N361, which is east of Dokkum, for the accessibility of the northeast of the province of Friesland (Provincie Friesland, 2010). South of the N356, the N31 and A7 can be reached for the connection to Drachten, Leeuwarden, Heerenveen and Groningen.

However, according to the province of Friesland, there were several problems regarding the existing road infrastructure. The quality of the current road between Dokkum and Nijega was insufficient, because the function, the road structure and the use of the road do not connect to each other (Provincie Friesland, 2010). In addition, because of the lack of easy access to the national road system, the accessibility of the region Noordoost Friesland and the city of Dokkum was poor (Provincie Friesland, 2010). The N356 was a busy road and together with the crossing of a number of villages, this created problems in terms of flow (changing speeds and ground level crossings), safety (possibility of crossing and the use of shortcuts), quality of life in the villages and noise pollution (Provincie Friesland, 2010). In addition, the spatial and socio-economic developments played a role because of the lagging population developments and the number of jobs (Provincie Friesland, 2010).

6.1.2. Policy goals

In the nineties there has been an investigation of the structural improvement of the road network in the region Noordoost Friesland towards the main road network and Leeuwarden (Fr6). In this research two alternatives are examined, a road at the centre of the region or an option for two new roads in the region (*Dutch: 'flankenoptie'*), both from north to south (Fr1; Fr2; Fr6). In 1999, the Provincial Council of Friesland decided to revise the road structure in Northeast Friesland with the option for a road at the centre of the region, the construction of De Centrale As (Fr6; Fr7). This decision was mainly based on the costs and the major interventions for the landscape (Fr7). The province of Friesland has determined the following goals for addressing current infrastructure and the development of De Centrale As (Provincie Friesland, 2010):

- improving of the accessibility of the region Noordoost Friesland;
- improving the traffic safety in Noordoost Friesland and on the roads N356 and N913;
- improving the liveability by the decrease of traffic on small roads and through the villages;
- to contribute to the improvement of the spatial and socio-economic structure.

6.1.3. The development of De Centrale As

At the end of 2006 the province of Friesland has made a decision for the realisation of De Centrale As and the development of the surrounding area of 7,000 hectares (Van der Ziel, Bruins Slot & Voerman, 2011). The route of De Centrale As has a length of 23.5 kilometres and is located between the N31, near Nijega, and the N361 on the south-eastern side of the city of Dokkum (figure 7). Via the road N361 near Dokkum, the rest of the original N356 and Holwerd can be reached. The road has been developed as a 2x2 lanes motorway with a speed limit of 100 km/h (Provincie Friesland, 2010). The northern part of the trace is modestly doubled, which means that no lane can be closed, if needed, but the road functions as a 2x2 lanes motorway (Fr1; Fr2). In addition to the road between Nijega and Dokkum, the development also includes two connecting roads near Garyp and Hurdegaryp (2x1 lane, 100 km/h) and, as part of De Centrale As, an aqueduct at the west side of Burgum (figure 7) (Provincie Friesland, 2010).

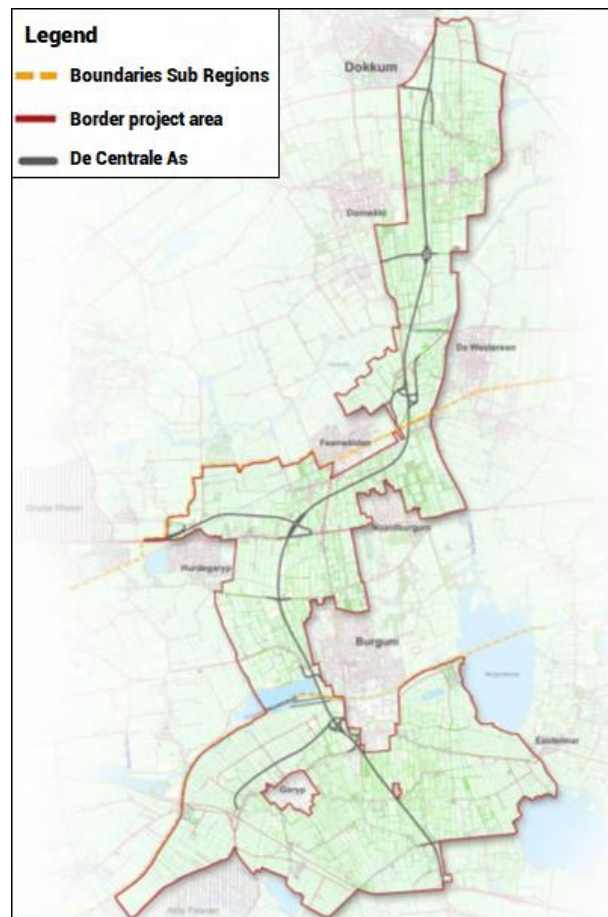


Figure 7: Illustration of the overview of De Centrale As (Van der Ziel et al., 2011)

National landscape 'de Noordelijke Friese Wouden'

Around De Centrale As, an area of 7,000 ha is in development to improve the quality of the area and to integrate the constructed route in the landscape (Van der Ziel et al., 2011). This is described in a landscape plan established by an Area Development Committee (Gebiedsontwikkelingscommissie). The integration of the infrastructure in the landscape is important, because the new road is to a large extent located in a bocage, the national landscape 'de Noordelijke Friese Wouden' (Provincie Friesland, 2010).

De Centrale As is part of a larger regional development

The development of De Centrale As is not a stand-alone project, but it has been the start for the development of a socio-economic programme (Fr1; Fr2). This socio-economic masterplan is translated into the Agenda Network Noordoost (ANNO) and adopted by the six municipalities in the region Noordoost Friesland and the province of Friesland (Dwaande/Netwerk Noordoost, n.d). ANNO is a network programme to strengthen the socio-economic dynamics in Noordoost Friesland (Fr1; Fr2). In the agenda are (ambition) projects included, concerning nature and landscape, living and working, entrepreneurship, sustainability and (digital) infrastructure (Dwaande/Netwerk Noordoost, n.d.). One of the projects is 'Kansen in kernen', roughly translated as 'Opportunities in the villages'. This project is part of ANNO and is about downsizing the initial N356 and improving the traffic safety and liveability in the built-up area of the villages (Dwaande/Netwerk Noordoost, n.d.).

6.1.4. Process and procedure of the De Centrale As

In 1999, the decision was made to develop De Centrale As (Fr6; Fr7). Prior to this decision, possible solutions for the road structure in the region Noordoost Friesland have been investigated (Fr6). The decision is followed by the notification of intent in 2001 (Fr7). Also in 2001 is decided to develop De Centrale As as a motorway with a speed limit of 100 km/h (Fr6). In the years that followed, an Environmental Impact Assessment is conducted and six alternatives have been investigated (Fr1; Fr7). In 2005 the preferred route has been presented and together with the Environmental Impact Assessment this has been available for public

consultation (Projectbureau De Centrale As, n.d.; Provincie Friesland, 2010). After this consultation the Environmental Impact Assessment was complemented and again has been available for public consultation (Fr6). Approximately 300 public responses are submitted (Projectbureau De Centrale As, n.d.). In May 2006, the definitive trace of De Centrale As is adopted by the Provincial Council of Friesland (Provincie Friesland, 2010). Also the Municipal Councils of the four involved municipalities have approved the plan (Van der Ziel et al., 2011). In 2008, the legal procedure for the provincial embedding plan has started (Projectbureau De Centrale As, n.d.). This was just after the Spatial Planning Act came into force (Fr1). From 2008 until 2011, this procedure has been followed. The public responses have led to adjustments of the development. Also a second revised Design Embedding Plan have been available for consultation (Fr7). In the autumn of 2011, the Council of State has declared the decision for the implementation of De Centrale As irrevocable and the appeal has been declared unfounded (Projectbureau De Centrale As, n.d.). Subsequently, in the period from 2012 the implementation is conducted and De Centrale As has been constructed (Projectbureau De Centrale As, n.d.). The road was open for use in October 2016.

6.1.5. Actors in the decision-making process

In the policy process of De Centrale As the Project Office De Centrale As is the coordinating actor. The project office has been set up by the province of Friesland specifically for the project De Centrale As, but is no administrative agency (Fr1; Fr2). The province of Friesland is the road manager and responsible for the process. The municipalities Dongeradeel, Dantumadiel and Tytsjerksteradiel are involved in the process as collaborative partners and funding partners of the province of Friesland (Fr1; Fr2). Besides, also the municipality of Smallerland is involved, but only for the southern part of De Centrale As. This municipality is not a funding partner (Fr1; Fr2). In addition, the politics, the Provincial Council of Friesland and the municipal councils, have had a role in the decision-making process (Fr1; Fr2). Other governmental actors which have had a role in the process are Rijkswaterstaat, the Ministry of Housing, Spatial Planning and the Environment (currently: Ministry of Infrastructure and the Environment), Water Board Fryslân and the Cultural Heritage Agency (current name) (Fr7). Furthermore, Staatsbosbeheer, an independent government agency and other associations, foundations and organizations relating to nature, landscape, environment, archaeology, flora and fauna, recreation and tourism have participated in the process (Fr6; Fr7). Social organizations such as the healthcare sector and the educational sector in the region were also actors in the process (Fr1; Fr2). Also various other actors have been involved, such as the Dutch Federation of Agriculture and Horticulture and Transport and Logistics Netherlands (Provincie Friesland, 2010). And besides, companies and entrepreneurs, including farmers, whether or not organized in a trade association of entrepreneurs, have been involved in the development. The individuals form a large category of actors (Fr1; Fr2). This concerns citizens as actors, residents of the current or new route, residents of villages or landowners, or citizens organized in working groups or actors associations (Fr6; Fr7). And finally, the media and the local broadcast can be appointed as an actor in the process (Fr1; Fr2).

6.2. Actor beliefs - Case I

For this case De Centrale As, actor beliefs about the importance of road development in Dutch demographic decline regions, are collected on the basis of interviews, reports of public response and other documents. This paragraph provides a description of the aspects of actor beliefs regarding the usefulness and necessity of the development of De Centrale As, the role of demographic decline in Noordoost Friesland in the usefulness and necessity discussion and beliefs about the effects of the development of the De Centrale As.

6.2.1. Usefulness and necessity of the development

There are various actor beliefs regarding the usefulness and necessity of the development which show up in the data. Respondent Fr2 points out that the existing road structure became increasingly busy by all kinds of developments, more and more measures had to be taken for road safety and in addition, the average speed on De Centrale As was very low. In addition, respondent Fr1 mentions that, when the process started in 1998, there were already several reports of municipalities, in which was thought about road safety and a good access of the region on the national road network. According to respondent Fr1, the province of Friesland, as director, and municipalities then started working together. The improvement was aimed at resolving bottlenecks, by means of four pillars accessibility, road safety, liveability and socioeconomic development (Fr1; Fr2; Fr7). In the nineties, a comprehensive study has been conducted on the structural improvement of the traffic structure

in Northeast Fryslân and Leeuwarden (Fr7). Respondent Fr1 appoints that the decision was made to get a higher hierarchy, by means of De Centrale As, which led to the notification of intent in 2001. According to respondent Fr1 and Fr3, this was primarily powered by business sector, because political support was already there. Respondent Fr2 points out that it was a process with shifting accents, politics and society have changed a lot and the question could be how this discussion went at a different time. Also, respondent Fr4 mentions that the project was very alive among actors, which is evidenced by the discussions.

Several respondents appoint that the development of De Centrale As has been the start (a 'kick-start') for the development of a regional socio-economic programme for the region (Fr1; Fr2; Fr4). According to respondent Fr4, it was said, "you do not construct a road to construct a road, you do this to bring about a certain development in your region". This process, in which the economic and social side of the road have been included, has resulted in a socioeconomic agenda prepared by the cooperative government agencies of De Centrale As, but also other municipalities in Noordoost Friesland (Fr4). Respondent Fr1 appoints that the construction of De Centrale As is a basic condition for further developments. And according to respondents Fr2 and Fr1, the development is "at the core of actors", "it's our road".

Advocates of the development of De Centrale As

According to the province of Friesland, this plan is necessary on the basis of a major public interest (Fr5). Respondent Fr2 believes that the road makes it easier to stay in Noordoost Friesland, to work and live, but there are also advantages of shorter travel times to other places, which is an 'added value' for the region. Respondents Fr2 and Fr1 mention that the advocates in the process were the educational sector, the care sector, the entire social field, entrepreneurs (associations) in all villages, several interest groups, all involved municipalities and also the Wadden islands from a recreational point of view. Respondent Fr2 points out that, at the Council of State, 77 organizations have declared full support for the road as a counterbalance against the opponents, also in the political debate. According to respondent Fr1, many people say, "De Centrale As is very nice, isn't it?" and also "yes, the road had to be constructed much earlier".

Several respondents believe that the region Noordoost Friesland is a peripheral area and De Centrale As is necessary to maintain the liveability, accessibility and dynamics in the region (Fr2; Fr3; Fr4). According to respondent Fr4, accessibility is really crucial to keep up with the economy and roads remain just as important, even if digital accessibility is further developed. The usefulness and necessity of the development of De Centrale As also appears from public responses. Many respondents have expressed their support for the development of the road, 'welcome the road' or think it is a good plan, because of improving the liveability, road safety, accessibility, regional accessibility and the flow of traffic (Fr7). Several respondents believe that a great public interest has been served (Fr7). Therefore, a number of respondents agreed on that the construction of De Centrale As could start as soon as possible (Fr7). According to other public respondents this is the best solution (Fr6; Fr7). In addition, many respondents review De Centrale As as a necessary development, but also some specific parts of the development are seen as unnecessary (Fr6; Fr7).

Advocates of alternatives solutions

Many public respondents agree that the identified problems needed to be solved. However, these actors have proposed other solutions regarding the type of solution, locations or connections or alternatives that should have been investigated (Fr6; Fr7). According to public respondents, these alternative solutions also could improve the road safety, liveability, (future) accessibility and economic improvement and, in addition, lead to less nuisance, traffic pressure, negative effects for the landscape, costs or the distribution of traffic (Fr1; Fr2; Fr5; Fr6; Fr7). Examples of these are a small development of a two-lane 80km/h road and connections between the city of Leeuwarden and the city of Dokkum. Besides, a large number of respondents is in favour of the adaptation of the existing road (N356) and do not see any need to construct De Centrale As (Fr6). Also, a number of public respondents is in favour of other and less profound solutions than the approach or construction of a road to improve traffic safety and reduce traffic pressure (Fr5; Fr7). Other public respondents believe that more attention should be paid to the decline of fossil fuels, to reduce traffic pressure by stimulating public transport or carpooling instead of road construction (Fr6; Fr7). In addition, two alternative solutions are appointed by many public respondents: the 'Centraalste As' and 'Groene alternatief'.

'Centraalste As' ('Most central axis')

One of the alternatives public respondents came up with and advocate is the "Centraalste As" (Fr6). Many respondents believe this as a better alternative, because this also complies with objectives but is less harmful to the environment, offering better access and is seen as a cheaper variant (Fr6). However, there are also some

opponents of this alternative (Fr6). According to the province of Friesland, this alternative leads to a major cross-cutting and fragmentation of the landscape and the effects are more negative than for De Centrale As (Fr6).

'Groene alternatief' ('Green alternative')

Another alternative that is provided by public respondents is the 'green alternative', a two-way road on the location of the existing trace with a short bypass around villages (Fr6; Fr7). There have been many advocates of the "green alternative", because of the nature of the identified problems (Fr5; Fr6; Fr7). According to these respondents, it solves the problems and provides sufficient accessibility, improves the traffic safety, leads to comparable liveability, no extra or less damage to the nature and the spatial environment, improvement of the socioeconomic structure and, in addition, considerable cost savings (Fr5). In addition, from a public response appears that this solution could provide employment around Dokkum (Fr7).

Opponents of the development of De Centrale As

Besides the advocates of the usefulness and necessity of De Centrale As, there are also opponents. According to respondent Fr1, the usefulness and necessity was a point of discussion, because actors believed that the road was not necessary at all and a small upgrade was enough. Respondents Fr1 and Fr2 indicate that the resistance was especially present in the 'green corner' (e.g. organizations regarding nature and the environment) and was also concentrated around different villages near De Centrale As. According to respondents Fr2 and Fr1, an argument of these opponents was that when the road is constructed, the population will leave the region. In addition, this resistance was about the usefulness and necessity of the development versus the crossing of the landscape (Fr1). Respondent Fr2 is of opinion that the resistance was minimal, there has been no real fierce protest.

No usefulness and necessity of De Centrale As

The beliefs of opponents are mainly expressed in the public responses. According to many public respondents, there is no usefulness or necessity for the development of De Centrale As, parts of the route, or the usefulness and necessity has not been demonstrated by the province of Friesland (Fr5; Fr6; Fr7). For example, a public respondent appoints that the plan of 1996 is no longer appropriate (Fr7). In addition, many public respondents agree on that there is no great importance for the construction of De Centrale As to solve problems, such as bottlenecks and traffic-related aspects, for which interests of nature and landscape must disappear (Fr5; Fr7). A public respondent indicates that apparently prosperity (at the expense of nature and the environment) still goes above well-being, peace and silence (Fr6). According to several public respondents, especially recreation and tourism, silence, nature and the environment are important points for the future of Friesland, (Fr6; Fr7).

Policy process

A number of public respondents have asked for a reconsideration or to freeze the plans for a number of years, because the future situation is not clear or because other alternatives and principles should be taken into account or were taken into account insufficiently (Fr6; Fr7). Also, public respondents are of the opinion that the project is already unstoppable (Fr7). Another public respondent believes that the solution is an appointment between the municipalities on the basis of money and has asked for reconsidered instead of "the feeling that it will be fine" (Fr6). In addition, a public respondent believes that a political game has been played, of which citizens are the victims (Fr6). Also, a public respondent mentions that it is nonsense that De Centrale As is the 'kick-start' for developments in the region (Fr7).

Goals of the development

Several respondents believe that the objectives regarding road safety, accessibility, liveability and economic development are insufficiently substantiated, it is thought that the plans do not achieve the objectives or it appears that there were other objectives (Fr6; Fr7). According to a number of respondents, the goal appears to be an efficient traffic flow, as quickly as possible from Dokkum to Nijega (Fr6). Other respondents argue that the decisions have totally failed to address the liveability of the region and do not contribute to the improvement of the spatial and socioeconomic structure (Fr5; Fr6). There is also a number of public responses specifically related to road safety, in which there is doubt about the contribution of De Centrale As to road safety or the expectation is that road safety will not increase as a result of the development (Fr7).

In violation of the policy

There is also a large number of respondents which was opposed to the development of De Centrale As because the plans were in conflict with the provincial policy, national policy, or policy regarding national landscapes

such as the Noordelijke Friese Wouden (Fr6; Fr7). According to these public respondents, large-scale infrastructure projects are not permitted, the plan does not represent a major public interest to cross the national landscape, it does not comply with the starting points for spatial integration or, in addition, does not contribute to the protection of open landscape and prospects for agriculture (Fr6; Fr7). Besides, some public respondents believe that the increase in traffic pressure is in violation of the Fryslân Provincial Traffic and Transport Plan, where the inhibition of car traffic growth is the target (Fr6).

Accessibility, traffic intensity and capacity

Many public respondents consider the development of De Centrale As unnecessary and undesirable, based on accessibility, traffic intensity and capacity (Fr5; Fr6; Fr7). According to public respondents, there is no major accessibility problem and, therefore, they do not see any added value in the construction of the road to improve accessibility (Fr5; Fr6; Fr7). A lot of public respondents have wondered whether the traffic forecasts, on which De Centrale As is based, are still correct or believe that these forecasts no longer meet (Fr6; Fr7). For example, according to a number of public respondents, the current traffic pressure is very acceptable (Fr7). Other public respondents think that the forecasts are now outdated and the traffic pressure will reduce, because of new developments that have taken place in the meanwhile (Fr6; Fr7). These doubts also applies to traffic jams. Many public respondents believe that this is not or hardly a point of discussion and that this will not change in the future (Fr6; Fr7). Therefore, several public respondents think that De Centrale As with current and future traffic intensity, or parts of De Centrale As, are not necessary with regard to capacity and good flow (Fr6; Fr7). Also, public respondents appoint that a part of road users does not use De Centrale As, especially for the connection between Dokkum and Leeuwarden the plan is not interesting (Fr6; Fr7). In addition, a public respondent believes that traffic intentions will increase mostly by road users working in Drachten, Heerenveen or Leeuwarden (Fr6). A number of public respondents also expects that, as a consequence of rising fuel prices, the increase in traffic will be lower and that De Centrale As is unnecessary (Fr6; Fr7). Another public respondent appoints that De Centrale As will not serve as an international or national connection (Fr7).

Distribution of budgets

Also the distribution of budgets appears in the documents of public response. According to many public respondents, the costs for the development of De Centrale As are too high or unnecessary (Fr6; Fr7). These respondents consider the development as an extremely expensive plan, waste of governmental budgets also for maintenance, useless or as discarded money (Fr6; Fr7). A number of respondents mentions that citizens are obliged to pay for a completely unnecessary provision (Fr6; Fr7). In addition, some respondents appoint that the development does not fit in times of economic crisis, uncertainty and cuts, which gives a wrong signal (Fr7). Also, a public respondent believes that money and power are decisive (Fr6). Besides, several public respondents mention that the money can be used better for other goals, such as infrastructural projects and good connections or the money can be spent better on recreation and the living environment (Fr7). Besides, a public respondent believes that there should be policies to discourage private car use (Fr6).

Advocates and opponents regarding the role of (regional) economic development in the usefulness and necessity discussion

Regional economic development is an important theme in the documents. Therefore, actor beliefs regarding the role of regional economic development will be addressed separately. Also, there is a distinction made between actor beliefs of advocates and opponents.

Advocates regarding the role of economic development in the usefulness and necessity discussion

According to respondents Fr3 and Fr4, it is important that the region is accessible and is connected to economic activities, especially south of the region in the direction of Zwolle. For this purpose, accessibility by means of De Centrale As is very important (Fr3; Fr4). Respondent Fr4 appoints that this is even more important than an accessible region, because the economy in the region is much smaller and especially citizens search for jobs outside the region. For both respondents, a good infrastructure is essential and an important prerequisite for the regional economy (Fr3; Fr4). Thus, respondent Fr4 indicates that the place to live depends on the choice for the location of a job and the quality of infrastructure plays an important role in this (Fr4). Respondents Fr3, Fr2 and Fr1 indicate that many entrepreneurs and companies have also benefits from the development of the road. Respondent Fr3 believes that infrastructure is very important to companies and entrepreneurs, both physical and digital, because they want to stay in an environment where dynamic and activities are to keep connected. Respondents Fr1, Fr2 and Fr3 also have recognized that many companies have left the region in recent years, but think De Centrale As could maintain and strengthen existing business and employment and could work as a motivation to invest. For agricultural activity, also an important and large

branch in Friesland, this is less important, but according to respondent Fr3, the maintenance is mainly about companies in the construction, metal sector and services. In addition, respondent Fr3 appoints that the development is also important for recreation, the access to the region Noordoost Friesland and the Wadden islands. Several respondents believe that the development of De Centrale As can contribute to economic development in the region. According to public respondents, including companies and entrepreneurs, improving the regional accessibility and traffic flow is an incentive for economic development (Fr7). In addition, the connection to important nodes and other parts of the country are also important (Fr6). Also some public respondents are advocates of the development because of positive consequences for the employment, and one of them also because of positive consequences for recreation, industry and the maintenance of youth in the villages (Fr7).

Opponents regarding the role of economic development in the usefulness and necessity discussion

The majority of the responses about economic development show that public respondents consider De Centrale As unnecessary for the regional economy, there will be no improvement of the socio-economic structure or the regional economy will deteriorate and the perspectives, on which large investments are based, are outdated (Fr5; Fr6; Fr7). Therefore, a public respondent is of opinion that a four lane road is unnecessary (Fr6). In addition, public respondents consider the differences between costs and economic benefits as significant (Fr6; Fr7). According to other public respondents, De Centrale As does not mean that companies will settle in Noordoost Friesland or that more employment will be generated, but it rather decreases, and some respondents have doubts whether these consequences have been properly investigated (Fr5; Fr6; Fr7). Many public respondents indicate that companies will choose other (urban) locations such as the A7 zone towards Heerenveen and Zwolle, because Noordoost Friesland is an unfavourable or geographically decentralized location (Fr6; Fr7). In addition, respondents expect that local businesses will leave or disappear and more commuting flows arise towards these economic centres (Fr6; Fr7). Other respondents believe that the established companies are satisfied with their accessibility (Fr7). Besides, there are also respondents wondering if competition between Noordoost Friesland and the A7 zone will increase (Fr6). In addition, there are public worried about small businesses in villages or expect that these companies will leave because of the development (Fr6; Fr7). Several other respondents mention that De Centrale As is not a (national or international) link between economic centres (Fr6). According to some public respondents, the development now has to prevent the region from a downward spiral, but that is not convincing (Fr5; Fr6). In addition, a public respondent believes that in the coming decades, Randstad will remain the economic engine of the country (Fr7). According to respondent Fr4, there were also economic opponents which did not see the usefulness of the road development and believed that the public money could be better invested directly in the economy.

Besides, there are many public respondents indicate that regional economic development can be better improved by utilizing and stimulating tourism and recreation, agricultural activity and local business instead of the construction of De Centrale As (Fr7). These respondents also think that in the future, the region will be more dependent on tourism, recreation and profiling as a beautiful residential region (Fr6; Fr7). According to a public respondent, this potential will be destroyed because of the development (Fr7).

6.2.2. Role of demographic decline in the usefulness and necessity discussion

According to respondent Fr3, the plans to develop De Centrale As as a four-lane road are made in a period which was based on growth, of cars and traffic. The process and procedure for road development eventually took so long, that when this was completed, the region Noordoost Friesland was a demographic decline region (Fr3). Respondent Fr3 mentions: ". . . when the first spade goes into the ground, there is actually the expectation that there's less traffic on the road". According to respondent Fr4, in the process demography, economy and liveability in the region suddenly came to the agenda and on the national agendas. Respondent 3 indicates that demographic decline to 2013 was an issue in Noordoost Friesland, but different as it is now. There was some talk, but still there was no demographic decline yet (Fr3). Respondent Fr4 thinks that the political discussion has shifted to decline and demographics in the context of developments such as De Centrale As.

According to a number of respondents, demographic decline has been a motive of opponents of development and action (Fr1; Fr2; Fr3). Respondent Fr3 indicates that opponents said: 'now you see, it never should have happened'. Also the question was asked, why a 2x2 lane should be constructed in a region when the future population will be smaller (Fr2; Fr3). Respondent Fr1 and Fr2 still know that people regularly said about De Centrale As: 'The road from nothing to nothing'. In contrast, respondent Fr3 believes that the road brings a

certain dynamic in the region, especially for small and medium-sized businesses, even though the road has only been open since last October. According to respondent Fr2, people do not leave the region because of the new connection, but the effect is that the development improves access, reduces travel times, improves accessibility and residents can continue to live in this region. Respondent (Fr1) expects that because of the development, the quality of the region will also be appreciated differently in location choice for living or working.

The interviews with respondents show that a good access is found to be "crucial" or "essential" for Noordoost Friesland (Fr1; Fr2; Fr3; Fr4). Respondents Fr3 and Fr4 think proper infrastructure is of great importance, including the digital infrastructure network (fiberglass). Respondent Fr4 expects that distance will become less important and areas can be kept liveable. According to respondent Fr3, the development is a good access to a strong region and the prevention of demographic effects, but it is not the solution to demographic decline. Demographic decline can also be avoided, as government and entrepreneurs collaborate and look at how to keep a strong region (Fr3). Respondent Fr4 is certainly convinced that demographic decline is not only about demographic changes, but also very much about economic changes.

Public responses

The reports of public response show that demographic decline has played a role in the public responses, during the procedure of the provincial embedding plan. Different respondents (stakeholder associations and resident associations, several entrepreneurs) are not convinced with the need for the De Centrale As to prevent a downward spiral for the region (Fr5; Fr6). From a public response appears the consideration that, because of the population decline, the necessity is no longer in proportion to the importance of maintaining the vulnerable landscape (Fr7). Also, a respondent does not expect that De Centrale As will provide growth in the region (Fr6). Besides, it appears from a public response, supported by several actors, that it is expected that the development of the road will not reduce demographic decline (Fr7). One respondent thinks that if the decline delays, because of the road construction in Noordoost Friesland, another region will be more confronted with demographic decline (Fr5). Another public response shows the expectation that the population will further decrease due to the deterioration of the living environment as a result of the development of De Centrale As (Fr7). And also a respondent assumes that De Centrale As can promote demographic decline, because there is no more need to live in the region (Fr7).

A large number of respondents has doubts about the traffic forecasts used for the development of De Centrale As, now there is a question of demographic decline (population decline, aging population), and expect that the demographic decline will have an effect on traffic intensities, (Fr5; Fr6; Fr7). Because of the aging population, the expectation is that traffic rather increases on local roads than on De Centrale As (Fr7). Other respondents are of opinion that these new figures should have been taken into account in the plans (Fr7). In addition, a public respondent believes that companies and entrepreneurs will not invest in a demographic decline region (Fr7).

There are several respondents who are of opinion that, due to the demographic decline, a four-lane road (2x2) is not necessary and are in favour of other solutions (Fr6; Fr7). A respondent (citizen) agrees with the usefulness and necessity of addressing the current situation, but disagrees with plans because of the demographic decline and indicates that a four-lane road is not necessary (Fr7). One public respondent is in favour of freezing the plan, but rather prefers De Centrale As will not be constructed at all (Fr7).

Demographic decline in the decision-making

Based on the analysis of the used data, it does not appear that the demographic decline has played a role in the decision-making for the development of De Centrale As. Respondent Fr1 indicates that the demographic decline in relation to decision-making in the project and process has not played a role. In the documents, the province of Friesland has described that the need for improvement of the traffic structure has been playing since the 80's and 90's (Fr7). From the beginning, improvement of accessibility, road safety, viability and spatial and socio-economic structure are the four objectives (Fr7). The province has described that population developments only affect a part of the predicted mobility, and on that account, no other choices have been made in road design and decision-making (Fr6; Fr7). According to respondent Fr1, the demographic decline was only a point of discussion in the process from the resistance side. After the decision-making process and the start of other necessary procedures, this discussion was no longer present (Fr1; Fr2).

6.2.3. Effects of the development

In addition to the usefulness and necessity of the development of De Centrale As in a demographic decline region, the effects of the road development have played a role in the policy process. These effects are collected on the basis of the interviews and the documents of public response. These actor beliefs are about positive and negative effects regarding the location of the road, the design of the road and road use.

Positive effects of De Centrale As

In the documents a number of different positive effects of the development appear. According to respondent Fr3, the positive effects of the development are much less regional traffic through villages, which improves the traffic safety and liveability. Respondent Fr1 believes that the situation of citizens living near the existing road improves, something they knew, but now it is also confirmed. Respondents Fr1 and Fr2 think that the resistance can also be viewed from the positive side, because the quality of development has become much better and sharpened. Also from the documents of public response, it appears that specific decisions regarding the location and design of the road are perceived as positive (Fr6; Fr7).

Landscape, nature and fauna

The documents contain many negative responses about the effects on landscape, nature and fauna. These will be discussed below. However, there are also positive effects for landscape, nature and fauna mentioned in the interviews. Despite the crossing of the landscape, respondents appoint that a lot of attention has been paid to the environment and the integration of the road, and according to respondent Fr2, the plan contains special elements related to the landscape, flora and fauna (Fr2; Fr3). For example, respondents Fr3 and Fr2 indicate that wildlife crossings, guidance for bats crossing the road, bunkers for bats and water crossings for aquatic animals are included in the development. According to respondent Fr3, in this way, the objections have been addressed by adapting as well as possible. According to respondent Fr1, politics have had a role in the design of the development, because they wanted to have some extra mitigation measures in the region. Respondent Fr2 and Fr1 are of opinion that De Centrale As is subordinate to the landscape, as 'a guest in the landscape' and the landscape quality and structures are maintained as much as possible.

Nuisance

A number of public respondents considers the effects on nuisance as positive. These respondents appoint that the overall disruption of traffic, including the noise emitted by increased traffic and pollution, in their situation will decrease or even will be eliminated by the development of De Centrale As (Fr6; Fr7).

Negative effects of De Centrale As

The negative effects frequently emerge in the used documents, in particular in the public responses. In this case, it should be made clear that there are also public respondents that agree with the usefulness and necessity of development of De Centrale As, but are not satisfied with the expecting experienced negative effects. Respondent Fr3 indicates that there was a lot of resistance, especially from a "green" and environmental point of view. According to respondent Fr1, the situation of people who first lived in the quiet countryside has, in principle, deteriorated by the construction of the road. A development in a rural vulnerable area had a lot of sentiment in the village and the surrounding area, but there was also resistance to the location of the new road next to a village (Fr1). Respondent Fr1 appoints that there was a balance between the usefulness and necessity of the development and the intervention in the area. According to Fr2, the negative reactions are especially from actors who are affected by the development and actors who care about the landscape in the deepest of the heart. Respondent Fr1 indicates that organizations and foundations in the interests of nature and the environment shared this opinion. In addition, the crossing of the landscape also played a part (Fr1). A public respondent believes that the main plan appears to look good, but in detail it has a big impact on the area and people (Fr6).

Increase of traffic through the development of the road

The public responses show the expectation of respondents that the development will attract more traffic instead of a decrease of traffic, which may lead to increased traffic flows and a declining traffic flow, including on local roads, an increased change of traffic jams and delays, consequences for road safety and more nuisance (Fr5, Fr6; Fr7). Although, one public respondent also expects the traffic pressure to decrease (Fr6). Another public respondent expects more problems and a chance for new bottlenecks (Fr6). Also, a public respondent considers it important that the unwanted traffic on the underlying road network, because of the increase of traffic, will be counteracted (Fr7).

Location and design of the road

Negative effects about the location and design of the road are also reflected in public responses. Some public responses are about the location of De Centrale As, which is too close to built-up areas or the bundling of the road has been insufficiently taken into account which does not promote the liveability (Fr6; Fr7). In addition, a public respondent believes that there are too few accesses and exits, which means that local traffic will hardly make use of the new road and, in addition, traffic intensity on the local network remains higher (Fr7). From more than a dozen of public responses the expectation appears that the new traffic situation leads to an increase of the shortcut traffic and creation of new short cuts, which causes nuisance and does not contribute to road safety (Fr6; Fr7). Also, some public respondents point out that the new trace is longer than the existing road, which means that more car kilometres have to be made (Fr6).

Road safety

Contrary to the goals, several respondents expect that there will arise more unsafe traffic situations (Fr5; Fr7). A number of public responses show that the increase of speed will cause this (Fr5; Fr7). Also, a public respondent believes that the number of accidents will not decrease by a new and better road (Fr7).

Accessibility and barriers

Several respondents expect that the accessibility will decrease and that the problems increase, because of the development of De Centrale As (Fr6; Fr7). One believe is that, because of fewer access points to De Centrale As, compared to the existing situation, road users have to make a detour or just keep using the existing N356 (Fr7). Also on the underlying road network, respondents expect that more detours are created due to closures and the crossing of direct connections, which will reduce the accessibility (Fr6; Fr7). In this case, also the accessibility of farms and property is expected to decrease (Fr6; Fr7). In addition, public respondents appoint deterioration in situations for cyclists, but also pedestrians and public transport (Fr7). In the used documents, public responses regarding the barriers that arise as a consequence of the crossing of the road network with the construction of De Centrale As can be identified (Fr5; Fr6; Fr7). According to a large number of public respondents, barriers arise through the crossing of roads, cycling routes and routes for pedestrians, but also barriers to agricultural traffic arise, which is an obstacle to local traffic (Fr6; Fr7). For example, several public respondents argue that historic and authentic roads will be seriously affected (Fr6). A number of public respondents is of opinion that no attention has been paid to this, for example, for roads that are of importance for the access of property (Fr6; Fr7). Besides, public respondents appoint that De Centrale As has consequences for the accessibility of villages (Fr6). According to these respondents, these barriers have a negative impact on the liveability (Fr7). In this respect, the travel time gain is expected to be minimal (Fr6; Fr7).

Recreation and tourism

In addition, respondents expect the development of De Centrale As has an effect on recreation and tourism, as the area is affected and the landscapes appeal deteriorates, barriers arise and recreational routes and opportunities disappear for cyclists and hikers, but also on water sports (Fr6; Fr7). A number of public respondents is of opinion that tourists will stay away from the region (Fr7). Also, some public respondents do not recognize the importance of recreation and tourism in the plans of the province (Fr6). Besides, several public respondents believe that this development is bad for recreation and tourism in the region, because this leads to a loss of opportunities (Fr6; Fr7).

Damage to landscape, nature and fauna

The damage to the landscape, nature and fauna is most often mentioned in the used documents. Several public respondents have appointed that the crossing of the landscape has really been a problem and has a significant impact (Fr1; Fr2; Fr3; Fr4). According to Fr2, the discussion was mainly about the resistance, because of the impact on the landscape. Respondent Fr3 indicates that the crossing has led to a lot of protest, but this has been refuted and also many concessions have been made in the design of the road. According to respondents Fr1, Fr2 and Fr3, the fuss has been great, because residents believe it is "their area" and "their nature". This is about sincere care for the beautiful area and, moreover, it is also a national landscape (Fr1; Fr2; Fr3). Respondent Fr1 indicates that actors considered that ecology and fauna has not been reflected, but these topics were treated with care in the plans.

There are a lot of responses about the negative effects on nature, landscape and fauna (Fr5; Fr6; Fr7). Many public respondents consider the development of De Centrale As as incomprehensible, due to the disastrous or

profound consequences for vulnerable nature, cultural-historical landscapes, liveability, and are of opinion that the national landscape Noordelijke Friese Wouden will be severely or irreparably damaged (Fr6; Fr7). Besides, one of the negative effects often mentioned by respondents, is the intersection of various neighbourhoods (Fr6). A public respondent argues that the province of Friesland has hardly looked at the natural values in the initial phase (Fr5). The public responses show that the landscape is expected to be very fragmented (Fr6). Many public respondents are afraid that many nature and habitats of animals will be lost in this way (Fr6; Fr7). In addition, public respondents expect more traffic accidents with animals due to the new road and increase of traffic flows and they wonder if the remedy of fauna passages is enough (Fr7). Due to these effects on landscape, nature and animals, many public respondents have advocated other alternatives (Fr5; Fr6). Several public respondents are also of opinion that nature, landscape and habitats for animals need to be compensated and the quality of the area must be maintained as much as possible (Fr5; Fr6). In addition, according to public respondents, the development has major consequences for farmers through the crossing of agricultural land (Fr6). A public respondent appoints that this makes the activities of farmers impossible (Fr6).

Nuisance

In addition to the crossing of the landscape, the nuisance, caused by the development of De Centrale As, has been mentioned often in the public responses. Many public respondents expect the development to lead to disproportionate negative effects of noise, but also nuisance regarding the liveability, health, air pollution, vibration and environmental pollution (Fr5; Fr6; Fr7). The expectation is that unacceptable consequences will arise for the living, working and living environment in the outlying area and in the villages and the attractiveness of the region (Fr6; Fr7). Also, the nuisance to animals is appointed by some public respondents (Fr7). A number of public respondents argue that the awareness of the degree of nuisance is insufficient and some consider that only little measures to be taken or that the environment has not played a part in decision-making (Fr6). Public respondents expect an increase in nuisance, because of the increase of traffic and also negative effects for the liveability (Fr6). Therefore, different public respondents are in favour of other alternatives or solutions, which are expected to cause less nuisance (Fr6).

Effects on the individual situation

Other negative effects that are widely mentioned in the public responses, are future changes in individual situations or business situations. These negative effects concern the living environment and quality, health, but also (indirect) damage, also due to construction and negative effects for the house, farm, or company (Fr5; Fr6; Fr7). The latter concerns, for example, depreciation of property or crossing of property or roads, which has negative consequences for the accessibility (Fr6; Fr7). Besides, also buildings will have to be demolished for the development (Fr6; Fr7). According to Fr1, the demolition of properties, was an intensive process, but also farm relocations have been done with care. Public respondents preferred other variants or solutions, which they expect to experience less negative effects on the individual situation (Fr5; Fr6; Fr7).

Regional economy

Respondents Fr3 and Fr4 also appoint the effects of the development of the De Centrale As for entrepreneurs and retail in villages and whether the local economic activity is still visible. According to respondent Fr4, this has also played a part in the process. Respondent Fr3 is wondering what the effects of this are, as current regional traffic not enters the village but uses De Centrale As and if this leads to a smaller shopping audience and economic consequences. Several public respondents also think that the road has a negative effect on the accessibility of businesses and shops in the smaller villages (Fr6; Fr7). Other public respondents argue the development will have a real impact on agricultural activity (Fr6). In addition, public respondents are of opinion that companies should not be restricted in their operations by De Centrale As (Fr6).

6.3. Case II: N18 Varsseveld-Enschede

The N18 Varsseveld-Enschede is a road development project in the region Achterhoek and partly in the region Twente, which is currently under construction. The Ministry of Infrastructure and the Environment and Rijkswaterstaat, as part of the ministry, are responsible for this project and collaborates with the provinces of Gelderland and Overijssel and the municipalities Oude IJsselstreek, Oost Gelre, Berkelland, Haaksbergen and Enschede. In 2018 the new road will be opened for use.

6.3.1. Policy problem

The N18 (also called Twenteroute) is a national road in the eastern part of the Netherlands for the largest part in the region Achterhoek and a smaller part in the region Twente (figure 8). The road has a length of approximately 45 kilometres and leads from Varsseveld to Enschede. In Eibergen, Haaksbergen and Usselo the road leads through the village. The N18 has a capacity of 2x1 lanes and the crossings are mostly at ground level (Rijkswaterstaat, 2013b). Between Varsseveld and Groenlo the road can only be crossed at designated locations and is closed for slow traffic (Rijkswaterstaat Oost-Nederland, 2005). The road is in possession of Rijkswaterstaat and is part of the national road network, but mainly has regional and local function (Rijkswaterstaat Oost-Nederland, 2005). According to Rijkswaterstaat, the Twenteroute is the most important access to the city network of Twente (Almelo, Hengelo, Enschede and Oldenzaal) and the city region of Arnhem and Nijmegen, especially for the region Achterhoek (Rijkswaterstaat, 2008; Rijkswaterstaat, 2013b).

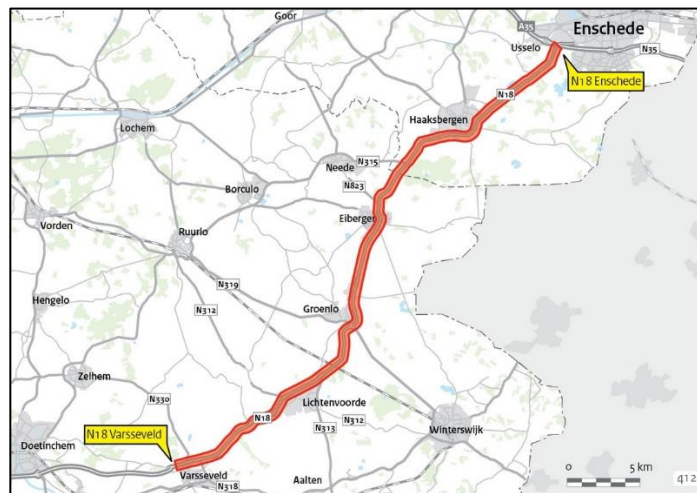


Figure 8: current N18 between the Highway A18 (Varsseveld) and Enschede (Rijksoverheid, n.d.c)

For decades, addressing the issue of the N18 has been subject of public and political debate (Ah2; Rijkswaterstaat, 2008). In particular, this is debate is about road safety caused by different speed limits on the road, the liveability and also because of the accessibility and economic development of the region (Rijkswaterstaat, 2008). The problem consists of three aspects: traffic safety, liveability and accessibility, in relation to the economic development (Eurlings, 2013). The fact that the way crosses a number of villages (especially Eibergen and Usselo) gives nuisance to inhabitants, for example because the road is difficult and dangerous to cross. In addition, ground level crossings and traffic with different velocities provide unsafe situations, poor flow and no stable or longer journey times (e.g. agricultural traffic) (Rijkswaterstaat, 2013b). The road also no longer meets the current directives and requirements which are needed for the increased amount of traffic (Rijkswaterstaat, 2013b). With the expectation that the amount traffic will further increase, it is also expected that the problems in the area of road safety, liveability and accessibility will grow (Rijkswaterstaat, 2013b).

6.3.2. Policy goals

There are two policy goals at the basis of the project N18 Varsseveld-Enschede. The main purpose (1) and secondary purpose (2) are included in the notification of intent (Rijkswaterstaat Oost-Nederland, 2005, p. 19):

1. 'Improve the traffic safety and living conditions as good as possible on the N18 and around the N18.'
2. 'Improve the accessibility and regional economic development as good as possible.'

Based on these main goals, the Ministry of Infrastructure and the Environment has set concrete goals with regard to road safety, accessibility, nature and landscape (minimizing negative consequences, as little as possible new cut-outs, arise of residual space), liveability (noise, air quality, effect of barriers) and the shape, function and design of the development (Rijkswaterstaat, 2008). Also this development can contribute to the regional economic development of the regions, because the improvement of the accessibility of industrial areas and highways A18, A35 and A1. The current construction and shape of the N18 is seen as a serious obstacle in the utilization of economic possibilities (Rijkswaterstaat, 2008; Rijkswaterstaat, 2013b). Based on

these goals, in an Environmental Impact Assessment 10 alternatives are investigated including short, medium and long bypasses and two most environmental friendly alternatives (Rijkswaterstaat, 2008).

6.3.3. The development of N18 Varsseveld-Enschede

The Ministry of Transport, Public Works and Water Management has decided to develop a new trace from Groenlo to Enschede next to the current N18 (Rijkswaterstaat, 2013b) (figure 9).⁹ Between Groenlo and Enschede a new trace will be developed with a speed limit of 100 km/h. From Groenlo to Haaksbergen a 2x1 lane road and from Haaksbergen to Enschede a 2x2 lanes road. In addition to this development near Varsseveld the road will be adjusted to a 2x2 lanes road with a maximum speed of 80 km/h and also the connection with the A18 will be changed. Between Varsseveld and Groenlo the current trace will be maintained. Furthermore different level crossings will be constructed to connect to the local road network. Near Enschede the N18 will be connected to the highway exit 'Enschede West (A35)/Westerval. This is new in comparison with the initial situation. The current N18 still will be open for use, but will be downsized and used for slow traffic and other traffic (Ah2; Rijkswaterstaat 2011; Rijkswaterstaat, 2013a). This should improve the average travel time, more reliable travel times, better regulation of agricultural traffic and a better flow (Rijkswaterstaat, 2013b). Parts of the N18 will be transferred to other road managers (municipalities or provinces) (Eurlings, 2013).



Figure 9: Overview of the development of the N18 Varsseveld-Enschede (Rijkswaterstaat, 2011b)

In addition, access routes, connecting routes, parallel roads, cycle paths and different level crossings are constructed or modified and existing roads in the surroundings are adjusted because of changed traffic situations, closure or the expected traffic growth (Rijkswaterstaat, 2013b). Besides, for the entire development of the N18 the integration in the existing landscape is taken into account (Rijkswaterstaat, 2013b). For this purpose, a landscape plan has included about how this integration will look like and what measures will be taken.

⁹ The Ministry Transport, Public Works and Water Management and the Ministry of Housing, Spatial Planning and the Environment merged into the Ministry of Infrastructure and the Environment in 2010

Second Phase N18

The project of the N18 has been divided into a first and second phase (Ah4). The 'First Phase N18' as described above will be developed, which determined on the basis of the available budget (Ah3; Ah4; Eurlings, 2013; Rijkswaterstaat, 2013a). The 'Second Phase N18', which is in particular about the part between Varsseveld and Groenlo, has not been taken into account in this development (Ah3; Eurlings, 2013). According to Rijkswaterstaat the infrastructure can function sufficiently until 2020 with the construction of the First Phase N18 (Eurlings, 2013). After 2020, Rijkswaterstaat has the intention to conduct an assessment about whether there is still reason to improve the infrastructure based on mobility objectives (Ah; Ah4). The municipalities in the region Achterhoek together have started with an investigation to see if there are still any adjustments or developments needed based on a wider perspective (Ah3).

6.3.4. Process and procedure of the N18 Varsseveld-Enschede

In 1992, for the first time the need for research for the adjustment or improvement of the N18 'Twenteroute' is officially confirmed by the former Minister of Transport, Public Works and Water Management and Minister of Housing, Spatial Planning and the Environment (Rijkswaterstaat, 2008). The N18 is included in the study programme of the Multiannual Infrastructure and Transport Programme (Rijkswaterstaat, 2008). Then, a notification of intent is drafted and the investigation for the improvement of the N18 has started (Rijkswaterstaat Oost-Nederland, 2005). Since 1998, the N18 Varsseveld-Enschede project has been postponed for a number of years due to the priority of the Multiannual Infrastructure and Transport Programme (MIRT) (Rijkswaterstaat Oost-Nederland, 2005).

In 2002, the province of Gelderland has initiated an investigation in regional context for a preferred alternative for the N18 and besides to find a substantial contribution for the construction (Rijkswaterstaat Oost-Nederland, 2005). Late 2003, the results of an investigation including a possible financial contribution from the region has led to this decision by the Minister of Transport, Public Works and Water Management for the start of a new procedure and a contribution from the national government (Rijkswaterstaat Oost-Nederland, 2005). Therewith, the N18 has been put on the agenda and has been incorporated into the Multiannual Programme Infrastructure and Transport (Rijkswaterstaat, 2008).

In 2005, the procedure of the Infrastructure Act has been started with the publication of the Notification of Intent (Rijkswaterstaat, 2008). In the subsequent period, the investigation of the Environmental Impact Assessment has been conducted, in which ten alternatives are investigated (Rijkswaterstaat, 2008). Involved government actors have expressed a regionally preferred alternative. The project objectives, the impact on the landscape and the available budget have affected the assessment and the preferred alternative has been selected (Rijkswaterstaat, 2013a; Rijkswaterstaat, 2013b). In the period between 2005 and 2015 the entire process of the Infrastructure Act is completed. During this procedure there were both formal and informal opportunities for participation and public response (Ah1). On the design record of decision (ontwerptracébesluit), part of the Infrastructure Act procedure, 379 unique responses were submitted by 795 actors. Besides, there was also informal participation, including the organization of work sessions or information meetings (Ah1; Rijkswaterstaat, 2013a). In April 2015, the Decision of the Route has become irrevocable (Rijkswaterstaat, 2015). This is followed by a period in which the preparation of the construction has been carried out. In 2016, the implementation has started. It is expected that the construction of the N18 will be completed in the autumn of 2018, after which the road can be opened for traffic.

6.3.5. Actors in the decision-making process

The Ministry of Infrastructure and the Environment and Rijkswaterstaat, part of the ministry as road manager, are responsible for the development N18 Varsseveld-Enschede. It is a project in which the Ministry of Infrastructure and the Environment, the provinces of Gelderland and Overijssel and the municipalities of Oude IJsselstreek, Oost Gelre, Berkelland, Haaksbergen and Enschede cooperate. This also applies to the funding. In the interviews, the importance of cooperation and co-financing in the approach of the N18 is regularly mentioned (Ah2, Ah3, Ah4). In contrast to other government actors, the province of Overijssel has later started to cooperate with a financial contribution, as it had other priorities first (Ah2, Ah4). Besides, the municipalities of Oude IJsselstreek, Oost Gelre and Berkelland have been constituted, after a municipal redeployment of eight smaller municipalities in 2005. The provinces, municipalities, regions and the Ministry of Infrastructure and the Environment are in addition to cooperation partners also funding partners, which underlines the

importance of addressing the N18 (Ah2, Ah3). The provinces and municipalities also are involved with the connection of the N18 to the local road network, which they manage (Ah1).

The managers pulled the project (Ah5). The ministers of Housing, Spatial Planning and the Environment and Transport, Public Works and Water Management have had a role in the development of the N18 approach and the decision-making for the development of the new N18 (Rijkswaterstaat 2011; Rijkswaterstaat, 2013a). Both ministries have merged into the Ministry of Infrastructure and the Environment. In addition, political parties, through the municipal council or the Provincial States, have been involved. Also other government agencies such as the Water Boards Rijn en IJssel and Vechtstromen were actors in the process (Rijkswaterstaat 2011; Rijkswaterstaat, 2013a).

In addition, organisations such as Natuurmonumenten, Staatsbosbeheer and various other working groups, foundations and (interests) organizations relating to nature, environment, landscape, flora and fauna, recreation and tourism, but also in general the importance of the region participated (Eurlings, 2013). Other interest organizations are for example the Dutch Federation of Agriculture and Horticulture and entrepreneurial organizations and associations to support the interests of farmers and entrepreneurs. Also, entrepreneurs and farmers are individually involved in the process.

Individual actors in the process are citizens, landowners, residents of villages or neighbourhoods and residents nearby the current or new route. Besides, actors have organized in sound board groups, stakeholder organizations and resident associations (Ah1). They have been involved through consultation periods, workshops, sessions, opening meetings and individual communication (formal and informal) (Ah1; Ah5). At the same time, all kinds of action committees were established (Ah2).

6.4. Actor beliefs - Case II

Also for the case N18 Varsseveld-Enschede, actor beliefs about the importance of the development of roads in Dutch demographic decline regions, are collected on the basis of interviews, reports of public response and other documents. This paragraph provides a description of the aspects of actor beliefs regarding the usefulness and necessity of the development of N18 Varsseveld-Enschede, the role of demographic decline in Noordoost Friesland in the usefulness and necessity discussion and beliefs about the effects of the development of the N18.

6.4.1. Usefulness and necessity of the N18 Varsseveld-Enschede

In the data various beliefs show up regarding the usefulness and necessity of the development of the N18 Varsseveld-Enschede. The usefulness and necessity discussion has already started in the eighties, actually even in the sixties (Ah2). According to respondent Ah3, the road A18/N18 at first was called A15 and the intention was to connect the A15 with the current N18 for a flowing movement to Rotterdam. There were capacity problems on the N18 and the expectation was that the amount of traffic would increase even further, leading to a huge burden by commercial transportation traffic, in particular, in Eibergen, Haaksbergen and Usselo (Ah2). According respondents Ah2, this was the argument that something needed to be done and, in the end, the Achterhoek and Twente region went together towards The Hague to argue that something was needed to be done. In the early 90s, there were plans for a bypass eastwards around Eibergen and the municipality already possessed land (Ah2). This land acquisition for the potential developments is also mentioned in a public response and by respondent Ah3 (Ah3; Rijkswaterstaat, 2011a). Respondent Ah4 mentions that the liveability discussion has actually started in Eibergen, because the N18 is located right through the middle of Eibergen, which was problematic for the village and inhabitants. This has been expanded by also improving the accessibility of the entire region (Ah4). The documents of public response also show that the extensive usefulness and necessity discussion, to address the N18, has played in the region for decades (Ah6; Rijkswaterstaat, 2011a). Since then, there were thoughts about the solution, adaptation of the existing route or a new route (Ah6; Rijkswaterstaat, 2011a). Respondent Ah2 indicates that the N18 also was already on the National Road plan (Ah2). According to respondent Ah5, the focus was only on the administrative preference, 'managers also wanted to leave something in their work'. Respondent Ah2 appoints it is good that the construction has started, "because otherwise you never know where those kinds of processes end" (Ah2). Also a public respondent thinks that after decades of consultation now is time for the realization (Rijkswaterstaat, 2013a).

A number of respondents point out that the funding also shows the importance of the road (Ah2; Ah3; Ah4). This means not only from the national government, but also from the provinces, regions and municipalities (Ah3). Respondents Ah2 indicate that joint funding today is important within the government, to allow projects to be implemented (Ah2).

Advocates of the development of the N18 Varsseveld-Enschede

According to respondent Ah3, the N18 is considered as "kind of backbone" of the road network in the Achterhoek. Respondent Ah4 indicates that the N18 is the connection to Twente and Arnhem/Nijmegen. The Decision of Preference (2009) shows that the most important arguments for the development of the N18 Varsseveld-Enschede are to improve the safety, liveability, traffic flow, in relation to the economic development (secondary objective). In addition, it reduces short cut traffic and provides sufficient capacity for the road (Eurlings, 2013). Besides, the design and location of the new N18 will contribute to the economic potential of the region, the link between Arnhem-Nijmegen and Twente and the parallel structure for the A1 (Eurlings, 2013).

According to respondent Ah1, the N18 is now an unsafe road that leads through the centre of villages, which is outdated. Several respondents indicate that by leading the traffic around villages the traffic safety and liveability in the villages improves (Ah1; Ah2; Ah3). Respondents Ah2 appoint that the most important thing is the disappearance of (transport) traffic from Eibergen and thereby eliminating the nuisance in the villages. The current N18 is a significant obstacle in Eibergen (Ah2). Respondent Ah1 indicates that the new N18 Varsseveld-Enschede, in addition to improving safety and liveability, improves the traffic flow and makes the infrastructure clearer. Respondents Ah2 and Ah3 also believe that the liveability and traffic flow (travel time) are high profit points. According to respondents Ah2, a short bypass around villages was not the best solution, because "the nuisance in the village has decreased, but the traffic flow has not changed" (Ah2). Rijkswaterstaat also agrees that a short redirection is not the solution based on traffic safety and liveability (Rijkswaterstaat, 2011a). Respondent Ah1 believes that safety and liveability are even more important than the improvement of the traffic flow. Also, the capacity, now and in the future and the availability of public budgets have played a role in project (Ah1). According to respondent Ah2, there has been a fight to ensure that the east of the Netherlands was on turn and afterwards there is not any longer returned to the issue (Ah2). A number of respondents point out that the funding by all governmental actors also shows the importance of the road (Ah2; Ah3; Ah4).

The usefulness and necessity of the development of the N18 is also appointed in the public responses. The opinions about the problem, the extent and the usefulness and necessity for the approach are different (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). According to public respondents, in particular, this is about solving the bottlenecks in villages, problems with respect to the liveability, traffic flow, accessibility of the region and especially road safety (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Several public respondents are of opinion that the solution must score high on improving road safety (Rijkswaterstaat, 2011a). Some public respondents consider that there must be a solution to the dangerous crossings and the ground floor crossings (Rijkswaterstaat, 2011a). Other public respondents believe that an approach to the problems is needed to improve liveability (Rijkswaterstaat, 2011a). In document Ah6 has been appointed that the road now crosses Eibergen and Usselo and not meets the future needs of traffic safety and liveability (Ah6). Several public respondents indicate that Eibergen needs a completely new bypass (Rijkswaterstaat, 2011a).

Rijkswaterstaat points out that current and expected traffic safety and liveability problems, despite the improvement, are so high that measures need to be taken (Rijkswaterstaat, 2011a). Also, according to several respondents, the traffic pressure and unsafety of the existing road would be excessive and also many respondents believe that drastic measures must be taken (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). The problems concern traffic safety, liveability, traffic flow, poor accessibility and the economy and, in addition, a "huge increase in traffic" is expected on the N18 (Rijkswaterstaat, 2011a). Public respondents believe that the development of the N18 is important, because, the Achterhoek is currently lagging behind as a good connection, the road offers opportunities for recovery of the original infrastructural network and besides because of traffic chaos during previous roadworks (Rijkswaterstaat, 2011a).

Multiple public respondents are for a drastic structural solution, also because of the long-term decision-making of the responsible directors (Rijkswaterstaat, 2011a). According to many public respondents, upgrading the current road would be "patchwork" or a "waste of resources" (Rijkswaterstaat, 2011a;

Rijkswaterstaat, 2013a). A public respondent believes that the criticism of the realization of a new N18 will disappear when the road has been constructed (Rijkswaterstaat, 2011a). There are also several public respondents who agree to the goals in a more general way and consider solving the issues on the N18 important, but this should not be at the expense of the attractiveness of the Achterhoek and the functioning of relationships between cities and countryside (Rijkswaterstaat, 2011a).

N18 as a part of a larger infrastructural network

A large number of respondents considers the approach of the N18 as a major improvement of a part of a larger infrastructure network. According to various public respondents, a good east-west connection via the A15, A18 and N18 and also Germany is of national importance (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). In addition, the N18 is also seen as an important link between the cities Arnhem and Nijmegen and the Achterhoek and Twente (Rijkswaterstaat, 2013a) which is important for both local and regional traffic. Several respondents agree that the N18 can serve as an alternative in calamities or to disburden the A1, but also the A50 (Rijkswaterstaat, 2011a).

Advocates of alternatives solutions

Many public respondents agree that the issues need to be tackled, but have proposed, in the context of the usefulness and necessity of the road development, other solutions regarding the type of solution, locations or connections or alternatives that should have been investigated (Ah5; Ah6; Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a).

Upgrading the current N18

A large number of public respondents has a clear preference for upgrading the current N18 to greatly improve traffic quality, traffic safety and liveability, with or without widening the road, a parallel road for slow traffic and less accesses and exits (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). According to various public respondents, large damage and crossing of landscape and nature by the construction of a new road are avoided and the costs are less (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Respondents are in favour of upgrading the existing N18, because accessibility at the moment is also good, a new route would be spatially outdated, upgrading gives possibilities for redistribution of property, there are already fast connections and because of the traffic intensity (Rijkswaterstaat, 2011a).

Connection to Hengelo instead of Enschede

In addition, a road from Varsseveld via Haaksbergen to Hengelo is often mentioned in the comments and which had to be considered in the opinion of the respondents (Rijkswaterstaat, 2013a). According to public respondents, this is a better solution because there is less damage to nature (landscaping), this option has more benefits, this is a more logical route and the costs are expected to be lower (Rijkswaterstaat, 2013a). Other public respondents appoints that Rijkswaterstaat has agreed that this variant is spatially better and this route is considered as a connecting road between Rotterdam and Germany, in which the connection to Hengelo and the A1 is better suited (Rijkswaterstaat, 2013a). According to Rijkswaterstaat, in this case, the task was to find a solution for the N18 and the access and crossing of villages on the trace (Rijkswaterstaat, 2013a).

Double lanes (2x2)

One of the reports of public response show that respondents consider the development of a four-lane road (2x2) from Varsseveld to Enschede necessary (Rijkswaterstaat, 2013a). A public respondent indicates that "if you do something, you should do it well" (Rijkswaterstaat, 2013a). Other arguments for this solution are that it meets the objectives, this solution was already prepared with the expropriation, it solves the problems, the future stability, accessibility and traffic safety, occurrence of bottleneck and the maximum access of Twente and the Achterhoek and business areas (Rijkswaterstaat, 2013a). According to a public respondent, it would not be logical if only a part of the road is 2x2 (Rijkswaterstaat, 2013a).

Other alternatives and solutions

In addition, other measures and solutions relating to the location, construction and maintenance of the road are mentioned (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). A number of public respondents are in favour of an 80 km road, with or without separate lanes, turbo roundabouts, or investing in improving safety on the current N18 through the construction of different level crossings, or good parallel structures to keep the outdoor areas accessible (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Besides, a respondent believes that the major problems concerning railways needs more attention in the mobility issue in Achterhoek (Rijkswaterstaat, 2013a).

Opponents of the development of the N18 Varsseveld-Enschede

In addition to the advocates of the usefulness and necessity of the N18, there are also opponents of the N18. According to respondents Ah2, there were interest groups that were against the development of the N18 route, "because they did not like it at all" (Ah2). Respondent Ah5 believes that the development of the N18 is not needed because the traffic volumes and forecasts for the N18 meet the norms, there are already good connections near the Achterhoek, the roads are fine, the Achterhoek has to exploit its strong points like care and recreation and there are also many smart solutions possible. According to Respondent Ah5, the research reports did not play a role in the decision-making for the N18, but "who pays determines" and the administrators of governmental authorities were not interested in the norms. Also, a public respondent mentions that the administrators of governmental authorities did not show a vision and policy, causing no budget has been created in the last 50 years, which has led to the development of the current "monstrous road" (Rijkswaterstaat, 2013a). Another public respondent believes that politics in election time should have been more honest about the desire to impose this road (Rijkswaterstaat, 2013a).

Goals of the development

Many public respondents believe that the N18 approach is not necessary (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). One of the documents of public response shows that some respondents have criticized the solution and call it a "half solution", "patchwork", a "non-structural solution" or "a form of arbitrariness" (Rijkswaterstaat, 2011a). According to various public respondents, the usefulness and necessity of the chosen development or parts of it has not been demonstrated based on the objectives of accessibility (flow), liveability and safety and, according to public respondents, the development does not solve the problems (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Several respondents expect that a major development is not necessary because accessibility and road safety are already good or have been significantly improved in recent years (Ah6; Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). A public respondent is of opinion that the traffic pressure and safety is exaggerated, except at Eibergen (Rijkswaterstaat, 2011a). Besides, respondents appoint that goals will be achieved when the road will be developed autonomous, the N18 is not the only solution, others have doubts about the improvement of road safety, whether the downgrading can be financed by local governments or if the solution is sustainable in terms of problem solving (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a).

Accessibility, traffic intensity and capacity

Also, several public respondents do not understand the decisions made for traffic intensity, capacity and accessibility. A number of respondents believes that the calculations are dated or are inconsistent with current economic and geographical developments or numbers have decreased sharply (Rijkswaterstaat, 2013a). According to one of these public respondents, the bypass is planned far enough around the villages for the development of business parks and villages, but the economic developments will not continue and now road users can hardly reach the road (Rijkswaterstaat, 2013a). Also, another public respondent thinks that economic developments and stagnation of building plans contributes to abandon the plans (Rijkswaterstaat, 2013a).

Besides, multiple public respondents indicated that there are never traffic jams on the N18 (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). A number of respondents expect that the improvement of the N18 and, in particular, the construction of a new route, does not make sense if measures are not taken on the A12 and the roads around Arnhem (Rijkswaterstaat, 2011a). A relatively large number of people think that the plans are too ambitious. Some of them find the current situation around the N18 overestimated, others think that the current traffic numbers do not reach the maximum capacity and, besides, a busy high traffic path does not fit into the plan (Rijkswaterstaat, 2011a). Also, according to a large number of actors, the Achterhoek is easily accessible via surrounding motorways (Ah6). Respondent Ah5 states that 80% of traffic in the Achterhoek area is local and that "we must keep it". Other respondents also disagree with the plans and the N18 as a

parallel route for the A1 / A50, among others, in case of calamities (Rijkswaterstaat, 2013a). Document Ah6 describes that residents of the Achterhoek and Southeast Twente do not want to sacrifice the strengths of the region for a route of large-scale international transport and, in addition, the national policy is precisely aimed at increasing the capacity of existing national transports roads (Ah6).

Strengths of the regions Achterhoek and Twente

Several respondents believe that the strengths of the Achterhoek and Twente are the calmness and space, the areas are not yet urbanized and the landscape is still beautiful and the focus needs to be at these strengths instead of disturbing the area it with a new road (Ah6; Rijkswaterstaat, 2011a). Public respondents believe that the construction is not necessary and is at odds with the regional objectives: care, services, tourism and recreation and nature (Rijkswaterstaat, 2011a).

Distribution of budgets

The distribution of budgets also plays a role in the usefulness and necessity of development. According to a small number of public respondents, no money should be wasted on the adaptation of N18, because problems will only increase which makes the approach unnecessary (Rijkswaterstaat, 2011a). Also, some respondents believe that money elsewhere in the Netherlands is more necessary than in Achterhoek for the N18 (Rijkswaterstaat, 2011a). In addition, a public respondent thinks it is frustrating that a lot of money is spent on the new road, while the project does not solve the problems (Rijkswaterstaat, 2013a). Several other public respondents, in view of the economic crisis and due to the cuts, expect there is no general interest or necessity for the construction of the N18 or wonder whether the plan is financially feasible (Rijkswaterstaat, 2013a). Hence, a public respondent considers the A35 of much greater importance to Twente than the N18 (Rijkswaterstaat, 2013a).

Advocates and opponents regarding the role of economic development in the usefulness and necessity discussion

Regional economic development is an important theme in the used documents. According to respondent Ah1, the regional economic development always has been considered as a side effect, in addition of the improvement of road safety, liveability and accessibility. Companies and entrepreneurs like to have space to expand, want good access and, therefore, they are interested in accesses of the road close to business areas (Ah1). Respondents Ah2 points out that it is undoubtedly more interesting to be in a business area, when there is a direct connection to the new road, but that depends on the type of company. Besides, on a higher level, according to respondents Ah2, the debate on regional economic development plays a role. How certain budgets are distributed, in Randstad or in the east of the Netherlands and what effects can be achieved (Ah2). Respondent Ah3 mentions that companies and entrepreneurs are very happy with the development, because of the improved accessibility from and to the Achterhoek, but also for the supply and delivery of goods. However, also other solutions are important, such as the A18 business park, a container transshipment across the border in Emmerich (Germany) and routes for long heavy trucks (Ah3).

Advocates regarding the role of economic development in the usefulness and necessity discussion

Many public respondents believe that the development of the N18 is good for regional economic development (Ah6; Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Based on this, public respondents are of opinion that the construction of the N18 can begin soon (Rijkswaterstaat, 2013a). According to respondent Ah5, the Chamber of Commerce has, as many times as needed, lobbied for a new road, because "that was good for employment". Document Ah6 describes that an important criterion for administrators of governmental authorities, involved with the policy decision, is the added value for the regional economy: improvement of the investment climate, attractive infrastructure (Ah6). According to public respondents, it is important that a road will be constructed to improve accessibility, among other things, because this creates an essential fast connection from Enschede to Varsseveld and to Rotterdam, the Achterhoek remains accessible and for good connections to the underlying road network (Rijkswaterstaat, 2011a, Rijkswaterstaat, 2013a). A public respondent points out that the situation is currently seriously inadequate (Rijkswaterstaat, 2013a). Several other respondents expect that the construction of a new road between Varsseveld and Enschede will strongly advance the economy of especially the Achterhoek, as business traffic and private traffic will benefit from time savings and companies have cost savings (Rijkswaterstaat, 2011a). Besides, public respondents also expect that the business climate will become more attractive, this is more jobs will be created and young people less quickly will leave the region (Rijkswaterstaat, 2011a). In addition, respondents believe that this accessibility is important for the competitiveness and the industry in Achterhoek, as the largest employer (Rijkswaterstaat, 2011a). A public respondent who defends the interests of companies in commercial transportation in

Gelderland and Overijssel is delighted with the development, because of the improvement of traffic conditions in terms of accessibility, road safety and liveability, as the N18 is an important connection for regional businesses in Achterhoek and Twente (Rijkswaterstaat, 2013a). According to this respondent, this also contributes to the business climate in the Twente and Achterhoek regions (Rijkswaterstaat, 2013a). From this point of view, a large part of the advocates see a long bypass as the best solution (Rijkswaterstaat, 2011a). A number of respondents even thinks that the traffic situation in the east of the Netherlands has to be addressed drastically and the N18 has to be "converted into an economic life vein", for example, to disburden the A1 (Rijkswaterstaat, 2011a).

Opponents regarding the role of economic development in the usefulness and necessity discussion

There are also a lot of public respondents who expect the development of the N18 to have no added value for regional economic development or consider economic growth even as undesirable (Ah5; Ah6; Rijkswaterstaat, 2011; Rijkswaterstaat, 2013a). Respondent Ah5 and also public respondents believe that the investigated economic effects are incomplete or incorrect, the development of the road only involves a limitation of the damage and that other solutions are necessary for the stimulation of the economy (Ah5, Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). In addition, a public respondent points out that the economic need for this route has never been urgent (Rijkswaterstaat, 2013a). Document Ah6 states that, as a result of the decline in the labour force, fewer new business areas are required and that the development of a new road over time leads to empty buildings on existing business areas and demand for new areas will decrease further (Ah6; Rijkswaterstaat, 2013a). In contrast, upgrading of the existing N18 route means improving accessibility for adjacent business areas (Ah6). Other public responses also show that stimulation of industry focused on large-scale production is considered to be outdated (Rijkswaterstaat, 2011a). In addition to responses about business areas, public respondents also appoint that the objective of economic development for farmers in the area is not reached or missing in the plans (Rijkswaterstaat, 2013a). Besides, a large number of respondents believes that the new route does not contribute to strengthen living, (health)care, high-tech technology, landscape and recreation and tourism in the Achterhoek and that the attractiveness is significantly reduced, while these are the main subjects of the Achterhoek (Ah5; Ah6; Rijkswaterstaat, 2011a). Many respondents consider recreation and tourism of increasing importance to the economy in the Achterhoek, because this is one of the strengths of the region (Rijkswaterstaat, 2011a).

Usefulness and necessity of a Second Phase N18

In addition to the usefulness and necessity of the first phase N18 Varsseveld-Enschede, the usefulness and necessity of the Second Phase plays a role in this case. Initially, the intention was to include the entire N18 in the development. According to respondent Ah3 and Ah4, in order to allow the project to be financed, the project has been cut into a first and second phase. Currently, the first phase is being implemented. From the letter of the position of the Minister it appears that, in the context of the MIRT (Multiannual Programme Infrastructure, Space and Transport), in the near future an analysis will be conducted to clarify whether there is a need for further expansion of the N18 (Eurlings, 2013). Respondent Ah2 recalls the discussion about the part between Groenlo and Varsseveld and whether a further study had to be considered for possible adjustments. Respondent Ah4 indicates that the Second Phase has been attenuated by the national government and, later, will be looked from mobility and accessibility goals and with the new traffic flows, whether there is a need for the Second Phase. According to respondents Ah3 and Ah2, the national government has decided to wait a year or 10 or 15 to evaluate whether there will be a second phase N18. Respondent 3 mentions that for the first few decades, Rijkswaterstaat does not see a traffic-critical need to further develop the N18. The interviews show that the municipalities in Achterhoek will not wait, because that will take too long and there already may be looked ahead (Ah3; Ah4). The municipalities in the Achterhoek have started a further study about the ambition for the N18 and infrastructure in the region, but also the accessibility and liveability in the region (Ah3). The province of Gelderland is also involved and also other local governments see the usefulness of a second phase, "that was always the purpose . . ." (Ah3). Respondent Ah3 appoints that the municipalities are "very pleased and happy" with the first phase, but it is thought useful to look further at the approach of the N18 for the part Varsseveld-Groenlo and not only from a traffic-critical perspective. According to respondent Ah3, accessibility can be facilitating, for commuting, transport and public transport, but also can create conditions for other developments in the Achterhoek.

In the public responses the Second Phase N18 is not directly mentioned, but it is appointed that the trajectory between Varsseveld and Groenlo is not included in the project (Rijkswaterstaat, 2013a). Several public respondents wanted the current route between Varsseveld and Groenlo to be included in the First Phase N18 (Rijkswaterstaat, 2013a). According to a public respondent, the Minister did not take sufficient account of the

importance of the region in decision-making (Rijkswaterstaat, 2013a). Several other public respondents show the concern about this part and indicate why it is important that this section is also included in the first phase (Rijkswaterstaat, 2013a). For example, the choice for not including the Second Phase raises questions about the future stability of development (Rijkswaterstaat, 2013a).

6.4.2. Role of demographic decline in the usefulness and necessity discussion

This second aspect of actor beliefs is about the role of demographic decline in the usefulness and necessity discussion. Respondents Ah2 describes that the process for the development of the N18 Varsseveld-Enschede has started decades ago with the discussion about the necessity to address the current situation and that discussion kept coming back. According to respondent Ah2, that was based on the idea of growth for this area. A number of respondents indicate that there was no question of demographic decline at the moment, that appeared later (Ah2; Ah4). The demographic decline started to play a role in the policy process from the moment of public consultation opportunities as part of the Infrastructure Act procedure (start procedure with the notification of intent in 2005). This appears from the report of public response for the Environmental Impact Assessment (consultation autumn 2008) and from the report of public response on the design Record of Decision (consultation end 2011) (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). In both reports, but especially in the second report of public response, different actor beliefs about demographic developments appear, in relation to the construction of the new N18 (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). On the one hand, several public respondents believe that the construction of a new route will cause to attract more entrepreneurs in the regions Achterhoek and Twente, which will create more jobs and young people will less rapidly leave the region (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). According to some public respondents, a long bypass from Varsseveld to Enschede would be the best solution to keep the region Achterhoek economically accessible (Rijkswaterstaat, 2013a). On the other hand, the public responses also show that economic growth is undesirable with the demographic decline in the region Achterhoek (Rijkswaterstaat, 2013a). A respondent indicates that 'het nieuwe werken' (flexible working hours and working at home) can further strengthen these demographic developments (Rijkswaterstaat, 2013a). In addition, a respondent appointed that employment and, through this, the number of cars will be even lower by the expected demographic decline (Rijkswaterstaat, 2013a).

Several public respondents have wondered whether the plans of Rijkswaterstaat are still necessary with future demographic developments (Rijkswaterstaat, 2013a). A public respondent is surprised that a new road will be constructed and thinks that road managers should be reserved in constructing roads in demographic decline regions (Rijkswaterstaat, 2013a). Another respondent thinks that due to the demographic decline, the plans must be abandoned (Rijkswaterstaat, 2013a). Also due to the decline of the regional population or the working population and aging, public respondents expect traffic volume and traffic to decrease or change throughout the day (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). They think that a part of the traffic problem will be resolved in this way (Rijkswaterstaat, 2013a). For example, according to a respondent, only Eibergen should be disburdened because there is a problem with traffic jams (Rijkswaterstaat, 2013a).

The reports of public consultation show that several respondents are of opinion demographic developments and new insights should be more taken into consideration in the decision-making, because it is insufficient in their opinion (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). A respondent indicates that directors should be aware of this (Rijkswaterstaat, 2011a). In a number of responses is indicated that a reconsideration of the projected transport movements or research into the effects of demographic decline is desirable and that this should be included in the decision-making (Rijkswaterstaat, 2013a). Also another solution would be better suited to future demographic developments (Rijkswaterstaat, 2013a).

Demographic decline in the decision-making

There have been specifically looked at how Rijkswaterstaat responded to the public responses that were about demographic decline. From a number of interviews and the answers of Rijkswaterstaat in reply to the responses in the reports of public response, it appears that the demographic decline has not played a role in decision-making for the development of new N18 and has not led to other decisions (Ah1; Ah2; Ah5). According to respondent Ah5, the demographic decline has not been taken into account: "Demographic decline was taboo, because executives wanted a way so much", "they did not look at it". Demographic decline has also not been taken into consideration in economic research for the development of the road, because they still expected a growth (Ah5). Besides, respondent Ah2 thinks that the decline in the decision-making of

development may have played a role and that the choices in the implementation may have a relation with demographic decline.

Respondent Ah1 indicates that the public responses regarding demographic decline did not affect policy decisions and a change of it. The comments on the Environmental Impact Assessment and the design Record of decision were answered by Rijkswaterstaat (Ah1, Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). In the responses, Rijkswaterstaat indicated that the main objectives of the new N18 are improving the quality of life and traffic safety at and around the N18 (Rijkswaterstaat, 2013a). The former Ministers of Transport, Public Works and Water Management and VROM have taken position on the approach to the problems, objectives, impact on the landscape and the available budget for development (Rijkswaterstaat, 2013a). According to Rijkswaterstaat, also more aspects including demographic change play a role in the traffic forecasts they use for road projects (Rijkswaterstaat, 2013a). Rijkswaterstaat describes that in the future it may appear that more measures have been taken than necessary, based on traffic intensities, which can be called a worst case approach (Rijkswaterstaat, 2013a).

Other arguments in the decision-making

Rijkswaterstaat has made another consideration regarding the usefulness and necessity of the development of the N18 based on the objectives for this development, namely improving liveability, traffic safety, accessibility and regional economic development (Ah1; Rijkswaterstaat, 2013a). According to respondent Ah1 and also described in the public responses, the main objectives are improving the safety and liveability, which both do not have a connection with the demographic decline (Rijkswaterstaat, 2013a). However, Respondent Ah1 also remarks that traffic safety and traffic flow also can be solved in a different way and understands the question whether the development of the new road is the best solution. Respondent Ah3 indicates that, in particular, liveability has played a role. Furthermore, respondent Ah2 thinks that the importance of solving the problems with the current road situation in Eibergen is greater than the demographic decline: "the development is not only for those who are helped in the future, but also for now" (Ah2). Some of the interviewed respondents think that if the demographic decline had occurred previously, the policy process might have been slightly different (Ah1, Ah3). This difference could be in the consideration for the choice of a whole new road, with one the one hand road traffic forecasts and on the other hand the development costs (Ah1). According to Respondent Ah3, the sense of urgency to still have a highway from Varsseveld to Enschede could have been greater.

Role of demographic decline in the usefulness and necessity of the Secondary Phase N18

In the investigation of the usefulness and necessity of a Second Phase N18 by the municipalities in the region Achterhoek, demographic decline plays a different role than in the first phase. Respondent Ah4 indicates that the First Phase N18 is based on mobility objectives. In the second phase N18, it is being investigated whether it is necessary for the future that further adjustments or developments for the N18 for the part Varsseveld-Groenlo are needed, based on the demographic decline agenda 'Agenda Achterhoek 2020' (Ah3; Ah4). According to respondent Ah3, for the municipalities of the Achterhoek, it takes too long until Rijkswaterstaat starts to evaluate around 2025: "we already can look forward to indicate what we want in the future". The province of Gelderland is also a formal partner in the project, companies are involved help thinking and also other local government actors involved in the First Phase N18 see its usefulness (Ah3). Respondent Ah3 emphasizes that the implementation of a second phase was always the intention.

6.4.3. The effects of the development

Besides the usefulness and necessity of the development, the third aspect of actor beliefs is about the effects of the development of the N18 Varsseveld-Enschede. The effects are collected from interviews and documents and are appointed by actors involved in the process N18 Varsseveld-Enschede. In particular, in the public responses these actor beliefs about positive and especially negative effects appeared frequently. Again, it should be made clear that there are also public respondents that see the general interest of development of the N18, but are not satisfied with the negative effects.

Positive effects of the N18 Varsseveld-Enschede

In the preference of the Minister is described that the development of the N18 Varsseveld-Enschede must improve road safety, liveability, but also accessibility and flow (Eurlings, 2013). Travel time and traffic safety would even be the largest benefits (Eurlings, 2013). Also, the development ensures that the capacity increases, the shortcut traffic decreases on the local road network, ground floor crossings will disappear and slow traffic

is not allowed to use the N18 (Eurlings, 2013). According to respondent Ah1, one of the positive effects is that in the new situation regional traffic does not lead through the village, which will improve the liveability of the villages. In addition, the traffic situation also will be safer (less accidents), more clear and the traffic flow improves because of these different level crossings and the decrease of crossings (Ah1). Respondent Ah1 thinks that the positive effects dominate the negative effects. Also, respondents Ah2 indicate that the most important thing is the disappearance of traffic and commercial transportation traffic out of Eibergen and taking away the nuisance that the road causes in the villages. Also, the new N18 has fewer connections to the local road network than the current N18 (Ah1). According to respondent Ah1, the function of the new N18 then will be similar to other national roads like the A1 and it is special that this current road type was possible with the function of the road and traffic numbers. Respondent Ah2 states that as a result of the new N18, several crossing roads are closed, but important roads will keep crossing the new N18 with new viaducts and the local road network is partially closed or accessible via parallel structures. Besides, a public respondent expects that the approach to the N18 will cause a significant improvement of the liveability, which is attractive to tourism (Rijkswaterstaat, 2011a). Also, a public respondent notes that much has been done to integrate the new road in the landscape (Rijkswaterstaat, 2013a). Another public respondent indicates that it is "an important design task" to limit quality loss due to the crossing of the landscape (Rijkswaterstaat, 2011a). Also, respondent Ah5 is pleased with the chosen solution, because "it could have been much worse by choosing a highway".

Several respondents mention that the improvement of accessibility, that causes a better flow and travel time reduction, is a very positive effect (Ah2, Ah3). According to respondents Ah2, road users travel a greater distance at the same time than it was first and that makes it also interesting for commuters (Ah2). Respondent Ah3 agrees with the positive effects on travel time and comfort and the improvement of liveability and safety, but believes that the biggest profit is the decrease of persistent shortcut traffic on the local road network. Besides, respondent Ah3 expects the capacity measures, such as near Varsseveld (and also a new larger carpool site), doubling of lanes, less ground floor crossings and the improvement of the flow (coordinated traffic lights) have very positive effects. According to another public respondent, the construction of the road needs to start as soon as possible to improve flow rate through the separation of slow and fast traffic (Rijkswaterstaat, 2011a)

Economic activity

Several documents show that positive effects are expected for the economic activity in the region. Respondents Ah2 believes that the new N18 trace can have a positive effect on the establishment of companies on locations near a new road connection, but that depends on the type of company. Road traffic can move faster because of improved accessibility (Ah2). Respondent Ah3 expects that accessibility will be better for employees who need to get to work in the Netherlands and also for the supply and disposal of goods which is now of concern. In addition, a public respondent (stakeholder of companies in commercial transportation in the region) is very pleased with the proposed development of the N18, as accessibility, road safety and liveability is not fulfilling and expects that the development leads to improvement of the accessibility and flow on the N18 (Rijkswaterstaat, 2013a). According to this respondent, this development also leads to benefits for regional business and contributes to the business climate in the Achterhoek and Twente region (Rijkswaterstaat, 2013a). Another public response shows the expectation that the improved accessibility in Twente or the Achterhoek to Rotterdam and vice versa is essential for the regional economy (Rijkswaterstaat, 2011a).

Increase of traffic through the development of the road

The increase of traffic as a positive effect has been mentioned a number of times in the used data. According to Rijkswaterstaat, attracting new traffic is not preventable and even desirable and the new N18 must have an attractive effect to improve the liveability and road safety in the region (Rijkswaterstaat, 2011a). Also, respondent Ah3 considers the development has an attracting effect and that this is positive for the Achterhoek, but this also may be negative for the liveability. Besides, a public respondent expects the development to contribute to the reduction of the traffic pressure on the local road network (Rijkswaterstaat, 2013a).

Negative effects of the N18 Varsseveld-Enschede

Negative effects of development have also been identified in the used documents and, in particular, the public responses show various negative effects. According to respondent Ah1, the chosen development has a lot of impact on the environment and on the local road network, as opposed to an expansion of the existing N18. Respondent Ah5 states that damage is inevitable. Respondent Ah1 indicates that development can be very disadvantageous and "very harsh" in certain situations, the situation will never be the same. This includes the

crossing of the landscape, the construction of asphalt in rural areas and the crossing of small villages or neighbourhoods (Ah1). Respondent Ah1 describes that considerations have been made about how to spend the governmental budgets.

Increase of traffic through the development of the road

The public responses also show that development is expected to attract more traffic on the N18, which may lead to traffic jams, but also on local roads leading to the N18 (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Respondent Ah2 knows that people experience this as a problem and mentions that designated models show an increase in traffic on the N18. Respondent Ah2 expects that local roads leading to the N18 will be heavily burdened due to the new accesses of the N18 and crossings. The consequences of the increase of traffic are different to public respondents (Rijkswaterstaat, 2013a; Rijkswaterstaat, 2011a). A public respondent thinks that because of the traffic pressure Groenlo and Lichtenvoorde will be in isolation and will become unattractive for living, working and recreating (Rijkswaterstaat, 2013a). Other respondents, among others, expect that an increase of the maximum speed will attract more traffic, but this is not the (main) objective of the project, that the road will be used as a main north-south connection or that the amount of traffic will increase (Rijksoverheid, 2011a; Rijkswaterstaat, 2013a). In addition, a large number of public respondents expect this to cause additional nuisance, which causes stress and annoyance on the road and effects on road safety, liveability and crossing the road (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). A public respondent thinks that the adaptation will therefore be unnecessary and believes that no money should be wasted anymore (Rijkswaterstaat, 2011a).

Commercial transportation

Especially the increase in commercial transportation traffic raises concerns about road safety, by public respondents (Rijkswaterstaat, 2011a). A number of respondents expect that the development will attract heavy (commercial transportation) traffic as a part of a connection between Rotterdam and Hamburg or Eastern Europe (and even Moscow), especially when the Dutch A15 will be connected to the A18 (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Besides, a number of public responses show that N18 is expected to serve as an alternative to the A1 and A50 in these connections which may have many consequences (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Another public respondent expects that more commercial transportation traffic will use the N18 because of the German road tax (Rijkswaterstaat, 2011a).

Accessibility

Respondent Ah2 indicates that the decrease of connection to the road has consequences for road users in the area. According to respondent Ah1 the local road network will be used much less, because the N18 is the main access of the road network (provincial and national road), also with the connection to the A35. Besides, in document Ah6 it is thought that when the new road is developed, the region will keep the existing and unsafe Twenteroute.

Several public responses show the expectation of negative impact on accessibility. Due to the development of the N18, other roads are crossed and closed, there will be fewer but more busy access routes to reach the N18 and road users need to take longer distances to reach or cross the N18 (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Also in document Ah6 is described that accessibility will decrease due to the limited number of accesses and exits on a new road. In addition, it is expected that this has an effect on the economic activity in the centres of the villages, because of the location of the route (Ah6). This is also shown in other public responses. Several public respondents expect that the size of public in villages will decrease which has consequences for the local economy (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a).

Another appointed negative effect, related to accessibility, is the creation or exacerbation of bottlenecks with the development of the N18. About 20 public respondents expressed the fear of bottlenecks on the route (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). These consider them to be a negative effect with regard to noise (noise, particulate matter), capacity and flow (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). These are locations on the N18 where the number of lanes increases or decreases and at the A35 junction (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). As a result, public respondents expect traffic to increase, causing bottlenecks which results in the increase of traffic pressure, decline of traffic flow and traffic jams, unsafe situations, nuisance and problems with crossing the road (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). In this regard, a public respondent believes that the N18 is not taken into account as part of a European road structure (Rijkswaterstaat, 2013a). Because of these bottlenecks, public respondents advocate different alternatives (Rijkswaterstaat, 2013a).

Recreation and tourism

According to several respondents, the barriers also have an impact on recreation and tourism in various ways (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). A large number of respondents expects that the region is becoming less attractive to tourists and recreationists because walking and cycling routes will be crossed (Rijkswaterstaat, 2013a). A public respondent expects recreants and outside athletes to stay away, also because of the unsafe traffic situation (Rijkswaterstaat, 2013a). As a result, public respondents believe that this has a bad impact on the economy in the region, while this sector is very important for the regional economy (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). A number of public respondents refer to plans to promote and further develop recreation and tourism in an attractive landscape, which the road counteracts (Ah6; Rijkswaterstaat, 2013a).

Damage to nature, landscape and fauna

The damage to nature, landscape and fauna is one of the most mentioned negative effects (Rijkswaterstaat, 2011a). In document Ah6, it is described that the new trace is based on a design made in 1960's, as the road construction does not take into account current insights on liveability, cultural history, landscape and nature. The arrival of a landscape-determining motorway raises a lot of resistance (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Respondent Ah3 indicates that there have been a number of municipalities that were against a highway because, among other things, the landscape would be affected too much. Also several documents show that many public respondents think that the nature, the determining landscape, farm land and the living environment of animals are very damaged and disturbed by the arrival of the road (Ah6; Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Therefore, several respondents are of opinion that this should be maintained as much as possible or have asked for compensation of the disturbances (Rijkswaterstaat, 2011a). The development also causes a fragmented landscape and at some locations a sort of isolated no man's land between two roads (Ah5; Ah6; Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). According to public respondents, this damage also has consequences for the liveability (Rijkswaterstaat, 2011). A public respondent notices that a better bundling of both roads will lead to the improvement of the liveability (Rijkswaterstaat, 2013a). In document Ah6, supported by various actors, is stated that a new crossing cannot be an option.

Nuisance

In addition, there are also very many public respondents against the development due to the nuisance the development will cause (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). This nuisance includes: noise, light pollution, air pollution, traffic pressure, horizon pollution, social security, the attraction of crime, shortcut traffic and health impacts on living conditions (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Respondent Ah2 indicates that where some people in the first situation do not suffer from noise from the road, this may be the case in the new situation. Many public responses show that people are affected directly as an entrepreneur or resident (Rijkswaterstaat, 2013a). But also in general, this is reflected in comments (Rijkswaterstaat, 2013a). Some respondents also preferred alternatives which gives the least nuisance (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). Also, some public respondents have had no confidence in the sound measurements (Rijkswaterstaat, 2013a).

Liveability and attractiveness of the region

The liveability in the region is also an important effect, especially as many respondents are strongly opposed the consequences of crossing small villages or neighbourhoods and, further, negatively affecting liveability, the living environment and the high social cohesion in these communities (Ah6; Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). According to several public respondents, these relatively quiet rural areas must be maintained (Rijkswaterstaat, 2011a). Also, several respondents believe that the liveability outside the villages is as important as in villages (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a). In document Ah6, it is described that the new road causes the attractiveness of living and recreation in Achterhoek to be significantly reduced. It is also expected that the new situation will lead to less favourable business factors and then companies will look for a more attractive location in the region (Ah6).

Effects on the individual situation

Other negative effects that are widely named in the public responses are future changes in individual situations or business situations because of the development of the road. A number of respondents has concerns about the negative effects on the living environment, living quality and health, but also (indirect) damage (including due to construction work) and negative effects for the house, farm, or company (Rijkswaterstaat, 2013a). This

is due to increased (commercial transportation) traffic, light pollution, property impairment, nuisance, privacy and barriers. Other public respondents expect that through the development of the N18 and changing road situations that they should drive further, social structures will be crossed and they will be isolated (Rijkswaterstaat, 2013a). Also, (agricultural) entrepreneurs state that the accessibility of the company will decrease which threatens the continuation or expansion of the company (Rijkswaterstaat, 2013a). Besides, also buildings will have to be demolished for the development (Rijkswaterstaat, 2011a; Rijkswaterstaat, 2013a).

6.5. Conclusion

In this chapter, sub question 3 is elaborated: *which actor beliefs are involved in the policy processes of two cases for the development of the new road Dutch demographic decline region?* On the basis of a reconstruction of the cases and the actor beliefs about the importance of road development in demographic decline regions, this has been described for each case. De Centrale As (Case I) and the N18 Varsseveld-Enschede (Case II) are both cases for the development of new roads in Dutch demographic decline regions. De Centrale As is located in the region Noordoost Friesland and the N18 partly in the region Achterhoek and partly in the region Twente. In two long-term policy processes, involving many different actors, decisions are made for a road development. In Case I, the goals were to improve accessibility, traffic safety, liveability by the reduction of traffic on small roads and through the villages in Noordoost Friesland and to contribute to the improvement of the spatial and socio-economic structure. In Case II the goals are to improve the traffic safety and the liveability as good as possible on and around the N18 and to improve the accessibility and regional economic development. In both cases this has led to the decision for the (partial) development of a new road and the adjustments of the existing road network. Besides, in Case I, the development of a large area of 7000 ha around De Centrale As is part of the project and the development of De Centrale as has become the start of a larger regional agenda.

The actor beliefs present in the cases and useful for this research are about the usefulness and necessity of the development, the role of demographic decline in the usefulness and necessity discussion and the effects of the development. In the actor beliefs about the usefulness and necessity of the development in both cases, there are both advocates and opponents. This aspect of actor beliefs contains beliefs about the problems, the goals, solutions, relevant policy, the regional economic development and the distribution of governmental budgets. Also based on the usefulness and necessity there are advocates of other solutions, such as 'Het Groene Alternatief' (English: The Green Alternative) in Case I or a connection to another city instead of the chosen route in Case II. In addition, in both cases actor beliefs regarding demographic decline are present in the processes and the role in the decision-making. Furthermore, actor beliefs about the effects of the development have been appointed in the decision-making process. For the cases, the effects can be divided in positive and negative effects and are about the increase of traffic through the development of the road and its consequences, the location and design of the road and consequences, accessibility, barriers, nuisance, recreation and tourism, regional economy, individual situations, liveability and attractiveness of the region and, especially, the effects on landscape, nature and fauna.

7. THE INFLUENCE OF ACTOR BELIEFS ON THE UNOBTAINABLE POLICY DECISION

Following the description of the cases in chapter 6, in this chapter the collected empirical information from both cases will be interpreted and the cases will be compared. In order to explain the unobtainable policy decision to keep developing new roads in demographic decline regions, which are not in line with the new or changed demographic policy, sub question 5 has been formulated: *how did actor beliefs influence the unobtainable policy decision in the cases to keep develop new roads in demographic decline regions?* This sub question will be answered on the basis of the collected information in chapter 6. First, in paragraph 7.1, the decision-making process, including the problems, the goals and the developments (means) will be described. Subsequently, in paragraph 7.2 the actor beliefs, about the importance of road development in demographic decline regions, based on the three aspects of the actor beliefs, in relation to the theory, will be described. In paragraph 7.3 the influence of actor beliefs on the policy decisions will be addressed. The chapter ends with a conclusion and an answer to the sub question.

7.1. Decision-making processes: problems, goals and solutions

In this first paragraph, the problems defined by the responsible governments (in collaboration with other partners), goals set by these actors and the chosen means to achieve these goals will be discussed. Subsequently for each part this will be followed by a comparison.

7.1.1. Decision-making processes

The province of Friesland (Case I) and the Ministry of Infrastructure and the Environment (Case II) were mainly responsible and initiated the process to address the problems and to decide for the development of De Centrale As and the N18 Varsseveld-Enschede. In the decision-making processes, the Province of Friesland and the Ministry of Infrastructure and the Environment have collaborated with other government agencies, such as provinces and municipalities.

In Case I, the process from start to implementation covers a period of approximately 17 years, from 1999 to 2016. Already before the decision of the Provincial Council to revise the road structure in Northeast Friesland in 1999, several governmental authorities were searching for solutions for the road structure in the region Noordoost Friesland. After the start of the process in 1999, in 2001, the procedure for the provincial embedding plan (*Dutch: provincial inpassingsplan*) has been started. The legal procedure for the provincial embedding plan took 10 years, from 2001 to 2011. In 2011, the provincial embedding plan was irrevocable and, subsequently, in 2012 the construction of the road has been started. In 2016 the construction of the road was finished and in the autumn of 2016 De Centrale As has been opened for use.

In Case II, the start of the process was in 1992. Decades before the start of the process, the proposed solution of the N18 was already topic of discussion. Since the first start, the process covers a period of 25 years, from 1992 to the present situation in 2017. The first start of the legal procedure was in 1995, but because of prioritizing and funding the project, the project has been postponed in 1998¹⁰. Seven years later, in 2005, the Infrastructure Act procedure started and has been declared irrevocable in 2015. This process of the N18 is currently (2017) in the implementation phase and the construction of the N18 Varsseveld-Enschede will be completed in 2018.

Although the discussion and plans for the development of the N18 go back quite a long time and the process of De Centrale As has had a run-up, both procedures have run in the same period with overlapping starts and finishes. Most important to mention is, that both processes have started before the development of policy regarding demographic developments and decline. First, there was no talk of demographic decline in these regions. During the processes, demographic decline policy for both regions has been developed.¹¹ Both regions have been appointed, first as anticipating region and later as demographic decline region. The part of the processes in this research is the period from the start of the processes to the implementation of the

¹⁰ This is also described in Chapter 6

¹¹ This is described in Chapter 5, paragraph 3

solution, can be considered as the 'decision-making process'. This is about the necessity decision and detail decisions until the start of the implementation.

7.1.2. Causes, magnitude and facets of the problems

In the previous chapter, the problems, goals and means of the road development in the cases have been described. In both cases the problem consists of several aspects. These problems are defined by the responsible governments (in collaboration with other partners), the province of Friesland (Case I) and the Ministry of Infrastructure and the Environment¹² (Case II). In Case I, the identified problems are the insufficient quality of the current road N356 (connection between function, road structure and road use), poor accessibility of the region Noordoost Friesland and the city of Dokkum, due to the poor connection with the national road system, the flow (crossing the villages and the traffic pressure), traffic safety, quality of life in the villages and noise pollution (nuisance). In addition, an identified problem is about the lagging population developments and the number of jobs. In Case II, the reasons for the discussion about upgrading the N18 were the traffic problems in the village of Eibergen. Subsequently, the suggested improvements of the N18 have been subject of public and political debate for several decades. The cause of the problems is that the N18 is a heavily burdened road between city regions Arnhem/Nijmegen and Twente and crosses several villages. This leads to problems regarding traffic safety, liveability (nuisance) and the accessibility (poor flow, no stable travel times and velocities) in relation to the economic development. In addition, the road no longer meets the current directives and requirements that match the amount of traffic and the regional and local function of the road. The expectation was that the increasing amount of traffic would lead to a growth of these problems.

The problems are the discrepancy between the existing and a desired situation, the existing situation of road infrastructure and achieving the goals by means of the construction of the De Centrale As and N18 Varsseveld-Enschede. A large number of aspects of the problems that arise in both cases correspond with each other, such as the flow, road safety, accessibility (flow) and viability (nuisance), in relation to (socio-) economic development. This is partly, because in both cases the existing roads are crossing villages. In addition, in both cases, current roads did not meet the expectations and goals of the responsible government, such as road function, road use and the type of road. A difference between both cases is the location of both roads. Case I lacks a good connection to the national road network and good accessibility of the region Noordoost Friesland, and in Case II, the road is considered as an important but heavily burdened road connection between regions, which causes problems. In addition, in Case I the lagging population developments and number of jobs, are also linked to the problem, which is different from Case II. In the light of these problems in both the cases, the choice to develop a new road development in a demographic decline regions can be considered logical. The problems, for which the road development was originally intended, have not disappeared due to the new conditions, because of demographic decline and the change of regional economic policies for these rural demographic decline regions.

7.1.3. Goals of the governmental authority

The problems described, in each case, led to the formulation of goals by the responsible governmental authorities. In Case I, the goals are: to improve the accessibility of the region Noordoost Friesland (1), to improve the traffic safety in Noordoost Friesland and on the roads N356 and N913 (2), to improve the liveability by the reduction of traffic on small roads and through the villages (3) and to contribute to the improvement of the spatial and socio-economic structure (4). For Case II, the goals are: to improve the traffic safety and living conditions on the N18 and around the N18 and to improve accessibility and regional economic development as well as possible. In addition, in Case II, specific objectives have been set regarding road safety, accessibility, nature and landscape, liveability and road development.

These goals to address the infrastructure situation are very similar in the cases. In both cases, the aim is to improve the accessibility (in terms of traffic flow, travel speed and traffic intensity), liveability and traffic safety. In particular, it is important for the government authorities that the solutions ensure that the villages will be disburdened, which means improving the liveability and traffic safety in villages. In addition, the improvement of the spatial structure is a specific goal in Case I. Based on these goals, the choice for the development of a road appears to be a logical mean to these goals which is aimed for. These goals are not opposing the new

¹² Ministry of Infrastructure and the Environment, destijds nog bestaande uit het ministerie van Verkeer en Waterstaat en het ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer

national demographic decline policy. In chapter 5 is described that maintaining and enhancing the liveability is also one of the goals in demographic decline policy.

Also in both cases, goals are set to contribute to the accessibility and regional economic development of the regions. These goals may be opposed to the new demographic and regional economic policies, if they are meant to continue to invest in the regional economic development and economic growth of these regions through spatial developments and to combat demographic decline by trying to reverse decline with new economic development. In the new demographic policies the idea is not trying to stop demographic decline but to try to accommodate this development and try to take away negative effects of demographic decline such as liveability and economic vitality as much as possible.

For the accessibility goal, this needs to be interpreted in a more subtle way. The policy documents in chapter 5 show that maintaining and enhancing accessibility are considered as important, with regard to the effects of demographic decline, to maintain and strengthen the liveability and economic vitality in demographic decline regions and to keep reaching work and a decreasing number of facilities. According to Haartsen et al. (2014), good infrastructure can contribute to the maintenance of accessibility in regions. However, improving the accessibility can also be opposed to demographic decline policy, when the improvement of the accessibility in the region is a way to contribute to economic development.

Besides, in both cases, an economic goal is included. The goal in Case I is to contribute to the improvement of the spatial and socio-economic structure, and in Case II, to improve the regional economic development of the Achterhoek and Twente. There is a difference, because regional economic development may include more aspects than the contribution to the socio-economic structure, which can be aimed at the social-economic situation of the regional population. However, the goals to improve or contribute to the regional economic structure, in itself, can be opposed to the demographic decline policy, because this can contribute to stop or reverse demographic decline instead of anticipating the negative effects of demographic decline. Anticipating to demographic decline means not investing in and facilitate regional economic development to reverse or stop demographic decline.

7.1.4. Means

In both cases, the policy decision is made for new road development: De Centrale As and the N18 Varsseveld-Enschede. Case I is the development of De Centrale As in the region Noordoost Friesland. The approach of the road structure in the region Noordoost Friesland is part of an economic master plan. The development of De Centrale As was the starting point for the development of a program to strengthen the socio-economic dynamics in Noordoost Friesland. De Centrale As is a new developed 2x2 lane highway between Nijega and Dokkum, with entrances and exits to connect to the existing road network and a few connecting roads. Besides, an area of 7,000 ha is in development to improve the quality of the area and for the integration of the constructed route in the landscape. In Case II, the largest part of the development is a new road between Groenlo and Enschede. This new road will be partially developed as 2x1-lane road and partially as a 2x2-lane road. In addition, the current road between Varsseveld and Groenlo will remain in use, but the part between Varsseveld and the A18 will be doubled to a four-lane road (2x2). The existing part and new developed parts will merge.

In the cases, decisions have been made for the development of new road infrastructure to solve or reduce the problems, identified by the governmental authorities. The roads differ from each other, if you look at road design, road function and the location of the road, in a larger road infrastructure. The designs of the developments are different and also the function, regional accessibility is different. De Centrale As is located on the outside of the Dutch national network of roads, while the N18 Varsseveld-Enschede is connected between two motorways A18 and A35 and the city regions 'Twente' and Arnhem-Nijmegen. Besides, Case I also differs from Case II, because of the large development of 7000 ha around the new constructed road. The similarity is that, where the existing roads cross the villages, decisions are made to construct the new roads around villages, to connect via underlying road networks and to construct different level crossings. This means that villages are no longer burdened with regional or national traffic and transport.

The expectation is that the decision for the construction of (partly) new roads outside the villages, in both cases, will lead to an improvement of the liveability and road safety in the villages, near and on the existing road. In both situations, accessibility can also be improved, because the traffic flow will increase, there are no

ground level crossings and slow traffic is not allowed on the new road. This also connects to one of the means in demographic decline policies for the maintenance and improvement of the mobility and physical accessibility for the road network, by achieving a good accessibility by road, proper connections of the local, regional and national road network and less travel time for traffic. Furthermore, it is expected that De Centrale As will contribute to the socioeconomic structure and the N18 Varsseveld-Enschede will lead to an improvement of the regional economic development. As mentioned in the previous paragraph, the achievement of these economic goals by means of the development of the road can be opposed to the demographic decline policy, because this can contribute to try to stop or reverse decline with this new spatial-economic development.

Besides, both developments also cause negative side effects in both cases (costs), such as the enormous impact on the landscape, the crossings of property of land owners, noise pollution and emissions on the new route. The difference between the cases is that De Centrale As (Case I) is located in a demographic decline region and near the anticipating region Zuidoost Friesland.¹³ However, the N18 Varsseveld-Enschede is partly located in the demographic decline region Achterhoek and in the region of Twente, a region which is not appointed as a demographic decline or anticipating region.

7.2. Actor beliefs

In chapter 6, the actor beliefs about the importance of road development in demographic decline regions, have been described extensively. This paragraph discusses the actor beliefs that played a role in decision making and the differences between the two cases:

- Actor beliefs about the usefulness and necessity of De Centrale As or N18 Varsseveld-Enschede
- Actor beliefs about demographic decline in the usefulness and necessity discussion
- Effects of the development of De Centrale As or N18 Varsseveld-Enschede

In the theoretical framework in chapter 2, these aspects are shortly explained. The usefulness and necessity of the road, including the role of demographic decline is about whether actors appoint the road development as useful or necessary, that something has to be done to solve the problem and whether the road is the solution to this issue. This connects especially to the policy core beliefs (policy preferences), but also to the secondary aspects (policy instruments) and deep core beliefs (principal beliefs) at a higher level. In addition, the effects of both cases are intended to identify beliefs of actors about the consequences of the development of the road. This is about how actors look at the expected effects of the development, positive and negative side effects of the development. This connects mainly to the secondary aspects (policy instruments), which can also be based on deep core beliefs (principal beliefs).

7.2.1. Case I: De Centrale As

In the process for De Centrale As, different actor beliefs about the importance of road development in demographic decline regions have played a part. These actor beliefs are collected on the basis of the three aspects of actor beliefs. In this paragraph, the influence of actor beliefs on the unobvious policy decision to develop De Centrale As in the demographic decline region Northeast Friesland will be discussed. The actor beliefs about the usefulness and necessity of the development of the roads (in demographic decline regions) are particularly relevant in this research. This is about the beliefs of the importance of the construction of roads, actor beliefs about policy preferences (policy core beliefs), policy issues and goals and the development of the road as a mean (secondary aspects).

Usefulness and necessity of the development of De Centrale As

In this case, there are both positive (*beliefs of advocates*) and negative (*beliefs of opponents*) actor beliefs about the usefulness and necessity of the development of De Centrale As. These actor beliefs are about traffic intensity, accessibility (bottlenecks, travel speed, traffic flow) and liveability near and on the existing road N356. But also, about regional accessibility (connections), (regional) economic developments, socioeconomic developments, distribution of budgets and the best solution. The (regional) economic development, socioeconomic developments, regional accessibility and distribution of budgets can be connected to the deep

¹³ Figure 5 in Chapter 5, paragraph 5.1.1

core beliefs: how actors in general assess the distribution of governmental budgets between regions, the importance of regional development of peripheral regions, the importance of regional accessibility and, in addition, the (regional) economic development of the region. Should or should we not invest in peripheral regions when the total national budget is limited and there are still many problems to be solved in core regions that are considered to be the motor of national economy?

In the process, various are actors in favour of the development of the Central As, because of the improvement of accessibility, traffic flow and travel times, solving bottlenecks, to improve the regional connections and get a higher infrastructural hierarchy and to contribute to socioeconomic developments. In particular, the high traffic intensity on the existing road is considered important. Also, actor believe that De Centrale As is an important connection to the national road network and the economic nodes. According to interview respondents, the region Noordoost Friesland is a peripheral area and De Centrale As is necessary to maintain the liveability, accessibility and dynamics in the region (Fr2; Fr3; Fr4). There are also actors who, partly, agree with the identified problems and goals, but these actors do not consider De Centrale As as the best solution and are in favour of other solutions. Besides, there are opponents of the development of De Centrale As. These opponents consider the development of De Centrale As not useful and necessary, because the plans are no longer appropriate, traffic forecasts no longer meet, the problems are insufficiently serious or not even recognized, with this mean the goals will not be achieved or the development is in violation with (environmental) policies. Several respondents find that the costs of the development are too high or unnecessary, a waste of money, are not appropriate in these times of demographic decline and money can be better spend on other infrastructure projects, in core regions, on recreation and tourism, landscape or to discourage private car use.

The regional economic developments is an important aspect in the actor beliefs about the usefulness and necessity discussion and part of the goals for the development. In Chapter 6, a distinction is made between advocates and opponents regarding the role of economic development in the usefulness and necessity discussion. Respondents are in favour of the development of road, because the development contributes to regional economic development. According to interview respondents and public respondents, the road is important for companies and entrepreneurs in the region, the accessibility of the region improves, but also the accessibility of economic activities south of the region towards Zwolle and connections to important nodes and other parts of the country improve. This is considered very important. In addition, based on economic development, there are also opponents of the development. These opponents consider the road development unnecessary for the regional economy. Public respondents expect that the development will not lead to an improvement of the regional economy or prevent a downward spiral, there will be more commuter traffic, the geographical location of the region Noordoost Friesland is not beneficial to regional economic development and the road will not attract companies to settle in the region. These companies are expected to settle near Heerenveen or Zwolle. Also, some of the opponents believe that the economic development regarding recreation and tourism, local businesses and agricultural activities are more important. On the one hand, the actor beliefs of advocates of the development of the roads to contribute regional economic development are in line with the goal, but are opposed to demographic policy which is aimed at anticipating to demographic decline. On the other hand, the actor beliefs of opponents are considered in line with the demographic and regional policies and allowing changes to occur in the region.

From the empirical information in chapter 6, it appears that solving the problems and achieving the goals, improving the traffic safety, liveability, accessibility and regional economic development, were most important in the decision-making. These problems have not disappeared and the goals have not changed during the process and did not lead to changes of the mean, the development of the N18 Varsseveld-Enschede, to achieve these goals. In particular, solving problems on the existing road and the connection with the national road network and economic nodes was important. This means that the actor beliefs of advocates of the development regarding the problems and goals have had an influence on decision-making, in contrast to other beliefs of advocates and beliefs of the opponents. This also shows that the decision-making is primarily based on policy core beliefs, but also the deep core beliefs, about regional economic development and distribution of budgets and secondary aspects about the choice for the development of a road were present.

Demographic decline in the usefulness and necessity discussion

In addition to the actor beliefs about the usefulness and necessity of the development of De Centrale As, for this research, specific actor beliefs have been collected about the role of demographic decline in the usefulness and necessity discussion. These actor beliefs have played a role in the process of De Centrale As.

According to various interview respondents, the demographic decline has been a motive of opponents of the development. One respondent has appointed that the decision for the road construction already has been made in a period of growth, cars and traffic. The interview respondents indicate that in the meantime the demographic decline occurred. Besides, a number of interview respondents suppose that in a strong region, demographic decline also has less impact. From the documents of public response, it has been found that, during the procedure of the provincial embedding plan, demographic decline was present in the process. Public respondents are not convinced of the need for De Centrale As, because of the demographic developments.

Chapter 6 shows that it does not appear that the demographic decline has not influenced the decision-making process. It was just a point of discussion in the process from the side of the opponents. It also appears that the need for the discussion was already in the 1980s and 1990s, when there was no talk of demographic decline. The goals set have remained the same since the beginning and have not changed by demographic developments. This means that the beliefs of actors about demographic decline in the usefulness and necessity discussion have not played a part in the decision making for the De Centrale As. Based on the theory, these actor beliefs are beliefs, connected to the policy core beliefs, which could have led to change of decisions.

Effects of the development of De Centrale As

Also, actor beliefs about the negative and positive effects of the development of De Centrale As are collected. These actor beliefs, of advocates and opponents, are about the effects of the road location, road construction, landscape, nature, fauna, various types of nuisance, regional economic activity, increase of traffic, road safety, accessibility, recreation and tourism, the individual situation and liveability. In this case, there are more actor beliefs about the negative effects than about the positive beliefs. What is most important, are the actor beliefs about the negative effects on cutting the landscape, damage to the nature and animal life, nuisance, barriers caused by road construction and the negative impact on the individual situation of actors.

From the empirical information in chapter 6, it appears that the effects of the development (secondary aspects) have not influenced the decision-making for the decision of constructing De Centrale As in the region Noordoost Friesland. However, these actor beliefs could have influenced how the road should be constructed: the design of the solution, the location of the road and preventing negative side effects. Examples of this, are the crossings and guidance for animals and the integration of the road in the landscape (Fr1; Fr2; Fr3). Chapter 6 shows that politics also has had a role, because they wanted to have some additional mitigation measures in the region (Fr1). Based on the theory, the effects of the development of De Centrale As connect to the secondary aspects of the policy core beliefs about the means and its consequences. On the basis of these secondary aspects, it is logical that no decision-making takes place leading to policy change or, in this case, non-policy change.

7.2.2. Case II: N18 Varsseveld-Enschede

Also in this second case, the process for the N18 Varsseveld-Enschede includes various actor beliefs about the importance of road development in demographic decline regions. These actor beliefs are collected on the basis of the three aspects of actor beliefs. In this paragraph, the influence of actor beliefs on the unobvious policy decision to develop the N18 Varsseveld-Enschede in the demographic decline region Achterhoek, and partly in the region of Twente, will be discussed.

Usefulness and necessity of the development of the N18 Varsseveld-Enschede

The usefulness and necessity of the development of N18 Varsseveld-Enschede (in demographic decline regions) includes positive (advocates) and negative (opponents) actor beliefs. These actor beliefs are about what the role of the N18 Varsseveld-Enschede in the network of road infrastructure should be, the traffic safety, liveability, accessibility (traffic flow, intensity and capacity) near and on the existing N18. But also, regional accessibility, regional development and economic development of the region, the distribution of budgets and actor beliefs about the best solution. The regional development, economic development of the region, regional accessibility and distribution of budgets are connected to the deep core beliefs: how actors in general assess the distribution of governmental budgets or the importance of the approach of a specific type of infrastructure (in the region) and, in addition, the importance of regional (economic) development and accessibility of these and other regions.

In this case, the advocates of the N18 Varsseveld-Enschede experience problems on and around the current road safety, liveability and accessibility and, thus, agree with the set policy goals for addressing the situation. In particular, the decrease of the traffic intensity in the villages is seen as important, to improve the road safety, liveability and prevent nuisance. In addition, these advocates believe that the N18 is an important regional connection (deep core beliefs) and therefore they are of opinion that the problems must be solved and the road can contribute to the economic development of the region. Also, there are many public respondents who agree that the problems need to be tackled, but are in favour of another better suited solution than the N18 Varsseveld-Enschede. Besides, there are opponents of the development of the N18 Varsseveld-Enschede. These opponents believe that the development of the road is not useful and necessary, because traffic volumes and forecasts for the N18 meet the norms, no problems can be recognized with regard to traffic safety, liveability and accessibility, the problems are not solved or the problems are insufficiently serious to decide for the development of the N18 Varsseveld-Enschede. Also, opponents are of opinion that the research, on which the decision is based, is outdated or inconsistent with current economic and geographical developments and, besides, some public respondents expect that if problems on the A12 are not resolved, the development of the N18 does not make sense. Furthermore, opponents consider the Achterhoek as a region that should exploit strong points like care and recreation, landscape, calmness and space, which should not be sacrificed with the development of the road. In addition, the distribution of budgets is one of aspects mentioned by public respondents. According to the opponents, investing in the N18 Varsseveld-Enschede is a waste of money, which can be better invested in other projects elsewhere in the Netherlands.

Regional economic development is an important theme in the documents, but is also one of the goals for the development of the N18 Varsseveld-Enschede. According to respondent Ah1, this always has been considered as a side effect by Rijkswaterstaat, in addition to the other three goals. In Chapter 6, a distinction is made between advocates and opponents regarding the role of economic development in the usefulness and necessity discussion. Many public respondents, advocates of the development, expect that the road is good for the economic development, including the accessibility of business areas and the new road, for companies and entrepreneurs, good for employment, investing climate, good connections to underlying road network, time and cost saving and an important connection for regional businesses. In contrast, there are also many public respondents, opponents of the development, who believe that the N18 Varsseveld-Enschede has no added value for regional economic development, the economic growth as undesirable (deep core belief), the expected economic effects are incomplete, incorrect or outdated. In addition, the N18 has no urgent economic need, does not contribute to the main goals of the Achterhoek, among others, to strengthen (health) care, high-tech, recreation and tourism.

From the collected empirical information in chapter 6, it appears that solving the problems and achieving the goals, improving the traffic safety, liveability, accessibility and regional economic development, were most important in the decision-making. These problems have not disappeared and the goals have not changed during the process and did not lead to changes of the mean, the development of the N18 Varsseveld-Enschede, to achieve these goals. This means that, especially, the actor beliefs of advocates regarding the problems and goals have had an influence on decision-making, in contrast to other beliefs of advocates and beliefs of the opponents. This also shows that the decision-making is based on policy core beliefs, but deep core beliefs about regional economic development and secondary aspects about the choice for the development of a road were also present.

Demographic decline in the usefulness and necessity discussion

For this research, in addition to the actor beliefs about the usefulness and necessity of the development, there are also actor beliefs about demographic decline in the usefulness and necessity discussion collected. These actor beliefs have played a role in the process of De Centrale As. The process for the development of the N18 has already started, before the demographic decline occurred in the Achterhoek region. The demographic decline in the region Achterhoek developed at a later stage during the Infrastructure Act procedure. Some public respondents believe that it is important for the Achterhoek region to keep the region economically accessible. Other participants believe that demographic decline does have an impact on the region and wonder if plans for the construction of the N18 Varsseveld-Enschede are still necessary. These respondents indicated that the demographic developments should have been taken into consideration in the decision-making. However, an interview respondent has indicated that the importance of solving the problems is greater than the consequences of demographic decline and that despite the demographic decline, problems will remain (Fr2). These actor beliefs are about the problems, goals and expectations (policy core beliefs) and also which mean is the best solution (secondary aspects).

Chapter 6 shows that the actor's beliefs about demographic decline in the usefulness and necessity discussion have not played a role in the decision-making process for development. This is evidenced by the interviews and replies of Rijkswaterstaat in response to the responses in the reports of public response. The objectives were central to decision-making and have not changed during the process. Rijkswaterstaat has indicated that it is possible that demographic decline can lead to other traffic forecasts than previously calculated for the N18 Varsseveld-Enschede. Also for this case, based on the theory, these actor beliefs, connected to the policy core beliefs, could have led to change of decisions.

Effects of the development of the N18 Varsseveld-Enschede

Also in this case, the actor beliefs about the effects of the development of the N18 Varsseveld-Enschede have been collected and described. The actor beliefs, of advocates and opponents, are about the best location of the road, the way of road construction, landscape, nature and fauna, various forms of nuisance, commercial transportation, bottlenecks on the new road, accessibility, the increase of traffic, regional economic activity, road safety, recreation and tourism, the individual situation and liveability. The majority of these collected actor beliefs is about the negative effects of development. Most important are the negative effects on the landscape, nature, fauna, nuisance, negative effects regarding the individual situation of actors, the creation of barriers and the liveability (in small villages or neighbourhoods).

The empirical information in chapter 6 shows that the effects of the development (secondary aspects) have not influenced the decision-making for the choice of construction of the N18 Varsseveld-Enschede in the Achterhoek and partly Twente region. Also in this case, the beliefs of actors about the effects may have had an impact on how the road should be constructed: the design of the solution, the location of the road and preventing negative side effects. One example is the integration of the road in the landscape, including the maintenance of existing (rail) infrastructure and the development of the road below ground level near Haaksbergen. Based on the theory, the effects of the development of De Centrale As connect to the secondary aspects of the policy core beliefs about the means and its consequences. On the basis of these secondary aspects, it is logical that no decision-making takes place leading to policy change, or non-policy change in this case.

7.2.3. Comparison of the cases

In Case I (De Centrale As) and Case II (N18 Varsseveld-Enschede), we see many similarities in the actor beliefs about the why and how of the development of the roads in demographic decline regions. However, there are also some differences between the present actor beliefs in the cases. The similarities and differences will be discussed on the basis of the three aspects of actor beliefs.

Actor beliefs about the usefulness and necessity discussion

In the usefulness and necessity discussion of both cases, the similarities are that the actor beliefs, both of advocates and opponents, generally concern the decrease of traffic intensity, the improvement of the accessibility (bottlenecks, travel speed, traffic flow and capacity) and liveability near and on the existing road. In addition, actor beliefs about regional accessibility, (regional) economic developments, socio-economic developments, the distribution of budgets and other solutions play a role in both processes. The differences are that in Case I, the process includes actor beliefs about the emphasis on the contribution to socio-economic developments and in Case II, there are specific actor beliefs about the role of the N18 Varsseveld-Enschede in the network of road infrastructure. Besides, in Case I, several actors believe that the development is in violation with (environmental) policies. That is not the case in Case II. The actor beliefs about the usefulness and necessity which appear to be most important for the policy decision of the development, in Case I, are about the high traffic intensity on the existing road and also De Centrale As is considered as an important connection between the peripheral region Noordoost Friesland and the national road network and the economic nodes south of the region. In Case II, these actor beliefs are about the decrease of the traffic intensity in the villages, to improve the road safety, liveability and prevent nuisance and also the N18 as an important regional connection, for which the problems must be solved, to contribute to the economic development of the region.

Actor beliefs about demographic decline

The role of actor beliefs about how demographic decline influences the usefulness and necessity discussion corresponds in both cases. These actor beliefs have been present, but have not played a role in the decision-

making process for development. The objectives were central to decision-making and have not changed during the process, because of the demographic decline and the developed demographic policy.

Actor beliefs about the effects of the developments

In addition, in both cases, also the actor beliefs about the effects of the developments did not play a role in decision making for road construction, but these have been of importance in the decisions about the design of the solution, the location of the road and preventing negative side effects. The difference that can be identified in the actor beliefs is that in Case II, the increase in commercial transportation and the emergence of bottlenecks, because of the design of the N18 Varsseveld-Enschede, are appointed in the documents as a negative effect of the development.

The role of actor beliefs in the decision-making

In decision making in both cases, the priority of the governmental authorities was to solve problems and achieve the goals set by means of the development of De Centrale As and the N18 Varsseveld-Enschede. The actor beliefs about the usefulness and necessity of the development have influenced the decision making. Furthermore, it appears that actor beliefs about demographic decline and the developed demographic decline policy have not influenced the policy decisions for road development.

7.3. The influence of actor beliefs on the unobvious policy decision to keep develop new roads in demographic decline regions

In this chapter, sub question 5 is elaborated: *how did actor beliefs influence the unobvious policy decision in the cases to keep develop new roads in demographic decline regions?* In both cases the policy decision is made to pursue for new road development: De Centrale As and the N18 Varsseveld-Enschede. The processes for the cases have started before the development of policy regarding demographic developments and decline for the regions Noordoost Friesland and Achterhoek. During these processes, demographic decline policy has been developed.

In the cases, the problems are the discrepancy between the existing situation of the road infrastructure and the desired situation, achieving the goals by means of the construction of the De Centrale As and N18 Varsseveld-Enschede. The problems, identified by the governmental authorities, largely correspond with each other and are about the accessibility (high traffic intensity, low traffic flow) and liveability. Besides, the actors in Case I see it as a problem that region lacks a good connection to the national road network and accessibility of the region Noordoost Friesland and, also, the lagging population developments and number of jobs are linked to the problem. In Case II, the road is considered by the actors as an important and heavily burdened road connection between regions, which causes problems. In addition, in Case I, actors see it as a problem that the road no longer meets the current directives and requirements, that match the amount of traffic and the regional and local function of the road. The problems, for which the road development was originally intended, have persisted, despite the new conditions because of demographic decline and a change of policy for these rural areas.

In order to solve the problems, four main goals have been set in both cases. Three of these are the improvement of accessibility, liveability and traffic safety. In addition, in Case I, the goal is to contribute the spatial and socio-economic structure, and in Case II, the goal is to improve regional economic development. In the demographic decline policy, accessibility and liveability are also considered important. Especially the economic goals may be opposed to the new demographic policy and regional policy, by continuing to invest in the development of these regions through spatial developments and to combat demographic decline. In both cases, the decision has been made to develop new roads as the best means to solve the problems and achieve the goals.

For both cases, actor beliefs about the development of roads in demographic decline regions have been collected. Based on the theory, the expectation was that beliefs of actors could have influenced the unobvious policy decision to keep developing new roads in demographic decline regions. In this chapter, it becomes clear that the actor beliefs about the usefulness and necessity had the most important role in influencing the decision-making. The empirical information shows that in both cases, actor beliefs about the identified problems, how to solve the problems and how to achieve the goals of improving road safety, liveability, accessibility and regional economic development/socio-economic developments were the most important

actor beliefs in influencing the decision-making for the development of the roads. These actor beliefs about the problems have not disappeared or changed and the goals have not changed during the process, because of demographic and regional policies. This also did not lead to changes of the beliefs about the importance and necessity of mean, the development of both roads, to achieve these goals. The collected information also shows that actor beliefs about the role of demographic decline in the usefulness and necessity discussion were present in the policy process, especially mentioned by public respondents. However, these actor beliefs have not influenced the decision-making, which means that the decisions for the development of roads in demographic decline regions have remained unchanged.

8. CONCLUSIONS AND DISCUSSION

In this concluding chapter, at first, in paragraph 8.1 the conclusions for each sub-question will be repeated. This is followed by answering the problem statement. In paragraph 8.2 the research will be discussed.

8.1. Conclusions

The purpose of this research was to explain how, in particular cases, actor beliefs influence unobvious policy decisions, although policy has been changed. More specific, research has been conducted about how actor beliefs influenced the policy decision to keep developing new roads in demographic decline regions for the cases De Centrale As and N18 Varsseveld-Enschede. This has led to the problem statement: ***“How do actor beliefs influence unobvious policy decisions, in particular in the case of keep developing new roads in some Dutch demographic decline regions?”***

1. Which theories can describe or explain the influence of actor beliefs on unobvious policy decisions, in particular to keep develop new roads in demographic decline regions?

In this research, it is presumed that policy decisions to keep developing new roads in demographic decline regions can be considered unobvious. These policy decisions can be considered unobvious, because (demographic) policy has been made or changed because of new developments, but the policy change did or does not lead to changes in specific policy decisions in decision making processes. The explanation of policy decisions can be that actors may have different underlying assumptions than the policy assumptions of the new or changed policy, because of disagreement with the assumptions behind the new or changed policy or because actors have other priorities. The expectation in this research is that actors held on to the decision for the development of roads (means), to achieve the goals that have been set, despite the new demographic and regional economic policy goals.

There might be several ways to explain the unobvious policy decisions, but in this research, the unobvious policy decisions will be examined on the basis of the influence of the *beliefs of actors* involved in the decision-making process. To explain these unobvious policy decisions parts an existing theory will be used. The Advocacy Coalition Framework appears to be very useful for this case study, because it describes that many different actors with their policy beliefs can interact to achieve goals and influence policy decisions by governmental authorities, that lead to policy change over a long period of time (a decade or more). However, in this research, it will be used to explain that no changes were made in decision-making processes, despite the change in policies.

The Advocacy Coalition Framework is an extensive framework. In this case study, the decision is made to focus on the specific concepts 'context of the actor beliefs' and the 'actor beliefs'. The context of actor beliefs focuses on relevant aspects, as part of the environmental elements in the theoretical framework: trends and developments regarding the development of main roads in the Netherlands and the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands. The concept of actor beliefs is derived from the policy beliefs of actors in the Advocacy Coalition Framework and concerns beliefs about the importance, usefulness and necessity of the development of roads in demographic decline regions. The actor beliefs consists of three aspects: the usefulness and necessity of the development of roads, the role of demographic decline in the usefulness and necessity discussion and the effects of the development of roads in the cases.

2. What are the developments regarding the development of main roads in the Netherlands?

In the 20th century, the Dutch road network has been expanded considerably. Still, roads are being constructed and adjusted, but the pace of the expansion has declined significantly. The investment in roads is important to maintain and improve the heavily burdened infrastructure and networks for its users. This is also reflected in the structural vision (2012) of the Ministry of Infrastructure and the Environment. However, in the field of road construction, change occurs and the choice of road expansion seems no longer obvious. Alternative approaches to maintain and improve the road network appear to be more and more important. Besides, in the coming years more and larger differences between regions are expected and the mobility changes due to

demographic and economic trends. Legislation for the construction or adjustments of national (Case II N18 Varsseveld-Enschede) and provincial roads (Case I De Centrale As) is included in the Infrastructure Act (Tracéwet) and the provincial embedding Plan (Spatial Planning Act). In the elaboration, there has been specific attention to the context of the actor beliefs in the cases. The aspects of the context that could influence the actor beliefs about the importance of the development of roads in demographic decline regions, or can be important for the formation of these actor beliefs, are the trends in road development, the importance of road development, based on actual advantages and disadvantages and in addition changes in policy for infrastructure.

3. What is the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands?

For several years, Dutch rural and border regions have to deal with demographic decline. This includes a decline of the population, the number of households and the potential working population. The main reasons for this decline are a stable but low birth rate, higher death rates, an aging population and a migration from rural to cities and urban areas. The demographic decline generally has an impact on the composition of the population and more specifically for housing, jobs, economic activities, facilities and mobility, but does not automatically lead to a decline in mobility. Rather, changes in mobility are caused by changes in road capacity, traffic policy, road construction, technical developments, the regional economy and the changes in individual behaviour (increase in prosperity, cultural developments, mobility behaviour), than by demographic decline (changes in the size and composition of the population). However, in time, the demographic decline may lead to an attenuation of the growth or decline in demographic decline regions. Because the expectation is that mobility in parts of the country after 2020 will stabilize or possibly decline (including demographic decline regions), the question rises if it is still necessary to continue with the expansion of road infrastructure and structural improvement of the road network.

During the past years, there are several policy documents published by the Government of the Netherlands, Dutch provinces and regions on addressing demographic decline. This policy is aimed at anticipating to the demographic developments, to prevent the effects of demographic decline or minimize the effects and to respond to these developments in time. The documents show that maintaining and improving the accessibility and mobility in demographic decline regions is seen as one of the most important elements. However this is not the same as building new roads for regional economic development and try to reverse or stop demographic decline, by attracting new economic activities and inhabitants to come to or stay in the region. This is not aimed at anticipating demographic decline and minimizing demographic effects. Among other things, to maintain the liveability, to keep (a decreasing number of) facilities accessible and for the economic vitality of the regions. This applies to access by car, public transport, commercial transportation and other modes of transportation. To maintain and improve the accessibility and mobility in demographic decline regions there are four solutions, namely via (1) improving public transport, (2) digital accessibility, (3) physical accessibility and (4) alternative technical or mobility solutions. The construction of new roads or expanding existing roads is hardly mentioned in the used policy documents, except in terms of the maintenance of existing networks and current development projects N18 Varsseveld-Enschede and De Centrale As (N356).

The aspects of the context in this sub question, that may have an influence on the actor beliefs about the importance of the development of roads in demographic decline regions, are the consequences of the demographic decline in general, especially for infrastructure and mobility in demographic decline regions. Public policies developed or changed for regions dealing with demographic decline should influence the decision to develop new roads. The consequence is not that no road improvements are necessary, but constructing new roads for the goal of regional economic development is not anticipating to demographic decline, but trying to reverse or stop demographic decline.

4. Which actor beliefs are involved in the policy process of two cases for the development of the new road in the Dutch demographic decline region?

De Centrale As (Case I) and the N18 Varsseveld-Enschede (Case II) are both cases for the development of new roads in Dutch demographic decline regions. De Centrale As is located in the region Noordoost Friesland and the N18 partly in the region Achterhoek and partly in the region Twente. In two long-term policy processes, involving many different actors, decisions are made for a road development. In Case I, the goals were to

improve accessibility, traffic safety, liveability by the reduction of traffic on small roads and through the villages in Noordoost Friesland and to contribute to the improvement of the spatial and socio-economic structure. In Case II the goals are to improve the traffic safety and the liveability as good as possible on and around the N18 and to improve the accessibility and regional economic development. In both cases this has led to the decision for the (partial) development of a new road and the adjustments of the existing road network. Besides, in Case I, the development of a large area of 7000 ha around De Centrale As is part of the project and the development of De Centrale as has become the start of a larger regional agenda.

The actor beliefs present in the cases and useful for this research are about the usefulness and necessity of the development, the role of demographic decline in the usefulness and necessity discussion and the effects of the development. In the actor beliefs about the usefulness and necessity of the development in both cases, there are both advocates and opponents. This aspect of actor beliefs contains beliefs about the problems, the goals, solutions, relevant policy, the regional economic development and the distribution of governmental budgets. Also based on the usefulness and necessity there are advocates of other solutions, such as 'Het Groene Alternatief' (English: The Green Alternative) in Case I or a connection to another city instead of the chosen route in Case II. In addition, in both cases actor beliefs regarding demographic decline are present in the processes and the role in the decision-making. Furthermore, actor beliefs about the effects of the development have been appointed in the decision-making process. For the cases, the effects can be divided in positive and negative effects and are about the increase of traffic through the development of the road and its consequences, the location and design of the road and consequences, accessibility, barriers, nuisance, recreation and tourism, regional economy, individual situations, liveability and attractiveness of the region and, especially, the effects on landscape, nature and fauna.

5. How did actor beliefs influence the unobvious policy decision in the cases to keep develop new roads in demographic decline regions?

In both cases the policy decision is made to pursue for new road development: De Centrale As and the N18 Varsseveld-Enschede. The processes for the cases have started before the development of policy regarding demographic developments and decline for the regions Noordoost Friesland and Achterhoek. During these processes, demographic decline policy has been developed.

In the cases, the problems are the discrepancy between the existing situation of the road infrastructure and the desired situation, achieving the goals by means of the construction of the De Centrale As and N18 Varsseveld-Enschede. The problems, identified by the governmental authorities, largely correspond with each other and are about the accessibility (high traffic intensity, low traffic flow) and liveability. Besides, the actors in Case I see it as a problem that the region lacks a good connection to the national road network and accessibility of the region Noordoost Friesland and also the lagging population developments and number of jobs are linked to the problem. In Case II, the road is by the actors considered as an important and heavily burdened road connection between regions, which causes problems. In addition, in Case I, actors see it as a problem that the road no longer meets the current directives and requirements, that match the amount of traffic and the regional and local function of the road. The problems, for which the road development was originally intended, have persisted, despite the new conditions because of demographic decline and a change of policy for these rural areas.

In order to solve the problems, four main goals have been set in both cases. Three of these are the improvement of accessibility, liveability and traffic safety. In addition, in Case I, the goal is to contribute the spatial and socio-economic structure, and in Case II, the goal is to improve regional economic development. In the demographic decline policy, accessibility and liveability are also considered important. Especially the economic goals may be opposed to the new demographic policy and regional policy, by continuing to invest in the development of these regions through spatial developments and to combat demographic decline. In both cases, the decision has been made to develop new roads as the best means to solve the problems and achieve the goals.

For both cases, actor beliefs about the development of roads in demographic decline regions have been collected. Based on the theory, the expectation was that beliefs of actors could have influenced the unobvious policy decision to keep developing new roads in demographic decline regions. In this chapter, it becomes clear that the actor beliefs about the usefulness and necessity had the most important role in influencing the decision-making. The empirical information shows that in both cases, actor beliefs about the identified

problems, how to solve the problems and how to achieve the goals of improving road safety, liveability, accessibility and regional economic development/socio-economic developments were the most important actor beliefs in influencing the decision-making for the development of the roads. These actor beliefs about the problems have not disappeared or changed and the goals have not changed during the process, because of demographic and regional policies. This also did not lead to changes of the beliefs about the importance and necessity of mean, the development of both roads, to achieve these goals. The collected information also shows that actor beliefs about the role of demographic decline in the usefulness and necessity discussion were present in the policy process, especially mentioned by public respondents. However, these actor beliefs have not influenced the decision-making, which means that the decisions for the development of roads in demographic decline regions have remained unchanged.

6. How do actor beliefs influence unobvious policy decisions, to keep develop new roads in some Dutch demographic decline regions?

Since the beginning of the 21st century, Dutch rural and border regions have to deal with demographic decline. As a consequence, during the past years, there are several policy documents published by the Government of the Netherlands, Dutch provinces and regions to adapt to the demographic developments, to prevent the effects of demographic decline or minimize the effects and to respond to these developments in time. Nevertheless, in recent years, policy decisions have been taken, by responsible governmental authorities, for the development of De Centrale As and N18 Varsseveld-Enschede in the Dutch demographic decline regions Noordoost Friesland and the Achterhoek.

These policy decisions can be considered unobvious, because (demographic) policy has been made or changed because of new developments in rural and border regions. But this policy change, with its underlying assumption about the importance, necessity and usefulness of roads in regions, does not lead to changes in specific policy decisions for the development of roads in demographic decline regions. An obvious policy decision would have been not to invest in the development of a new road, to adapt to demographic decline instead of trying to reverse the developments of demographic decline. Accessibility, mobility and economic activities are important in the demographic decline regions, but not to reverse the process of demographic decline. Based on this, the expectation was that the developed policies would lead to a change in the decision-making, which would mean stop developing the new roads in these cases. However, actors held on to the decision for the development of roads (means), to achieve the goals that have been set, because of their assumptions on the importance, necessity and usefulness of roads in peripheral regions. These assumptions might differ from the policy theory in terms of both goals of road development in peripherals regions (regional economic development) and regional economic growth or not. But the assumptions might also differ in the necessity of the mean of new road development, to take away negative effects of demographic decline.

For the explanation of these unobvious policy decisions, to keep develop new roads in demographic decline regions, this thesis focuses on the influence of actor beliefs as alternative assumptions for the assumptions in the policy theory. To elaborate the research, specific theoretical concepts 'context of the actor beliefs' and the 'actor beliefs about the importance of the development of roads in demographic decline regions' are used. These concepts are based on parts of the Advocacy Coalition Framework. The context of the actor beliefs, about the trends and developments regarding the development of main roads in the Netherlands and the role of the development of roads in relevant (policy) documents for demographic decline regions in the Netherlands, may have had an influence on the beliefs of actors in the cases of De Centrale As and N18 Varsseveld-Enschede.

That in the two cases, policy decisions have been made to keep developing De Centrale As and the N18 Varsseveld-Enschede, can only partly be due to opposing the new policies. Only during the decision-making processes, demographic decline started to play a role and policy regarding the approach of demographic developments for the regions Noordoost Friesland and Achterhoek has been developed. The development of the roads was already on their way. This development was partly based on spatial and regional economic developments and partly on other problems related to these roads, such as the liveability, traffic safety and traffic intensity on both existing roads in villages. This second category of problems did not change due to the new demographic developments and demographic policy. In this sense, it is logical that the actors in the regions still choose for road development. However, if they use regional economic development as argument and, particular, as the underlying idea to reverse demographic decline, than the mean road development serves the wrong goal, based on the demographic policy. Accessibility and mobility are still part of the new policies

for demographic decline regions and here the mean might still serve the right goals, also as a local solution to the problems. However one might discuss if this matches national priorities of road development. Regional economic development focusses more on the core regions where mobility is seen as an important part of national economic development, instead of road development in peripheral regions with a declining population which should not have priority.

8.2. Discussion

Following on this research, a number of things can be discussed. First of all, in this research, parts of the Advocacy Coalition Framework have been used to explain the influence of actor beliefs on unobvious policy decisions of road development in demographic decline regions. For this research has been decided to study (assumptions underlying) unobvious policy decisions on the basis of the influence of actor beliefs. Did the assumption about necessity, importance and usefulness of roads in demographic decline regions differ between actors in these regions and the policy theory underlying the new national demographic and regional-economic development policies? However, unobvious policy decisions could also be investigated in a different way. For instance, as a classical implementation study focussing on information, capacity and power of actors. The operationalization and definitions of the theoretical concepts have made the investigation feasible and on the basis of sub question the main question could be answered and conclusions could be drawn. The way in which this research was conducted and performed ensures that relationships between the variables could be demonstrated, but it is not sure how one variable leads to the other variable and whether other variables are important in the explanation of unobvious policy decisions.

The scope of this research is small by the choice of type of research, a case study. Conducting a case study has both disadvantages and benefits. The advantages are that this type of research has provided a very in-depth research of the studied cases and it has offered the opportunity to gain insight into the causal mechanism in the research, which is the influence actor beliefs on unobvious policy decisions on the basis of three aspects.

The decision is made to study the cases N18 Varsseveld-Enschede and De Centrale As. Both policy processes were already ongoing for a long time and policy decision have been made for the development of both roads. For the collection of empirical information in this research, this can be an advantage over other cases. Nevertheless, it could be interesting for the results of this research to study cases which are at an earlier stage of the process, in which decisions have changed during the process because of policy change or decisions which have led to non-development because of the development or change of demographic policy or other policies.

For this study, the collected available empirical information have been used and analysed. On the basis of this qualitative data, the cases are reconstructed and the actor beliefs about the importance of road development in demographic decline regions are described and analysed. For the results, it means that, when more or other information was available from (administrative) consultations, informal participation, a more comprehensive and perhaps more complete reconstruction of the cases and the present actor beliefs can be made. However, the question is whether this would have an influence on the conclusions.

The results are in line with expectations, because demographic policies, developed in response to demographic developments, have not affected the policy decisions for the development of roads in two specific cases. No new or changed decisions are taken, were it would be expected, in road development processes in regions affected by demographic decline. The conclusions show that other actor beliefs have played a role in the decision-making by governmental authorities. The explanation here is that solving infrastructure problems, such as the liveability and the hindrance in certain villages, has played the most important role in both cases and no other developments have been looked into. An underlying explanation could be that the beliefs of certain actors have played a greater role than others in the decision-making process, for example by administrators of governmental authorities or politicians. But also, it is interesting how policies are taken into account in these policy processes. This could be further explored.

This research has added that when policies change, this does not immediately lead to other decisions in ongoing decision-making processes, if the original problems are still there and the development of roads is seen as means for solving these problems. If national demographic decline and national regional economic

policy, and the new priorities they brought, would have been considered more important by actors, this might have had an impact in the decision-making process.

Although the scope of this research is specific, on a more general level this study may be interesting in other situations. Policy processes in which the policy decisions are different than expected on the basis of new or changed policy, the unobvious policy decisions, but also in situations where new or changed policies have led to other decisions. It may be interesting to conduct other research about such relevant cases, in which no other decisions have been taken in spite of changing policies and also in general, the extent to which changing policy, through economic, demographic, spatial, technical or socio-cultural developments, can be taken into account in policy processes.

9. LIST OF REFERENCES

- Birkland, T. A. (2001). *An introduction to the policy process. Theories, concepts, and models of public policy making*. Armonk, NY: M.E. Sharpe.
- Blatter, J., & Haverland, M. (2012). *Designing case studies. Explanatory approaches in small-n research*. New York, NY: Palgrave Macmillan.
- Boeije, H. (2005). *Analyseren in kwalitatief onderzoek*. The Hague, the Netherlands: Boom Lemma.
- Bressers, J. T. H. A., & Klok, P.-J. (2008). De inhoud van het beleid. In A. Hoogerwerf, & M. Herweijer (Eds.), *Overheidsbeleid. Een inleiding in de beleidswetenschap* (8th ed., pp. 181-203). Alphen aan den Rijn, the Netherlands: Kluwer.
- Centraal Planbureau & Planbureau voor de Leefomgeving (2016). *Kansrijk Mobiliteitsbeleid*. Retrieved July 15, 2016, from https://www.cpb.nl/sites/default/files/omnidownload/CPB-PBL-Boek-23-Kansrijk-mobiliteitsbeleid_0.pdf
- Colebatch, H. K. (2006). *Beyond the Policy Cycle. The Policy Process in Australia*. Crows Nest, Australia: Allen & Unwin.
- Colebatch, H. K., Hoppe, R., & Noordegraaf, M. (2010). Understanding Policy Work. In H. Colebatch, R. Hoppe, & M. Noordegraaf (Eds.), *Working for Policy* (pp. 11-25). Amsterdam, the Netherlands: Amsterdam University Press.
- Compendium voor de Leefomgeving (2016). Het Nederlandse hoofdwegennet, 2016 [Illustration]. Retrieved March 25, 2017, from <http://www.clo.nl/indicatoren/nl2096-infrastructuur-wegen?i=34-169>
- CROW (2013). *Mobiliteit en ruimte – de wisselwerking tussen mobiliteit en ruimte in de stedelijke regio*. Ede, the Netherlands: CROW
- Dam, F. van, de Groot, C., & Verwest, F. (2006). *Krimp en Ruimte. Bevolkingsafname, ruimtelijke gevolgen en beleid*. Retrieved April 24, 2016, from http://www.pbl.nl/sites/default/files/cms/publicaties/Krimp_en_ruimte.pdf
- Dwaande/Netwerk Noordoost. (n.d.). ANNO I 2012-2016. Retrieved March 31, 2017, from <https://www.dwaande.nl/netwerknnoordoost/i-2012-2016/netwerk-noordoost/de-agenda>
- Eurlings, C. (2009). Standpunt N18 [Letter of government]. Retrieved May 24, 2016, from http://www.platformparticipatie.nl/Images/1.%20Standpunt%20N18_tcm318-361562.pdf
- Geurs, K. T. (2013). Mobiliteit en ruimte: theorie en geschiedenis van een continue wisselwerking. In CROW (Ed.), *Mobiliteit en ruimte - de wisselwerking tussen mobiliteit en ruimte in de stedelijke regio* (pp. 21-48). Ede, the Netherlands: CROW.
- Geurs, K. T. (2014). *Dynamiek in mobiliteit en bereikbaarheid*. Enschede: Universiteit Twente.
- Google. (2017). [World Map - The Netherlands] [Photograph]. Retrieved August 14, 2017, from <https://www.google.nl/maps/@52.5878363,6.0398838,8z>
- Haartsen, T., Krikke, P., Hooimeijer, P., & van Waveren, H. (2014). *Grenzen aan de krimp: Toespitsing interbestuurlijk actieplan bevolkingsdaling Noodzakelijk*. Retrieved October 6, 2015, from <https://www.rijksoverheid.nl/documenten/rapporten/2014/10/10/grenzen-aan-de-krimp>
- Harms, L. (2003). *Mobiel in de tijd: op weg naar een auto-afhankelijke maatschappij, 1975-2000*. Retrieved October 30, 2015, from: https://www.scp.nl/Publicaties/Alle_publicaties/Publicaties_2003/Mobiel_in_de_tijd

- Harms, L. (2008). *Overwegend onderweg: de leefsituatie en de mobiliteit van Nederlanders* (SCP-publicatie 2008/13). Retrieved November 11, 2015, from https://www.scp.nl/Publicaties/Alle_publicaties/Publicaties_2008/Overwegend_onderweg
- Harms, L., Olde Kalter, M. J., & Jorritsma, P. (2010). *Krimp en mobiliteit. Gevolgen van demografische veranderingen voor mobiliteit*. Retrieved October 12, 2015, from https://vng.nl/files/vng/publicaties/2012/krimp_en_mobiliteit_tcm195-277735.pdf
- Heffen, O. van (2008). Beleidstheorieën uit de beleidspraktijk. In A. Hoogerwerf, & M. Herweijer (Eds.), *Overheidsbeleid. Een inleiding in de beleidswetenschap* (8th ed., pp. 205-222). Alphen aan den Rijn, The Netherlands: Kluwer.
- Herweijer, M., & Pröpper I.M.A.M. (2008). Burgers in het beleidsproces. In A. Hoogerwerf, & M. Herweijer (Eds.), *Overheidsbeleid. Een inleiding in de beleidswetenschap* (8th ed., pp. 261-275). Alphen aan den Rijn, The Netherlands: Kluwer
- Hilbers, H., Snellen, D., Daalhuizen, F., De Jong, A., Ritsema van Eck, J., & Zondag, B. (2011). *Nederland in 2040: een land van regio's. Ruimtelijke verkenning*. Retrieved March 3, 2016, from http://www.pbl.nl/sites/default/files/cms/publicaties/rv11_rapport.pdf
- Hoogerwerf, A. (2008). Beleid, processen en effecten. In A. Hoogerwerf, & M. Herweijer (Eds.), *Overheidsbeleid. Een inleiding in de beleidswetenschap* (8th ed., pp. 17-34). Alphen aan den Rijn, the Netherlands: Kluwer.
- Hoppe, R. (2011). *The governance of problems. Puzzling, powering and participation*. Bristol, United Kingdom: The Policy Press.
- Hoppe, R., & Peterse, A. (1993). *Handling frozen fire: Political culture and risk management*. Boulder, CO: Westview Press.
- Koöperaasje Fryslân (2010). *Fan mear nei better. Beleidsopgave 2010-2020 demografische ontwikkelingen Fryslân*. Retrieved May 11, 2016, from [http://kkn.vanmeernaarbeter.nl/sites/kkn.vanmeernaarbeter.nl/files/\(2010\)%20Beleidsopgave%20bevolkingsontwikkeling%20Fryslan.pdf](http://kkn.vanmeernaarbeter.nl/sites/kkn.vanmeernaarbeter.nl/files/(2010)%20Beleidsopgave%20bevolkingsontwikkeling%20Fryslan.pdf)
- Maarseveen, R. van, & Romijn, G. (2015). *De ruimtelijk-economische effecten van transportinfrastructuur*. Retrieved June 28, 2017, from <https://www.cpb.nl/sites/default/files/publicaties/download/cpb-achtergronddocument-juli2015-de-ruimtelijk-economische-effecten-van-transportinfrastructuur.pdf>
- Ministerie van Infrastructuur en Milieu (2012). *Structuurvisie infrastructuur en ruimte. Nederland concurrerend, bereikbaar, leefbaar en veilig*. Retrieved October 2, 2014, from <https://www.rijksoverheid.nl/documenten/rapporten/2012/03/13/structuurvisie-infrastructuur-en-ruimte>
- Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, Interprovinciaal Overleg, & Vereniging van Nederlandse Gemeenten (2009). *Bevolkingsdaling in cijfers*. Retrieved October 27, 2014 from <https://www.rijksoverheid.nl/documenten/rapporten/2009/06/01/bevolkingsdaling-in-cijfers>
- Mom, G., & Filarski, R. (2008). *Van transport naar mobiliteit, De mobiliteitsexplosie, 1895–2005*. Zutphen, the Netherlands: Wallburg Pers
- Netwerk Noordoost (2011). *Agenda Netwerk Noordoost 2011-2030. Mei-inoar wurkje oan 'e takomst fan Noardeast Fryslân!* Retrieved May 28, 2016, from <https://www.dwaande.nl/uploads/bestanden/Werken%20en%20ondernemen/Agenda-Netwerk-Noordoost.pdf>
- Nijland, H. (2014). *Mobiliteit en bereikbaarheid. Balans van de Leefomgeving 2014, deel 5*. Retrieved from http://themasites.pbl.nl/balansvandeleeftomgeving/wp-content/uploads/PBL_2014_Mobiliteit-en-bereikbaarheid_Balans_deel-5_1541.pdf

- Oxford dictionaries (2017). *Definition of obvious in English*. Retrieved from <https://en.oxforddictionaries.com/definition/obvious>
- Planbureau voor de Leefomgeving (2016). *Balans van de Leefomgeving 2016. Richting geven - ruimte maken*. Retrieved June 9, 2017, from <http://themasites.pbl.nl/balansvandeleeftomgeving/wp-content/uploads/pbl-2016-balans-van-de-leefomgeving-2016-1838.pdf>
- Projectbureau De Centrale As (n.d.). *Stappen tot nu toe*. Retrieved February 2, 2016, from <https://www.decentrales.nl/achtergrond-en-organisatie/stappen-tot-nu-toe>
- Provincie Friesland (2010). *Inpassingsplan De Centrale As*. Retrieved March 7, 2016, from http://www.ruimtelijkeplannen.nl/documents/NL.IMRO.9921.079808-VA01/t_NL.IMRO.9921.079808-VA01.pdf
- Provincie Friesland (2013). *Projectplan Fan mear nei better. Demografische ontwikkelingen 2013-2015 Provincie Fryslân*. Retrieved March 9, 2016, from <http://kkn.vanmeernaarbeter.nl/sites/kkn.vanmeernaarbeter.nl/files/Projectplan%20demografische%20ontwikkelingen%20def.pdf>
- Provincie Gelderland (2015). *Omgevingsvisie Gelderland*. Arnhem, the Netherlands: Provincie Gelderland.
- Provincie Groningen, Provincie Friesland, Provincie Zeeland, Provincie Limburg, & Provincie Gelderland (2016). *Nederland in balans. Een nieuwe koers voor krimpregio's*. Retrieved December 7, 2016, from <https://www.zeeland.nl/actueel/nederland-balans-nieuwe-koers-voor-krimpregios>
- Regio Noordoost-Fryslân, Provincie Fryslân, Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2013). *Regioconsultatie demografische ontwikkelingen*. Retrieved May 11, 2016, from <https://www.dwaande.nl/uploads/bestanden/Werken%20en%20ondernemen/Regioconsultatie.pdf>
- Rijksoverheid (2015a). *Kaart krimpgebieden en anticipeergebieden 2015 [Illustratie]*. Retrieved October 12, 2015, from <https://www.rijksoverheid.nl/documenten/kaarten/2015/06/29/kaart-krimpgebieden-en-anticipeergebieden-2015>
- Rijksoverheid (2015b). *Noordoost Fryslân officieel krimpgebied*. Retrieved September 11, 2015, from <https://www.rijksoverheid.nl/onderwerpen/bevolkingskrimp/nieuws/2015/06/30/noordoost-fryslan-officieel-krimpgebied>
- Rijksoverheid (n.d.a). *Aanleg nieuwe wegen*. Retrieved August 22, 2016, from <https://www.rijksoverheid.nl/onderwerpen/wegen/inhoud/aanleg-van-nieuwe-wegen>
- Rijksoverheid (n.d.b). *Krimpgebieden en anticipeergebieden*. Retrieved April 1, 2016, from <https://www.rijksoverheid.nl/onderwerpen/bevolkingskrimp/inhoud/krimpgebieden-en-anticipeergebieden>
- Rijksoverheid (n.d.c). *MIRT Overzicht. N18 Varsseveld-Enschede [Illustration]*. Retrieved August 25, 2017, from http://mirt2016.mirtoverzicht.nl/mirtgebieden/project_en_programmabladen/412.aspx
- Rijksoverheid (n.d.d). *Platform participatie. N18 Varsseveld-Enschede*. Retrieved November 14, 2016, from <http://www.platformparticipatie.nl/projecten/alle-projecten/projectenlijst/n18-varseveld-enschede/>
- Rijksoverheid (n.d.e). *Revision of Environment & Planning Laws*. Retrieved April 19, 2016, from <https://www.government.nl/topics/spatial-planning-and-infrastructure/contents/revision-of-environment-planning-laws>
- Rijksoverheid (2016). *Actieplan Bevolkingsdaling. Samenwerkingsafspraken voor een structurele aanpak in de krimp- en anticipeerregio's*. Retrieved June 1, 2016, from: <https://www.rijksoverheid.nl/documenten/rapporten/2016/03/18/actieplan-bevolkingsdaling>

- Rijksoverheid, Vereniging van Nederlandse Gemeenten, & Interprovinciaal Overleg (2009). *Interbestuurlijk Actieplan Bevolkingsdaling: Krimpen met kwaliteit*. Retrieved May 11, 2015, from: <https://www.rijksoverheid.nl/documenten/kamerstukken/2009/11/27/interbestuurlijk-actieplan-bevolkingsdaling-kv2009063855ainterbestuurlijkactieplan>
- Rijkswaterstaat (2008). *Trajectnota /MER Deel A N18 Varsseveld - Enschede*. Retrieved October 5, 2016, from http://www.platformparticipatie.nl/Images/03.%20Deel%20A%20deel%203_tcm318-361505.pdf
- Rijkswaterstaat (2011a). *Nota van Antwoord - Inspiraak Trajectnota/MER N18 Varsseveld - Enschede*. Retrieved November 14, 2016, from http://www.platformparticipatie.nl/Images/17.%20Nota%20van%20Antwoord%20inspraak%20Trajectnota%20milieueffectrapport_tcm318-361516.pdf
- Rijkswaterstaat (2011b). *Ontwerptracébesluit N18 Varsseveld – Enschede. Samenvatting*. Retrieved August 25, 2017 from http://www.platformparticipatie.nl/Images/2.%20Samenvatting_tcm318-361752.pdf
- Rijkswaterstaat (2013a). *Nota van antwoord - Inspiraak op het Ontwerptracébesluit N18 Varsseveld - Enschede*. Retrieved April 14, 2016, from http://www.platformparticipatie.nl/Images/3.%20Nota%20van%20antwoord%20zienswijzen%20ontwerptrac%C3%A9besluit_tcm318-361628.pdf
- Rijkswaterstaat (2013b). *Tracébesluit N18 Varsseveld - Enschede - Toelichting*. Retrieved April 14, 2016, from http://www.platformparticipatie.nl/Images/2.%20Toelichting_tcm318-361481.pdf
- Rijkswaterstaat (2015, April 8). *Tracébesluit N18 Varsseveld-Enschede onherroepelijk*. Retrieved April 14, 2016, from <https://www.rijkswaterstaat.nl/over-ons/nieuws/nieuwsarchief/p2015/04/Tracébesluit-N18-VarsseveldEnschede-onherroepelijk.aspx>
- Rijkswaterstaat (n.d.). *Tracéwet*. Retrieved July 15, 2016, from <https://www.rijkswaterstaat.nl/wegen/wetten-regels-en-vergunningen/wetten-aanleg-en-beheer/tracéwet.aspx>
- Rijkswaterstaat Oost-Nederland (2005). *Startnotitie N18 Varsseveld-Enschede*. Retrieved from http://www.platformparticipatie.nl/Images/2.%20Startnotitie_tcm318-361747.pdf
- Ritsema van Eck, J., van Dam, F., de Groot, C., & de Jong, A. (2013). *Demografische ontwikkelingen 2010-2040. Ruimtelijke effecten en regionale diversiteit*. Retrieved April 24, 2016, from http://www.pbl.nl/sites/default/files/cms/publicaties/PBL_2013_Demografische%20ontwikkelingen-2010-2040_1044.pdf
- Sabatier, P.A. (1998). The advocacy coalition framework: revisions and relevance for Europe. *Journal of European public policy*, 5(1), 98-130.
- Sabatier, P.A. (1999). *Theories of the Policy Process*. Boulder, CO: Westview Press.
- Sabatier, P.A. (2007). *Theories of the policy process* (2nd ed.). Boulder, CO: Westview Press.
- Sabatier, P.A., & Jenkins-Smith, H. (1999). The advocacy coalition framework: An assessment. In: P. Sabatier (ed.), *Theories of the Policy Process*, pp. 117–166. Boulder, CO: Westview Press.
- Sabatier, P. A., & Weible, C. M. (2014). *Theories of the policy process* (3rd ed.). Boulder, CO: Westview Press.
- Statistics Netherlands (2015). *Transport en mobiliteit 2015*. Retrieved March 3, 2016, from <http://download.cbs.nl/pdf/2015-transport-en-mobiliteit-2015.pdf>
- Statistics Netherlands (2016, August 12). *Lengte van wegen; wegkenmerken, regio [Dataset]*. Retrieved October 5, 2016, from <http://statline.cbs.nl/Statweb/publication/?DM=SLNL&PA=70806ned&D1=a&D2=0,3,13,42,69,92,264&D3=a&HDR=T&STB=G1,G2&VW=T>

- Stone, D. (2002). *Policy paradox. The art of political decision making* (Rev. ed.). New York, NY: W.W. Norton & Company.
- Stuurgroep Achterhoek 2020 (2014). *Uitvoeringsagenda Achterhoek. "D'ran! Stappen zetten, gewoon doen!"*. Retrieved March 28, 2016, from http://www.achterhoek2020.nl/wp-content/uploads/2013/01/Uitvoeringsagenda-Achterhoek-2020-Versie-2014-06-26_DEF.pdf
- Tracéwet (1993, December 16). Retrieved July 18, 2016, from <http://wetten.overheid.nl/BWBR0006147/2015-01-01>
- Verschuren, P., & Doorewaard, H. (2007). *Het ontwerpen van een onderzoek* (4th ed.). The Hague, the Netherlands: Boom Lemma.
- Verwest, F., & van Dam, F. (2010). *Van bestrijden naar begeleiden: demografische krimp in Nederland. Beleidsstrategieën voor huidige en toekomstige krimpregio's*. Retrieved April 24, 2016, from http://www.pbl.nl/sites/default/files/cms/publicaties/krimp_web.pdf
- Weible, C. M., & Sabatier, P. A. (2007). A guide to the advocacy coalition framework. In F. Fischer, G. J. Miller, & M. S. Sidney (Eds.), *Handbook of public policy analysis. Theory, politics, and methods*. (pp. 123-133). Boca Raton, FL: CRC Press.
- Wet ruimtelijke ordening (2006, October 20). Retrieved July 18, 2016, from <http://wetten.overheid.nl/BWBR0020449/2016-04-14>
- Ziel, C. van der, Bruins Slot, E., & Voerman, A. (2011). *Integrale visie gebiedsontwikkeling De Centrale As. "Oer weide, sompe en wâld"*. Burgum, the Netherlands: Projectbureau De Centrale As.

APPENDIX 1: QUESTIONNAIRE (DUTCH)

Algemene gegevens

Respondent	
Organisatie	
Functie	
Datum	
Tijd	
Locatie	

Voorstellen

Als afstudeerstudent van de opleiding Public Administration aan Universiteit Twente in Enschede doe ik onderzoek naar de invloed van veronderstellingen van actoren op het beleidsproces en de beleidskeuzes voor de aanleg van nieuwe wegen in de regio's die te maken hebben met demografische krimp. Met demografische krimp wordt bedoeld:

- De afname van het aantal bewoners in een regio
- De afname van het aantal huishoudens in een regio
- Een afname van de potentiële beroepsbevolking

Het doel van dit onderzoek is om te verklaren hoe deze veronderstellingen van actoren hebben geleid tot de keuze voor de ontwikkeling van de weg in een regio waar nu krimp plaatsvindt. Dit gebeurt aan de hand van een reconstructie van het proces waarin de overtuigingen van verschillende actoren (meningen, argumenten en belangen) met betrekking tot de wegontwikkeling en de krimp een rol hebben gespeeld en welke invloed kunnen hebben gehad op de besluitvorming en de context van de overtuigingen van actoren.

Ik heb gekozen om de casussen de Centrale As in de regio Noordoost Friesland en de N18 Varsseveld-Enschede in de regio Achterhoek en Twente te onderzoeken. In beide casussen gaat het om langdurige processen met betrekking tot de verandering en verbetering van de weginfrastructuur en omliggende gebieden in een krimpregio. In het begin van beide beleidsprocessen was er nog geen sprake van demografische krimp. Sinds een aantal jaren is dit wel het geval.

Vragenlijst

Algemeen

1. Wat is uw functie/beroep?
2. Op welke manier bent u betrokken bij de regio [Noordoost Friesland/Achterhoek]? (persoonlijke relatie?)
3. Op welke manier bent u (en de organisatie) betrokken bij de ontwikkeling van de [Centrale As /N18]?

Casussen 'De Centrale As' (N356) en N18 Varsseveld-Enschede (project, doelen, keuzes)

4. Kunt u kort vertellen over het proces voor de ontwikkeling van de weg?
5. Wat zijn de doelstellingen voor de ontwikkeling van de weg? (hoofddoelstelling, subdoelstelling)
6. Hoe is de beleidskeuze voor deze ontwikkeling tot stand gekomen?
7. Wat is de functie van de huidige weg en de nieuwe weg?

Ontwikkeling De centrale As en N18 Varsseveld-Enschede

8. Wat vindt u van de ontwikkeling van [De Centrale As/N18]?
9. Wat zijn volgens u de positieve en negatieve effecten van de weg?
10. Waarom is de ontwikkeling van de nieuwe weg wel of niet belangrijk voor de regio?

11. Hoe denkt u over wegontwikkeling in landelijke regio's?

Actoren

- 12. Welke actoren zijn er betrokken bij het proces?
- 13. Wat is de rol van deze actoren?
- 14. Welke actoren zijn waarom voor de ontwikkeling van de N18/De centrale As?
- 15. Welke actoren zijn waarom tegen de ontwikkeling van de N18/De centrale As?
- 16. Kent u actoren waarvan u denkt dat deze voor dit onderzoek interessant zijn om te spreken?

Demografische krimp

- 17. Sinds wanneer is de krimp een probleem of discussiepunt in de regio [Noordoost Friesland/Achterhoek]?
- 18. Welke gevolgen heeft de krimp in de regio volgens u?
- 19. Heeft de krimp volgens u gevolgen voor de regionaal economische ontwikkeling?

Demografische krimp en de wegontwikkeling

- 20. Heeft de krimp volgens u gevolgen voor het gebruik van de Centrale As/N18? Welke? (positief of negatief)
- 21. Heeft de krimp een rol gehad in het beleidsproces en de besluitvorming voor de ontwikkeling van de Centrale As/N18? Is er rekening mee gehouden? Waarom wel/niet?
- 22. Heeft de krimp invloed gehad op de beleidsdoelen?
- 23. Zijn beleidsdoelen door krimp veranderd of hetzelfde gebleven? Waarom wel/niet?
- 24. Heeft de krimp invloed (gehad) op hoe actoren denken over de ontwikkeling van de weg?
- 25. Als de krimp al eerder was begonnen, was er dan anders omgegaan met het beleidsproces voor de ontwikkeling van de weg?

Afronding

- 26. Heeft u nog vragen of opmerkingen?

APPENDIX 2: TABLE PERSONAL COMMUNICATION

Case	Source	Organisation	Date	Code
De Centrale As	Interview Civil servant	Province of Friesland	16-11-2016	Fr1
De Centrale As	Interview Civil servant	Municipality of Tytsjerksteradiel	16-11-2016	Fr2
De Centrale As	Interview respondent	Federation of entrepreneurs Noordoost Friesland (ONOF)	03-02-2017	Fr3
De Centrale As	Interview respondent	Network Noordoost (formerly involved)	03-02-2017	Fr4
De Centrale As	Personal communication – Report legal process provincial embedding plan	Province of Friesland	26-11-2016	Fr5
De Centrale As	Personal communication - Report legal process provincial embedding plan	Province of Friesland	26-11-2016	Fr6
De Centrale As	Personal communication - Report legal process provincial embedding plan	Province of Friesland	26-11-2016	Fr7
N18 Varsseveld-Enschede	Interview Civil servant	Rijkswaterstaat	14-11-2016	Ah1
N18 Varsseveld-Enschede	Interview Civil servants (2 respondents)	Municipality of Berkelland	30-11-2016	Ah2
N18 Varsseveld-Enschede	Interview Civil servant	Municipality of Oude IJsselstreek	13-12-2016	Ah3
N18 Varsseveld-Enschede	Interview Civil servant	Province of Gelderland	07-12-2016	Ah4
N18 Varsseveld-Enschede	Interview respondent	Stichting TwenteroutePLUS (foundation)	16-01-2017	Ah5
N18 Varsseveld-Enschede	Title: Mens en Regio rapport. Leefgemeenschappen in de Achterhoek en Zuidoost Twente over het toekomstige tracé van de N18	Kernengroep N-18, Stichting TwenteroutePLUS, etc.	16-01-2017	Ah6

Table 1: Personal communication