



PICKING UP SPEED

INVESTIGATING THE POLICYMAKING PROCESS OF
DUTCH REGIONAL CYCLING

Master Thesis Spatial Planning
Jonas Geise

Image front page: Tunnel under the A15 highway of the Rijnwaalpad.
Part of the fast cycle route linking Arnhem and Nijmegen.

COLOPHON

Title

Picking up speed. Investigating the policymaking process of Dutch regional cycling

Author

Jonas Geise

930923254040

Jonas.geise@wur.nl

Study

Landscape Architecture & Spatial Planning

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Wageningen University

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Supervisor

Supervisor: Arend Jonkman MSc

Second reviewer: Dr. ir. Wendy Tan

Examiner: dr. Martha Bakker

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PREFACE

Cycling is in my opinion one of the best ways of getting around. It captures many elements at the same time. While you press your pedals on a bicycle, you move slow enough to be able to enjoy the landscape, but also fast enough to get to places within a reasonable amount of time. Cycling does not cost much energy and also gives you your daily exercise. And, although one might think differently, it does not rain that much in the Netherlands either. So, what are we waiting for?

It is not a surprise that I myself am a bicycle enthusiast. My grandmother and mother cycle a lot and I have become affected by the virus as well. Because of this personal fascination I have tried to do something with cycling during my studies. My Landscape Architecture Bachelor thesis was entitled “(Re)Cycling the Parkstad”. The topic was the former railway lines in the South Limburg landscape, which I proposed to use in order to create new fast cycle routes. The bachelor thesis was partly research and partly design, but I preferred the research aspect the most. This is what stimulated me to choose Spatial Planning for my Master. The question which slowly arose was, how cycling is actually promoted in the Netherlands. How do policies for cycling come about? Combined with the trend of cycling ever further, due to technological advancements in the form of electric bicycles, my research objective became clear and started to focus on cycling’s regional aspect.

While in the beginning I did not know much about regional cycling, in the meantime I have become a bit of an expert and now know about so many projects, policies and developments. It was hard to stop delving into it. I have come to better understand how governments work together in order to make people use the bicycle on regional distances. This thesis report is the result of all this hard work and I am very proud of it.

The result was however not possible without the help of my interviewees. I would like to thank them all for their time and provided insights. The interviewees were policy makers at provinces, municipalities, national government and non-governmental organisations. People with a passion for cycling who were willing to tell me more about regional cycling in particular. And it must be said, cycling needs to fight for attention and continually needs to prove its right to exist. The people I have interviewed try to do so. Secondly, I would like to thank my supervisor, Arend Jonkman. For giving me advice in a calm and structured way which I appreciated a lot. You let me do my work and had confidence in my work. Our regular meetings were very fruitful and gave me enough feedback to work on for many weeks. Third, I thank my parents and sister, who have supported me and helped me think about the thesis. Lastly, thank you Chantal for taking me on some bicycle trips in the weekends in the beautiful Wageningen area. These were welcome distractions and put me back on my feet.

I wish everyone good reading and hope my thesis may give insights in regional cycling. The most important future development for our beloved two-wheelers.

Jonas Geise

Wageningen, 22 July 2019



ABSTRACT

Cycling in the Netherlands is in strong development and literally picking up speed, transitioning from a mainly local activity towards also a regional modality. This process is mainly because the electric bicycle becomes mainstream. This type of bicycle offers cyclists an increased speed and radius. Governments try to stimulate cycling on the regional scale mainly due to car congestion, sustainability and health issues. To that end, fast cycle routes are created which increase speed, comfort and safety for cyclists. Moreover, incentive programmes and campaigns are set-up in order to trigger citizens to actually take the (electric) bicycle. Cycling's transition requires the involved governmental actors to work together and cross municipal boundaries. Some Dutch provinces have increasingly focussed on the topic and show large ambitions. However, the focus on regional cycling is rather new and little research has been done to date. The research which is there mostly looks into potential measures, while the policymaking process itself is fairly unexplored. The reason to try and understand the policymaking process is that policies in turn have a large influence on cycling itself. This research has therefore investigated the policymaking process of regional cycling in the Netherlands. The qualitative research design uses interviews and policy document analysis. It includes expert interviews for the national context and two case studies: the provinces of Gelderland and Noord-Brabant. The outcome of the research shows that in Gelderland and Noord-Brabant, regional cycling has matured throughout the years. It has become a policy domain on its own, with continued attention from all scale levels. However, municipalities and provinces rely heavily on each other, in order to develop and realise ambitions in regional cycling. Both in terms of initiating, facilitating as well as funding. It is questionable whether the current approach is sufficient to realise regional cycling's potential to become an important modality on the regional scale. The Dutch national government interferes to a limit extent because of decentralisations in the past. It could however provide a more solid base to help foster the growth of cycling on longer distances, given regional cycling's issues around cooperation and funding. For the near future, it is clear that regional cycling policymaking will be developing a lot and provides an interesting topic in the field of spatial planning.

Keywords: regional cycling, fast cycle routes, policy cycle, governance, the Netherlands, spatial planning



1 INTRODUCTION

1.1 Cycling in the news

In June 2018, the Dutch minister for Infrastructure and Water Management said in a press release that she wants to get 200.000 extra people to use a bicycle instead of a car. The goal is to tackle car traffic jams, decrease pollution and give people more opportunities to get around in urban regions. *"More than half of all car rides is less than 7,5km. A well cyclable distance"* according to the minister (Rijksoverheid, 2018). With the increased popularity of the e-bike people can cover longer distances than before, making the bicycle an interesting alternative to the car on a local and especially a regional scale. The government of Rutte III has therefore plans to spend 26 million euros on building fast cycle routes, with co-funding from provinces and municipalities (Rijksoverheid, 2018). Dutch provinces will invest *"at least 400 million euros"* (IPO, 2018) in the coming years in order to build 600 kilometre of extra fast cycle routes. The ambition is to build a further 400 kilometres after 2021 (IPO, 2018). These are clear and strong goals, boosting investments in cycling in the Netherlands.

The words and actions of the Dutch minister and provinces do not stand on their own. All around the world we can see an increasing interest in promoting bicycle use (Handy et al., 2014; Fishman & Cherry 2016; Van Goeverden, 2015; Pucher & Buehler, 2017). This is due to the fact that cycling has many advantages over other modes of transport: virtually non-polluting, health improving and relatively inexpensive (Handy et al., 2014; Pucher & Buehler, 2017; TNO, 2010). Cycling thus seems to give answer to many pressing problems like climate change, unhealthy living environments and mobility issues, which societies throughout the world are currently facing.

Cycling in the Netherlands is a well-established form of transport, especially within cities (Buehler & Pucher, 2012; KiM, 2017). Cycling from cities to neighbouring towns, or cities to cities, is far less popular however (KiM, 2017). I call this the regional scale of cycling. As stated above, Dutch governments have growing aspirations to increase cycling on the regional scale, in particular the provinces. Many provinces are developing and implementing cycling policies and are thus important actors in the regional cycling arena. In order to boost cycling it is important to understand how money can be spent wisely and develop strategies and policies accordingly (Van Goeverden et al., 2015). Academic studies have therefore focussed on cyclists' behaviour and the infrastructure itself to improve policy effectiveness. Quite frankly, cycling's policymaking process itself remains much less studied (Heinen et al., 2010). Policymaking is a complex process, which is especially true for regional cycling. By definition, regional cycling crosses municipal or even provincial borders. This means that more actors are involved in the policymaking process of regional cycling than local cycling, adding to the complexity of the issue. So, we have seen that the Dutch minister and provinces aim to stimulate regional cycling. In order to do so we should not only look towards effective measures, but also towards how policies are developed. Because better understanding policymaking can help to improve the process itself (Jan & Wegrich, 2007). This in turn is positive for policies to actually make an impact and, in this case, stimulate regional cycling. This study therefore aims to close this identified knowledge gap and focusses on the development of regional cycling policies in the Netherlands.

The next part will further substantiate the idea as introduced and give the problem description, after which the research questions will be presented.



1.2 A brief overview of cycling in the Netherlands

1.2.1 Historical developments

It may seem that the Netherlands is a cyclist's paradise, due to the abundance of bicycles and cycle paths throughout the country. However, the future for cycling has not always looked so bright. Before the Second World War, cycling was by far the most important way of getting around in the Netherlands. Its modal share at the time was much higher than it is nowadays and poor and rich alike used the bicycle for transportation (De la Bruhèze & Veraart, 1999). This changed considerably after the war. From 1950 until roughly 1975 the rate of cycling steadily decreased (De la Bruhèze & Veraart, 1999). The car became the main mode of transport and streets became dominated by the car and pushed cyclists to the side of the street.

Cycling rates fell for almost twenty-five years and the future of cycling was often questioned. New plans and policies however enabled cycling to gradually recover (De la Bruhèze & Veraart, 1999). Crucial in this development was the separation of bicycle traffic from car traffic, through the construction of dedicated bicycle lanes. The bicycle slowly became a policy domain of its own. The main reason for the renewed interest in cycling was due to the negative aspects of car use (traffic jams, pollution, high costs) becoming increasingly prominent (De la Bruhèze & Veraart, 1999). Since the mid-1970s, cycling has therefore been of growing importance in urban planning policies in the Netherlands (Pucher & Buehler, 2008).

Due to new, purposeful policy interventions cycling was able to recover in the Netherlands. Similar developments in Germany and Denmark, which also saw cycling rates plummet during the same period, confirm this idea (Pucher & Buehler, 2008). More interestingly, there are other countries which have had comparable levels of cycling before the 1950s, but which were not able to change the negative trend and nowadays have only marginal cycling rates. Examples include the United States and United Kingdom (Pucher & Buehler, 2008). It goes to show that policies, especially in the long run, can have a substantial impact on a modality's importance in a mobility system.

1.2.2 Current state of cycling

Bicycle ownership rates in the Netherlands are among the highest in the world. Every inhabitant on average owns 1,2 bicycles (CBS, 2016). This means that many people have a bicycle at their disposal, although it does not apply for everyone. In the last ten years or so there has been a large increase in the sales and ownership of electric bicycles, also called e-bikes. In 2018 40% of all bicycles sold in the country were electric bicycles (RAI Vereniging, 2019), up from a mere 6% in 2007 (RAI Vereniging, 2018). Of the total amount of 22,8 million bicycles, almost 2 million is an electric bicycle (RAI Vereniging, 2018).

The bicycle as a means of transportation in the Netherlands has been relatively stable over the past few decades, according to the Mobiliteitsbeeld 2017 of the Netherlands Institute for Transport Policy Analysis (KiM, 2017). The modal split for 1985 shows that 25% of all transportation movements were done by bicycle (Harms, 2016). The main rival clearly is the car, making up for 47%. Thirty years later this view seems almost unaltered; the bicycle making up for 27% and the car for 47% (see figure 1). During the last decades, the total mobility of Dutch people did however increase considerably, meaning that the various transportation modes increased in terms of passenger kilometres, but not in terms of modal share (KiM, 2017).



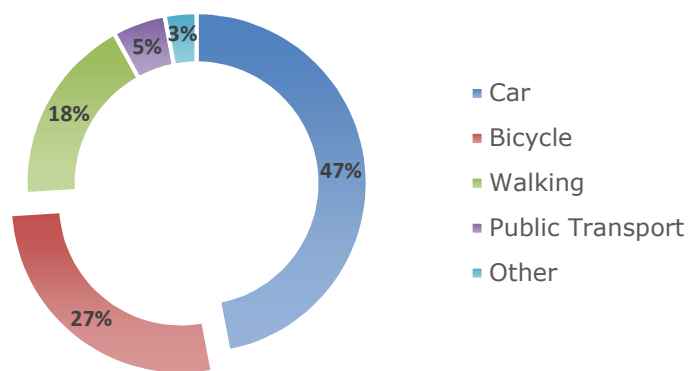


Figure 1. Modal Split of transportation movements in the Netherlands 2016.

There are various reasons for people to take a bike. Mostly, people take a bicycle for leisure (37%), followed successively by work (24%), school (20%), shopping (13%) and other (KiM, 2018 p.3). This is fairly similar to the reasons for taking the car, except that the car is used most for commuting than is the case for the bicycle (KiM, 2017). Independence, enjoyable and arriving on time are important aspects which people like about cycling (KiM, 2015). Comfort and speed are the only two criteria which people grade as insufficient.

There have in recent years been various interesting developments in the field of cycling. Most notably, the increase of electric bicycles. The electric bicycle gives its users the ability to cycle longer distances, since people are aided by a battery. On average, cyclists in the Netherlands cycle about 3,6 kilometres per trip. Whereas electric bicycle users cycle on average 5,2 kilometres (see figure 2). Users of electric bicycles are however fairly limited by the ability to achieve higher speeds for a sustained time, according to the KiM (2017) report. On average electric bicyclists achieve 12,8 km/h, whereas normal bicyclists reach 12,3 km/h. This thus implies that, generally speaking, electric bicyclists cycle for a longer time than normal cyclists. The reason for this is that current infrastructure was not designed for bicyclists to attain higher speeds. Level crossings, sharp bends and narrow paths limit the possibility for cyclists, and electric cyclists in particular, to reach their full potential. Width is important in order to have enough space to safely overtake one another, which is especially important with rising speed differences between normal cyclists and electric cyclists. The bicycle is however increasingly perceived as a transportation mode for medium distances in the region. The unlocked potential of the bicycle on a regional scale has also been noted by policymakers, as we will discuss in the next sub-chapter.



Figure 2. Average speed and distance covered with a normal bicycle and electric bicycle in the Netherlands for the years 2013-2016.

1.3 Game changers in Dutch cycling

In the last decades, two main developments have taken place which have influenced cycling considerably. The first development is the electric bicycle, which has given cyclists the potential to cycle on a regional scale. This is important, because one might think that the car is used mostly for long distances, while this is not true at all. The car is often used for relatively short trips. Half of all car movements is for distances less than 7,5 kilometres (RLI, 2018). About one quarter of all car movements is made for distances of up to five kilometres (RLI, 2018). This is the average distance which electric bicyclists currently cover and within reach of normal bicyclists (KiM, 2017). Adding to that is the fact that the electric bicycle is becoming ever more mainstream on Dutch roads and cycle paths, meaning that these distances are within reach of a growing population. The reason for this is that in the beginning, the electric bicycle was used mostly by the elderly (65 years and older). Nowadays more and more younger people use it too, to cycle to school or work (KiM, 2017).

The second important development is the shift from focussing on the local network towards a more regional focus (Fietzersbond, 2013). Cycling in cities in the Netherlands itself is already well developed, but the need to connect cities and towns with one another has become important too. In 2006 the first ideas were launched to create regional cycling routes, through the collaboration within 'Met de fiets filevrij' (later on 'Fiets filevrij'), consisting of the Fietzersbond, regional and local governments and the ministry (Fiets filevrij, 2010). The goal was to attract employees, living at a maximum distance of 15 kilometres from work, to leave their car at home and start using the bicycle. The organisation Fiets filevrij was superseded in a new collaboration called 'Tour de Force' in 2016 (Tour de Force, 2016a).

These collaborations helped to put in practice new concepts, like 'bicycle highways' (fietsnelwegen), later replaced by the term 'fast cycle routes' (snelfietsroutes). These concepts aim to give cyclists fast and direct routes on a regional scale. Fast cycle routes are wider asphalt paths than usual, have larger bend radii and contain few level crossings and stops (Fietzersbond, 2015). These routes mostly link larger cities with neighbouring cities or towns.

About 300 kilometres of fast cycle routes have been built to date in the Netherlands (Fietzersbond, 2015). The development of fast cycle routes is mainly done under responsibility of municipalities, with supervision of a province. The way in which fast cycle routes have been designed and built varies greatly, adhering to local conditions and policies (Fietzersbond, 2013). Its development is not mature yet, given the fact that there are relatively few routes when compared to the dense existing local cycling network. As stated earlier on, provinces plan to build around 1000 km of these routes in the future (IPO, 2018). This will greatly increase the current network and can thus be seen as a game changer in Dutch cycling. Now, let us look more closely as to why cycling is socially relevant.

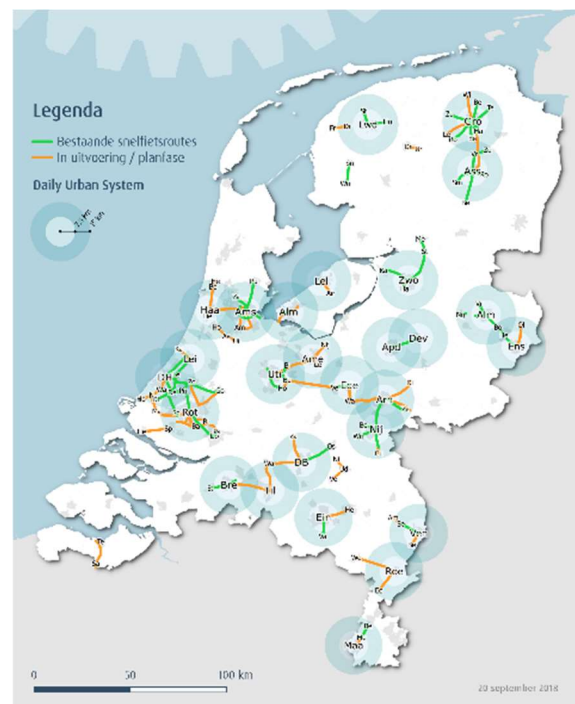


Figure 3. Image of fast cycle routes in the Netherlands, with the daily urban system around the city centres. In green: realised route. In orange: planned route.

1.4 Why cycling?

Throughout the world we have seen an increased interest in promoting cycling, the last few decades (Reid, 2017; Pucher & Buehler, 2017). This is due to the fact that cycling (potentially) gives answers to various societal problems which we are facing. As noted earlier on, cycling is virtually non-polluting, health improving and relatively inexpensive (Handy et al., 2014). Without being exhaustive I will elaborate on a few.

Reducing greenhouse gas emissions, most notably CO₂, is an important goal of the current Dutch government in order to decrease climate change (Rijksoverheid, 2017). In the Netherlands, motorised traffic in 2014 accounted for about 21% of total CO₂ emissions. Passenger road traffic in turn accounts for slightly more than half of these emissions (CBS, 2016). Stimulating non-polluting transport modes could therefore have a substantial effect on reducing greenhouse gas emissions (Heinen, 2010). Motorised traffic also causes more local negative effects. Internal combustion engines are the largest single emitter of particulate matter (fine dust) in the country and the most prominent source is road traffic (CBS, 2016). Fine dust, even in lower concentrations, causes all sorts of respiratory problems and decreases life expectancy. Next to that, road traffic is also the biggest source of noise annoyance in the Netherlands. Roads with a speed limit of 50 km/h as well as scooters and mopeds are often mentioned as causing strong noise annoyance (RIVM, 2018). Increasing the usage of silent, non-emitting transport modes like cycling could thus be positive for public health.

Actively stimulating people to make healthy choices is important for public health too. The World Health Organisation defines health not by the absence of disease but rather "*as a state of complete physical, mental and social well-being*" (WHO, 2011). In many studies, cycling is linked with improved public health (De Hartog, 2010; Hendriksen, 2010). Since people can use a bicycle on a day to day basis and this could thus structurally improve people's health.

Riding a bike is a cheap mode of transport and therefore mobility poverty in the Netherlands is a smaller problem than in other countries where people rely much more on the car which in turn is more expensive and not available to everyone (Martens, 2013; PBL, 2018). Last but not least, the bicycle is a very efficient mode of transport when it comes to space usage. A bicycle is small, when compared to a car for instance, and therefore easily parked and stored. Cycling infrastructure itself also requires less space; only pedestrians are more space efficient (KiM, 2017). This means that cycling could be of vital importance in order to keep cities accessible and liveable.

All in all we can conclude that cycling is a transport mode with many positive effects. It could help to tackle serious problems which society is currently facing. Stimulating sustainable forms of transport, like cycling, is however a difficult process. Policies need to be adapted, infrastructure needs to be altered or constructed and people's daily lives need to change in order to make use of new opportunities. This requires a long-term vision and commitment by many different parties. Policies supporting such a transition should therefore be well thought of and many studies have tried to advise policymakers on how to do so, as I will explain in the next sub-chapter.

1.5 Cycling research: findings and needs

Cycling conditions can be influenced by policymakers and planners, by developing plans and strategies which help to make cycling more attractive to people (Harms et al., 2016; Pucher & Buehler, 2008). There is a positive relationship between cycling rates and how well developed bicycle networks are, as noted by Buehler & Dill (2016) and Rietveld & Daniel (2004). The better the bicycle network the more likely people will make use of the available infrastructure. Cycling can also be



actively stimulated, through pro-bicycle policies, but also by "*transport policies in general, housing and land use policies, and car pricing and restraint policies*" (Pucher et al., 2010 p.122). A large study conducted by Harms et al. (2016), covering 22 municipalities in the Netherlands, found that the most successful cities "*employed a coordinated, comprehensive approach, including infrastructure provision, pro-bicycle programmes and car-use restrictions*" (Harms et al., 2016 p.137). Many of noted studies stress that there is no one solution and a broad approach is thus needed in order to stimulate cycling (Pucher et al., 2010; Harms et al., 2016).

Cycling research has been fast growing in the last twenty years or so. Research has broadened to encompass a wide spectrum of topics: evolving from studying only lanes and paths to analysing whole networks, people's behaviour and policy measures (Buehler & Dill, 2016). That being said, many authors do note the need for further research (Pucher & Buehler, 2017; Heinen et al., 2010; Harms et al., 2014), to help take "*cycling policy to the next level*" (Lamberts, 2016 p.65). The cycling research body remains relatively small, focussing on providing policymakers with information about practical, effective measures. Much less attention has been given to how policies are developed (Harms et al., 2016; Handy et al., 2014). Many studies therefore miss out on how measures are implemented, organised and for example what role different actors play. This lack of research on policymaking may seem somewhat peculiar, since policymaking processes are complex and its outcomes uncertain (Jann & Wegrich, 2007). This is also noted by the Tour de Force, an organisation in which governments work together to stimulate cycling. The Tour de Force notes that the multitude of relevant players and a lack of a strong leading actor are one of the causes for relatively slow realisation of regional cycling routes (Tour de Force, 2016a). To counter this negative effect, it is therefore important to better understand the policymaking process. Research on the regional cycling policymaking process will help to gain new insights in policymaking, thereby positively stimulating its development and application in order to get more people to take the bicycle on a regional scale.

1.6 Research questions

Now that we have come to know more about (regional) cycling in the Netherlands and better understand its societal and scientific relevance, we can define the problem at hand. Formulating a problem statement is key in order to provide a research objective and answer the question of what this research is trying to achieve. In order to reach the objective, a main research question is formulated. This main research question is further split up in several sub-research questions which help to answer the main question.

Problem statement

There is limited insight in the policymaking process of regional cycling in the Netherlands.

Research objective

The aim of this research is to gain insight in the policymaking process of regional cycling in the Netherlands.

Main research question

How are regional cycling policies in the Netherlands developed?



Sub-research questions

1. How is regional cycling conceptualised in The Netherlands?

In order to be able to talk about regional cycling it is important to better understand what is meant by this concept.

2. What stakeholders influence the policymaking process regarding regional cycling (and what is their role)?

The process of policymaking is sometimes complex and messy, in which many different actors/stakeholders have a say. Therefore, it is important to describe the actors' role in developing regional cycling policies.

3. How are challenges of actors overcome in order to develop regional cycling policies?

The aim is to identify key elements for overcoming (differences between) provinces, municipalities and other stakeholders. Actors have differing interests but at the same time need to cooperate with one another. This cooperation is perceived to be of great importance for regional cycling policies.

1.7 Reading guide

This document is structured as follows. Chapter two presents a theoretical framework in order to gain a better understanding of (regional) spatial planning and how policies are developed in theory. Chapter three deals with the methods which I have used for this study. Chapter four presents the results of the expert interviews and document analysis of the national context. The case studies are divided in two. Chapter five presents the results of Gelderland, while chapter six presents the results of Noord-Brabant. Chapter seven brings about the discussion, before concluding with chapter eight which gives the overall conclusion of the research and presents recommendations for future research. The last chapter gives a short personal reflection on the findings.

The chapters of this study form the steps that have been taken during the research process. These various steps first broaden out, before funnelling down again, thereby providing important starting elements for the next step. An example of this is that the Introduction ends by presenting the research questions. This then forms the start for the Theoretical Framework, because the questions steer the direction in which the research is going. Below, a graphical representation of the structure as just described.

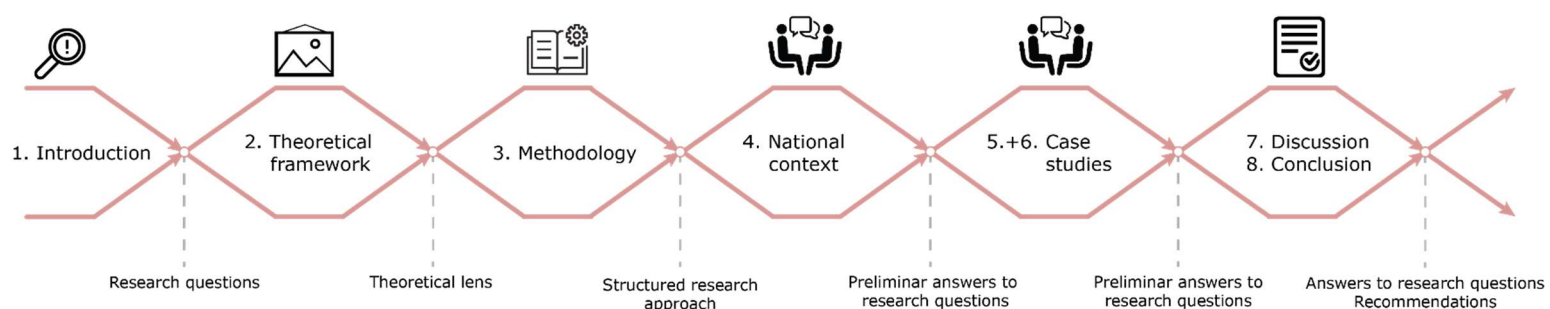


Figure 0. Simplified structure of this research. The steps represent the different chapters.

PART 1. RESEARCH SET-UP



The fast cycle route between Tilburg and Waalwijk, in Waalwijk. Note that bicyclists and cars do not level cross, which increases speed and safety for both.

2 THEORETICAL FRAMEWORK

This chapter is used to present the theories which have guided this research. The reason for using a theoretical framework is that a description of a case can never incorporate all facts of a case. The researcher therefore makes a selection, based on what is found important and relevant for the research. This selection making is done by using theories, which focus on specific aspects which are of the researcher's interest (Creswell, 2014). I will start to elaborate on a very broad lens: spatial planning.

2.1 What exactly is spatial planning?

The Netherlands has a long tradition of creating landscapes, almost everything has been altered or created by human interventions. Because of the Netherlands' relatively high population density there is a lot of pressure on the landscape between different land uses (Faludi & Van der Valk, 1994; Van der Valk, 2002). Spatial planning tries to deal with these tensions in order to improve the quality of the living environment (Hidding, 2006). Spatial planning thus has to do with the way we interact and shape our landscape. It is a broad term and defined in various ways by different authors, also differing from one country to another. Since we focus on the Netherlands, we will use a definition most appropriate for the Dutch case. We make use of the definition as given by Hidding (2006, p.91). In her book 'Planning for city and countryside' (in Dutch: 'Planning voor stad en land'), Hidding focusses on Dutch spatial planning and describes how it has evolved over time and is still evolving. According to her, planning is a "search process" where planning actors try to develop coherent strategies and visions in order to intervene in the mutual process of space and society. This is done for the public good and within the context of policymaking and policy implementation. It forms the basis for "*well-considered and democratically legitimate decision-making processes*" (Hidding, 2006 p.91) in the field of spatial issues. Spatial planning is important in the policy formulation process and thereby prepares political decision making. By nature, planning is future oriented and policies are developed in order to realise the envisaged goals (Hidding, 2006). Spatial planning in the Netherlands is based on consensus, stemming from the country's political system where compromises between different parties is very common (Van Der Valk, 2002). The profession is well organised and planners are highly skilled in negotiation (Van Der Valk, 2002). We now have gathered a rough idea of what spatial planning, in the Dutch context, means. We will continue and see how academics describe the regional aspect of planning.

2.2 Regional planning

In the past decade many important developments have taken place in the Dutch planners paradise (Roodbol-Mekkes, 2012; Gerrits et al., 2012). Most important have been decentralisations from the national government towards provinces and municipalities (Van Straalen et al., 2014; Janssen-Jansen, 2016). During the 20th century the Dutch national government has had a profound influence on the spatial development of the Netherlands, but this has changed considerably. Developing coherent spatial plans costs a lot of time and critics stated that planning did not meet expectations and did not involve citizens enough (Roncken & Beunen, 2017). The solution was sought in giving other actors more power, being both governmental and non-governmental organisations. Therefore, from the 2000s onwards, and particularly since a new act was introduced in 2008 (Van Straalen & Witte, 2018), provinces and municipalities in the Netherlands have acquired more responsibilities in spatial planning. According to Westerink et al. (2017) the regional level has become very important

in developing integrated spatial strategies. Especially provinces gained a much stronger role in spatial planning (Van Straalen et al., 2014; Roncken & Beunen, 2017).

Let me shortly elaborate on the role of the different governmental levels in the Netherlands in the field of spatial planning. The national government positions itself nowadays to set out broad lines and taking care of national infrastructure like railways, highways and significant waterbodies or canals. The national government has few spatial planning instruments and policies left and delegated most of them towards municipalities and provinces (Gerrits et al., 2012; Roncken & Beunen, 2017). The municipalities form the lowest tier of government in the Netherlands and deal with a wide range of tasks like housing and local mobility. The tasks of the municipalities are all much related to local issues. The twelve Dutch provinces form the government level between municipalities and the national government. Provinces are responsible for various domains like provincial roads and cycle paths, landscape and nature conservation, to name but a few.

The provinces all deal differently with their relatively new policymaking capabilities (Van Straalen, 2014). Some provinces have taken up a direct role and set up new departments in order to develop spatial plans. Other provinces take up a more steering and a facilitating approach. The provinces are however not the sole institution acting on the regional level. They are "*one of many stakeholders operating at the regional level*" (Van Straalen & Witte, 2018 p.161). Provinces rely strongly on municipalities in order to actually realise their ambitions, as described by Van Straalen & Witte. The reason is that municipalities have a strong say in developments within their administrative borders. So if the province wants to realise something, they need the support of the relevant municipalities. This of course affects the relationship between these two tiers of government. Provinces are currently still giving shape to their new role, but it is questioned by Van Straalen & Witte (2018) whether provinces have the institutional capacity to take on their new role.

We can conclude that when analysing a case it is important to be aware of institutional capacities of the respective actors and look closely at the relations that exist between the different levels of government. The reason for doing so, is that these relations have a large influence on the outcomes of policymaking processes.

2.3 The Public Policy cycle

The interest of this study is the public policymaking process. Private organisations and companies also develop policies to achieve certain goals in the future, but that is not what we are looking for here. Public policy is the outcome of a process in which decisions are made and also not made by the involved actors (Birkland, 2016). Policymaking involves actors ranging from governmental institutions to citizens and non-profit organisations. These actors all have a different interest in the policymaking process and try to influence the process itself, thereby hoping to gain from changes which can be made in the policies (Birkland, 2016). Public policymaking can be rather complex because of all the different actors involved and interplay between them. That is the reason why theoretical models have been made up: in order to comprehend and analyse these processes (Jann & Wegrich, 2007). These theoretical models may sometimes be simplistic, but this is inevitable given the fact that they represent a very complex reality.

The first policy model was designed in the 1950s by Laswell and described the policymaking process as having several stages, chronologically following one another. Laswell's model has since then functioned as a basic framework to analyse policy processes and has subsequently been altered and used in many ways (Jann & Wegrich, 2007). Nowadays, we could describe Laswell's stages according to Jann & Wegrich as follows: agenda-setting, policy formulation, decision making, implementation

and evaluation. The model is not meant to describe the real-world decision making process, but forms an *"ideal-type of rational planning and decision-making"* (Jann & Wegrich, 2007 p.44). Stages are in reality obviously less distinct and do not necessarily follow one another chronologically or have a clear ending. To overcome this, Laswell's model has been changed through influences of various authors. Most notably is the influence of the work of David Easton in his book 'A systems analysis of political life'. Here he describes the feedback loops between policy inputs (demands and support of citizens) and policy outputs (programmes, laws etc.). The policy outputs form the basis for new policy inputs (Jann & Wegrich, 2007). Combining both Laswell's and Easton's models has produced the so called 'Public Policy cycle'. It is a practical, heuristic model which is used to gain more insight in the process of policymaking and helps structuring empirical data (Jann & Wegrich, 2007). It focusses on general properties of the policymaking process instead of specific actors. The model starts with agenda setting, but does not end at evaluation anymore. Evaluation is merely seen as an input for new agenda setting, after which the policy cycle continues. Also, it must be noted that the stages not only follow chronologically, but that it is also possible to go back one stage or more. For example, during the policy formulation process one can go back to agenda setting. After this has been finished, the cycle continues again with policy formulation. The different stages can also happen parallel to one another. While implementing a certain policy it can be worthwhile to already start monitoring and evaluating, in order to be able to steer the implementation. It may come as no surprise that a thorough evaluation can only be done after the implementation has finished.

The Public Policy model has its limitations and it is important to be aware of this. As mentioned earlier on, it is a simplified model and reality is in fact much more complex. The different policymaking stages are not clear cut and may be difficult to distinguish from one another. Next to that, policies are developed in a constantly evolving environment which is inherently complex and difficult to comprehend (Jann & Wegrich, 2007). The Public Policy model has however developed into the most widely applied model in order to research public policy (Jann & Wegrich, 2007). It has helped many scholars to gain understanding of policy processes and will therefore be used in this research too. I will continue by elaborating on the various stages of the cycle.

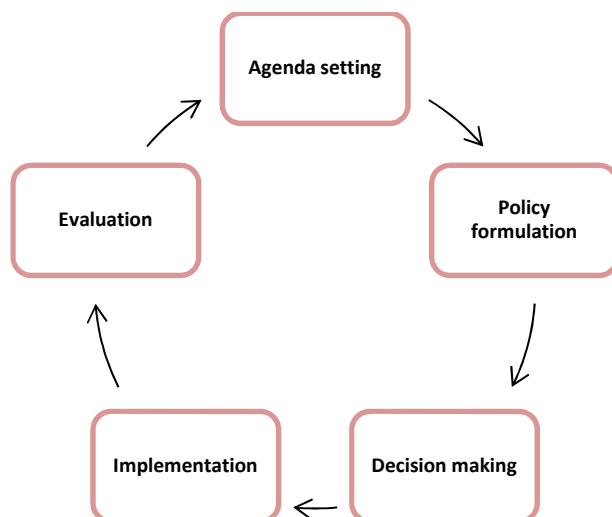


Figure 5. The Public Policy cycle as described by Jann & Wegrich (2007).

Agenda setting is the stage where social problems are recognised. There must be a need for governmental intervention and the creation of policies to deal with the identified problems. Actors within or outside of governmental organisations try to influence the agenda. No single actor however has direct influence on all of the mechanisms behind the agenda setting process (Jann & Wegrich,

2007). Since it is impossible to deal with all of the recognised problems, a selection needs to be made. By keeping in mind potential strategies to deal with the identified problems, the problems themselves are structured and selected. The agenda setting stage is highly influenced by the case specific situation and "far from a rational selection of issues" (Jann & Wegrich, 2007).

In the second stage, policies are formulated in order to deal with the identified problems. Objectives are written down in order to answer questions like 'what should a certain policy achieve?'. Later on, this will be helpful in order to evaluate whether policies have been successful (i.e. reached their goals). Again, different stakes will be weighed against each other and the costs and benefits of a policy will be taken into account (Jann & Wegrich, 2007). This is mostly done by policymakers at municipalities, provinces or ministries. This weighing of costs and benefits is a less informal process than one might expect as Jann & Wegrich note. One of the reasons for this is that the process is heavily influenced by power resources available to the different actors in a policy system. Already in 1959, Lindblom wrote an article about this issue citing that the most common method of policy formulation relies more on gut feeling and experience than on rational decision making. Policymakers need to deal with a very complex reality and therefore make implicit decisions since they are not able to process all the available information, according to Lindblom (1959).

The third stage is somewhat more difficult to distinguish from the previous one, since policymaking and decision making are very much interrelated (Jann & Wegrich, 2007). Therefore, both are combined during analysis of this study. I would like to note however that decision making can be seen as a sort of go/no-go point. It is a milestone in the policy cycle since it marks the start of the implementation phase. It is therefore incorporated as an autonomous step in this policy cycle.

Policy implementation is that what happens between an intention and the actual action (Jann & Wegrich, 2007). The policies as formulated in the previous step are executed. This means that funds, tasks and responsibilities are distributed between the involved actors. During the implementation process policies, can still change, get delayed or even blocked altogether. Implementation is not top-down, but rather a process where societal and institutional factors as well as networks play a significant role (Jann & Wegrich, 2007).

The last stage is the evaluation step. Policies are designed in stage two, with the idea of realising certain goals. Evaluating the results of policies is important in order to understand whether goals have been met or not. Did policies have the intended outcome? A policy can then be continued, adapted or terminated, depending on the outcomes of the reflection (Jann & Wegrich, 2007). The policy cycle thus does not necessarily stop at the evaluation stage.

The described public policy cycle will function as a basic framework within this study. It is however still unclear who influences the development of public policies. Who has for example the power to make decisions? Therefore, we now shift our view and take a closer look at a transition which has a large impact on decision making capabilities of the relevant actors.

2.4 From government towards governance

As noted earlier on, there have been various developments in the last decades in the spatial planning field in the Netherlands. Next to decentralisations, one other important development has taken place. This is the shift towards a more participatory and collaborative planning approach (Westerink et al., 2017). Planning processes have become less top-down and more bottom-up, thus giving room for other actors to get involved in the policymaking process. This fits into a broader development throughout the world since the end of the 20th century (Mäntysalo & Bäcklund, 2017). Planning processes are increasingly undertaken with actors having varying backgrounds and all of these actors try to influence the process in a way that suits them best. The resources necessary to act are scattered, meaning that even governments are mostly not able to act on their own but rely on the cooperation of other actors (Mäntysalo & Bäcklund, 2017; Westerink et al., 2017). I will now further explain this change from government towards governance.

Developing policies can be done in many ways and can be roughly categorised into three different approaches, according to Pülzl & Treib (2007). The first method is called top-down, meaning that there is only a small group (i.e. the government) which can influence the policymaking process, meaning that there is thus great control of the actual outcomes of the process. Second, bottom-up gives a lot of room for individuals and non-governmental organisations to participate in the policymaking process. The government is then not the sole actor in the process, but one of many different actors. This is also called a form of governance, as opposed to the term government. Third, a combination of both methods is called a hybrid approach. In this situation the different actors have varying levels of participation in the project and the government is neither absent or dominant. Governments can thus be a leading, participating or even absent actor in the planning process (Westerink et al., 2017). Although the latter, in its purest form, is quite unique. It is difficult to separate the three approaches from one another since definitions are multi interpretable in reality. Dutch governmental bodies are still very influential in altering land uses given their juridical power (Westerink et al., 2017). The notion of top-down, bottom-up and hybrid approaches however helps to analyse and categorise (parts of) policy processes (Pülzl & Treib, 2007). It shows how different actors have been involved in the policymaking process. The level of involvement influences the way in which actors interact with each other and this in turn influences the outcomes of the process (Pülzl & Treib, 2007).

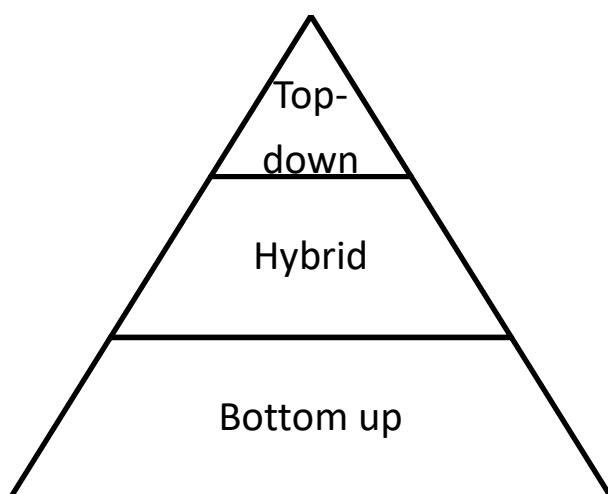


Figure 6. Top-down, hybrid and bottom up and their hierarchical position in the policy process. Based on Pülzl & Treib (2007).

For the purpose of this research, two specific aspects of governance will be distinguished, based on the research by Van der Zouwen & Van Tatenhove (2002) and Arnouts & Arts (2009). These are multi-actor and multi-level aspects of governance respectively. The first refers to the effect of the increasing blurred lines between state-market-society. Because of this, governmental actors are no longer the dominant participant in policymaking. There is an increased involvement in the policymaking process by civilians, private actors and societal organisations. The second aspect, multi-level governance, relates to the levels of government that are involved. Multi-level governance is the interaction between the different levels of government. Van der Zouwen & Van Tatenhove (2002) describe multi-level governance as an extensive form of multi-actor governance: the interactions between the various actors on the different levels of government combined determine the direction of a certain policy domain.

2.5 Concluding

In this chapter I have tried to explain what spatial planning is and why it is of use. In the Netherlands, there is a lot of pressure on different land uses since the country is fairly densely populated. Spatial planning is the search process in order to try to deal with these tensions. Whereas during the 20th century the national government had a lot of planning authority, nowadays the Dutch provinces and municipalities are the most important when it comes to developing spatial plans. This has changed the spatial planning domain considerably and for this research it is important to be aware of how governments interact with one another. The focal point of this study are policies. Many different stakes need to be taken into in order to realise certain goals defined by policies. This ranges from the interests of different governments, to citizens and non-governmental organisations. The Public Policy cycle enables us to identify the different steps in the policymaking process and see what has been of crucial importance in order to put policies in place. Policymaking is a complex process, mainly due to the variety and amount of actors which are involved. The ability of single actors to influence the policymaking process has diminished due to the shift from government to governance. We have seen that governments can be leading, participating or (although rarely) absent actors in the policymaking process.

The different notions as described in this chapter help us to better understand the data which will be gathered during the research. Now, let us turn towards the methodology.

3 METHODOLOGY

This chapter describes what methods have been used to perform the necessary research in order to answer the research questions. Elaborating on the methodology structures a research and shows to others how a research has been undertaken. This enables researchers to maximise the validity of research findings (Du Toit, 2014).

First, the overall research design is explained and selection criteria for the cases are presented. Second, the methods of data collection are discussed. Third, the method of analysis the data is described, before turning towards validity and reliability. Lastly, the case selection is elaborated on.

3.1 Research design

The researcher's worldview can be best described by a constructivist view. In this worldview, people interact with the world around them and thereby construct meanings and build their own reality (Creswell, 2014). Many different meanings thus exist, differing from person to person, influenced by historical and social perspectives of the individuals. A phenomenon can therefore, in the constructivist's vision, be best understood via the views of the different participants and stakeholders. The holistic approach to research is more a philosophy than a study design. The design is based upon the idea that a multiplicity of factors interacts in our lives and we thus cannot understand a phenomenon from just one or two perspectives (Creswell, 2014). To understand a situation or phenomenon you need to look at it in its totality – that is, holistically from every perspective.

3.1.1 Multiple case study

The goal of this research has been to understand the complexity of policymaking. More precisely, to gain insight in the policymaking process of regional cycling in the Netherlands. To be able to understand a phenomenon in totality it is necessary to explore the varied and multiple perspectives of individuals or groups (Kumar, 2011) which are part of the policymaking process. This helps "*rendering the complexity of a situation*" (Creswell, 2014 p.32) on a certain issue as described by people. A qualitative research approach was therefore found most appropriate, since it does not focus on quantifiable data and statistical analysis. A qualitative research rather focusses on stories and beliefs of people, which in turn must be interpreted by the researcher (Creswell, 2014). The researcher is thereby able to describe a complex phenomenon in an inclusive way and capturing nuances which other methods are not capable of. This can also make the results of a qualitative research more accessible to society, according to Silverman (2014). The process of qualitative research is largely inductive (Creswell, 2014), the data collected during this research was thus used to generate meaning. Lastly, the topic of this study is not well understood yet and relatively unknown. An explorative research is therefore most appropriate (Gerring, 2007; Du Toit, 2014).

The design for this research was a multiple case study. A case can be almost anything, ranging from one or more individuals to a community, event or process, restricted in time and space (Creswell, 2014). Gerring (2007 p.37) defines a case as an "*intensive study of a single unit or a small number of units (the cases), for the purpose of understanding a larger class of similar units (a population of cases)*". The reason for choosing a multiple case study design for this research is fivefold.

First, the aim of this research is to gain an in-depth understanding of the policymaking process of regional cycling. Case studies are used in order to gain a holistic and in-depth understanding (Creswell, 2014; Verschuren & Doorewaard, 2010). In this way, the researcher is able to develop a "*nuanced view of reality*" (Flyvbjerg, 2006 p.223). Second, case studies are flexible and do not

require much pre-structuring (Verschuren & Doorewaard, 2010). This allows the researcher to change course during the research process when needed. Especially for this research this will come in handy, since it is more of an explorative kind and case studies are well suited for exploratory research (Gerring, 2007). Third, the goal of this research is not so much to understand how regional cycling policies are developed in the cases themselves. The cases are a means to shed some light on how regional policies in the Netherlands in general are developed. In order to make generalisations within a case study it is not needed to study many different cases, as Flyvbjerg (2006) points out. In fact, it is possible to use only one case and still make generalisations about the results. However, using more than one case study can improve the external validity of a research (Verschuren & Doorewaard, 2010). Meaning that the outcomes are more easily declared applicable to similar cases. Since generalisation is an important aspect of this study, a *multiple* case study is a very suitable research design. Fourth, cases will always differ from another, however similar they may seem. This is especially true for policymaking processes. These processes are mostly very complex due to the amount of actors involved and the varying stakes which are at play. So, by looking at two cases instead of one, the richness of information is increased and this is positive for the overall understanding of the phenomenon under study. Lastly, the ultimate goal of this research is to gain more insight in the process of regional cycling policies and to contribute to its development. The outcomes of the research must therefore also be comprehensible to experts in the field. As mentioned before, qualitative research is more accessible to other individuals or groups. This is especially so for case studies because they are more of an everyday nature and therefore easier accepted by people in the field (Verschuren & Doorewaard, 2010).

Taking all these considerations into account, the first step in the research was to create an oversight and understand the national context of regional cycling in the Netherlands. Developments on a national level have had a lot of influence on (regional) planning in the Netherlands, as already described in the theoretical framework. However, understanding the national level would not have been enough in order to answer the main research question. The results would probably stay too general. Using two case studies has helped to look close at the policymaking processes in practice and make more detailed analysis. The research approach for this study is presented in the following scheme.

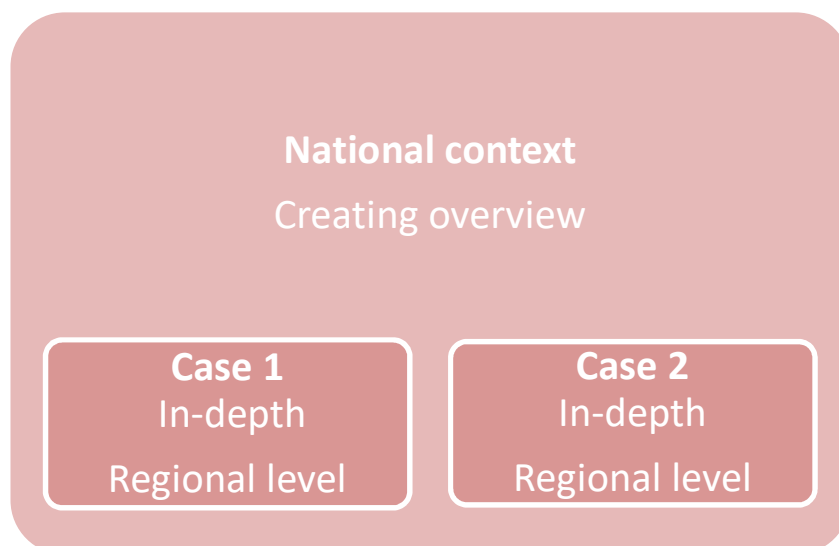


Figure 7. Research design. First, an overview has been created by focussing on the national context. After that, two cases were used in order to gain in-depth information about policymaking for regional cycling.

3.1.2 Case selection criteria

This left me with making a proper case selection. Case selections in qualitative research are best done through purposeful sampling, meaning that the researcher selects the cases based on the availability of relevant information in order to conduct the research (Creswell, 2014; Gerring, 2007). When strategically selecting a case, the generalisability of the research is positively influenced. In order to select a qualitative case, several strategies exist, according to Flyvbjerg (2006). When one is trying to gather a lot of information and gain a deeper understanding of a certain phenomenon, an atypical or extreme case is most suitable. Extreme cases generally encompass more actors and mechanisms because of their atypical nature, allowing the researcher to dive deeper instead of only "*describing symptoms*" (Flyvbjerg, 2006, p. 229). The extreme case is thus an attempt to increase the dimension of interest (Gerring, 2007).

Taking into account the previously described strategies, a few criteria were made in order to choose two case studies:

1. This research focussed on the Dutch context and the regional cycling dimension. It is hard to determine a clear line which separates the concepts of local and regional cycling. To overcome this, I wanted to have special focus on actors and policies which largely intervene on a regional level and focus on fast cycle routes, which are clear result of regional cycling policies.
2. The cases must have a clear and ambitious regional cycling policy put in place. Without ambitious policies there is probably less focus on regional cycling. This has all sorts of practical implications. Policy documents may then for example be lacking or meagre. Or, there are few people dedicated to work on regional cycling, which in turn makes interviews less fruitful or harder to organise.
3. The regional cycling policies should have led to actual action and changes. This makes it possible to research the policymaking process and go through the whole Public Policy cycle instead of only a part of it.

Through a desk research in the initial phase of the research, a list of possible cases was made. This desk research included news articles, policy documents of municipalities, provinces, the national government and reports made by several parties like the Fietzersbond and the Netherlands Institute for Transport Policy Analysis (KiM). The choice for the two cases, the provinces of Noord-Brabant and Gelderland, will be further elaborated on in 3.5.

3.2 Data collection

This research included three data collection methods: collecting secondary data through desk research, attending meetings of regional cycling policy experts and collecting primary data through in-depth interviews. The interviews are seen as of key importance to this study, since we are searching for opinions of people in order to comprehend the policymaking process.

Desk research was needed in order to gain some first understanding of the policies which are in place. The desk research provided important input for the interviews and enabled the researcher to focus, instead of asking too many general questions. That is why documents have for a large part been analysed before interviews were made. The desk research mainly involved collecting policy documents of provinces and other related actors. The documents were found online on the actors' websites and are about cycling in general and regional cycling when possible. The documents shed some light on things like the ambition, actions and cooperation with other stakeholders like municipalities. The documents helped to understand general and factual information. The main documents which were analysed are presented in Appendix 11.2.



In order to gain more understanding of regional cycling, I have attended three sessions. I have called these Expert Events, since they gathered policymaking experts in the field of regional cycling from all around the country. These sessions proved very fruitful and have brought me in contact with people whom I could interview, provided interesting information and gave me oversight. The Expert Events thus helped me to place regional cycling in its context.

The main source of data collection for this research were semi-structured interviews. Interviews help to uncover more detailed and inside information. It is a common way of collecting information from people, especially when complex phenomena and in-depth information is needed (Kumar, 2011). The interviewer has the possibility to design a certain interview format and think of questions which could be interesting in order to obtain the needed information. The interview format can be structured, unstructured or anything in between. Meaning that, respectively, a researcher has to stick to a rigid structure or has a lot of flexibility to ask questions during the interview (Kumar, 2011). A semi-structured interview format was chosen for this study. Some general questions were made in advance of the interviews. These questions go from general to more specific, starting with the role of the interviewee and the organisation. The questions were organised with the Public Policy cycle steps. More specific questions were asked during the course of the interview, depending on what the interviewee said. There was thus enough room for spontaneous questions or reactions and this has allowed the researcher to explore interesting themes that came up during an interview. This helps to gain an in-depth understanding of how the interviewees perceive the topic of interest (Silverman, 2014). The interviews were held in Dutch since it was the mother tongue of all interviewees. The interviews were recorded, and the interviewer took notes when necessary. An interview protocol, containing explanation of the research and interview questions, was made to guide the interviews. The list of interviewees, the interview protocol as well as the analysed policy documents, can be found in the Appendix.

The selection for interviewees was done with information obtained through the desk review, attending the first two Expert Events and through interviews with experts. In the first interviews, new names of potentially important interviewees popped up. This sometimes happened naturally during the interview and sometimes the researcher asked specifically which persons would be of importance for the research. This technique was used during the research and is called snowballing. It stops when no new names pop up (Kumar, 2011). First, five experts were interviewed with an overview of current and past policy developments. These experts provided further information next to the policy documents but, more importantly, also on how policy is actually developed. The experts have worked on the national level or have had experience working on multiple policymaking processes. Second, four interviews were held for each of the cases. The interviewees represented various actors involved in the development of regional bicycle policies for the two selected cases. In the results part I refer to the interviews with an interview code. The list of interviewees, together with the interview codes, is provided in Appendix 11.3. Here the interview codes are presented too, which are used in the results part to refer to specific interviews.

The interviewees come from the national level (ministry, Rijkswaterstaat), provinces, municipalities as well as non-governmental organisations (Fietsersbond, Radboud University). Next to that, the interviewees were involved in regional cycling in differing degrees. Some interviewees worked on an abstract level and were not involved in the implementation phase of projects, while others drew up maps and were present at neighbourhood presentation evenings and were thus more involved in practical work. The interviewees were selected in a way that helped to have a varied group of people, representing different organisations, levels and expertise. It was deemed more important to interview two persons from two differing organisations than two interviewees from the same organisation, except when these persons had very different tasks and expertise. This approach was

applied in order to increase the variedness of the gathered information, which was important to gain a good image of regional cycling. The approach is represented below in figure 8.

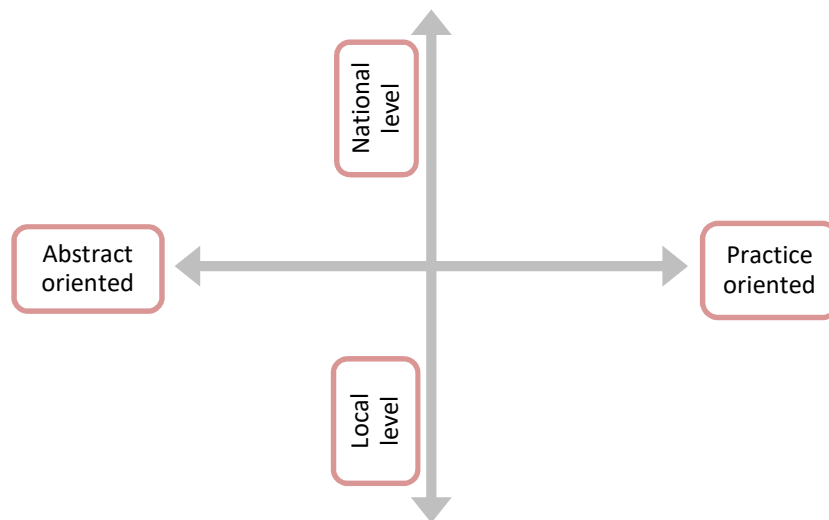


Figure 8. Interviewee characteristics. Figure showing the main different characteristics of the interviewees. On the Y axis the level on which they operated. On the X axis their orientation.

Data collection as a whole stops when one reaches the point of saturation (Kumar, 2011). This is the point where (almost) no new information is gained through collecting more interviews or policy documents. This decision highly depends on the cases themselves and the opinion of the researcher whether or not new data collection would be useful or not. However, one is never really 'done' with interviewing and gathering data. For this research, the amount of interviews was found appropriate to answer the research question. The information was varied and also rich enough to be able to make conclusions. Answering the research question is what it, in the end, is all about.

3.3 Data analysis

During qualitative research, a lot of data is generated and keeping oversight may be difficult (Bryman, 2012). Therefore the data needs to be analysed in order to make sense of all the information. Analysis is done by taking apart the gathered data and also putting it back together (Creswell, 2014). It starts after data has been collected, but not all interviews and documents need to be finished and found in order to start analysing the data. This means that data collection and analysis run more or less parallel to one another.

The first step in analysing data, according to Creswell (2014), is to prepare the data. Relevant documents were sorted and arranged. The (recorded) interviews were transcribed. This was done fairly detailed, to the extent which was needed for this research. It was the content that mattered and not so much how things were said. The transcriptions were time consuming, but gave a lot of information. The second step was to read through the data and gain an initial idea of what participants and documents have to tell. The third step was to code the data, meaning that sentences or paragraphs were segmented and certain themes were labelled to it accordingly (Bryman, 2012). Transcripts themselves contain too much information to be of practical use for the results part. This information therefore needs to be condensed as well as analysed. Several methods exist. What I have done for this research is the following. Through desk research I was able to distinguish certain themes which could be important for the topic. Important too was the theoretical framework. I had the themes (i.e. codes) written down. Then I started reading for the second time but more

thoroughly. Whilst doing so, parts of the transcript which fitted one of the codes were labelled. Not everything fitted the predetermined codes though, which made it necessary to add some extra codes. When the coding process was completed, it was repeated several times. Simply because it is hard to capture all the information in one go (Bryman, 2012). The process stopped when no new codes were labelled to the text, because the most important information was already covered. The same method was applied for the analysis of the documents, because through the interviews new insights were gained which made it necessary to go back to the document analysis.

The same codes were used for each interview, making for a structured approach. The codes in that way helped to search for information which might otherwise be overlooked, because interviewees sometimes use different words but essentially talk about the same. Next to that, by using the same codes, the interviews can be compared with one another. In a few interviews, codes overlapped a lot. For practical reasons the codes were then combined.

The fourth step in the data analysis was to see what important codes emerged and look at important, descriptive, information. In order to make this leap between coding and results, I added an intermediate step. I wrote a summary of the most important information which an interviewee had told about, categorised per code. This was done in my own words, closely following what interviewees had said. The goal of the summaries was to make the information compact, but also still rich enough in information. This summary has been complemented by adding quotes from the interviewees. The quotes have been written in English whereas the transcripts were in Dutch. These translations have been done in such a way as to keep as close to the original meaning as possible. The translated quotes were used in the results part itself to make the outcomes more vivid and support the text as a whole. By interrelating the information and identified codes, new insights were produced which are presented in the results part.

3.4 Validity and reliability strategies

The data collection and analysis should be done in such a way that the results are reliable and valid. In this way, the outcomes of the research can be better trusted and used. The concepts of validity and reliability are closely related.

Validity of a research relies on the accuracy and appropriateness of the research (Kumar, 2011). It can be further split up in external and internal validity. External validity refers to whether the outcomes of a research are applicable to a wider population (Gerring, 2007). Because only a small part of the population has been studied (in this case Gelderland and Noord-Brabant), its outcomes may not always apply for the rest of the population. This means that the outcomes of one case cannot be transferred to other cases one on one. Internal validity refers to the sample itself: "Are we measuring what we think we are measuring?" (Kerlinger, 1973 as cited by Kumar, 2011). In quantitative research, internal validity is a commonly used concept. Do the findings of the research give an accurate representation of the topic of study? The concept of reliability has to do with consistency and stability of a research (Kumar, 2011). Are codes for example used in the same way throughout the whole analysis? The question is whether other researchers would have come to (more or less) the same conclusions or not. The word 'policy' for instance can have multiple meanings to different people and it is good to be aware of this. Thus, checking whether you are talking about the same thing is important because otherwise the outcomes of the research may not be reliable.

In order to improve external validity, I have tried to make the results more realistic and give the reader the ability to have a sort of shared experience. Therefore I have given a rich and thick account of my interviews and included many perspectives. Also perspectives which were sometimes differing

from other findings. Including such contradictions makes the results more realistic and thus increases validity (Creswell, 2014). Lastly, by first investigating the national context, I have been able to better understand the results of the cases within the context of the Netherlands as a whole and generalise to answer the research questions. To increase the internal validity, I have applied several different methods. First I used triangulation, which means that I have multiple data sources and used multiple perspectives of people. Secondly, I have given my interviewees the chance to reflect on my findings. This means that they had the possibility to check a rough version of the report and see whether they thought that I was accurate with the information which they had provided. I have used the feedback of my interviewees in order to improve the research. This method is called member-checking (Creswell, 2014).

In order to improve reliability, Creswell (2014) suggests that qualitative researchers need to document as many procedures and steps as possible so that others could be able to follow them. To that end, I have made an extensive methods section covering all my steps throughout the research. Next to that, Creswell notes the following actions which I have applied too. First, it is important to check transcripts of interviews, to make sure that there are no large and clear mistakes. Transcribing interviews is a lot of work and mistakes are therefore easily made. Second, it is important to see whether there is a shift in the definition of the codes used in the analysis. The codes were consistently used. I have looked back upon earlier work and compared data with the codes to see if they still matched as intended.

The words validity and reliability are not always used in qualitative research, but sometimes replaced by words like credibility, transferability or dependability. For example, Tracy (2010) suggests making thick descriptions and triangulation in order to improve credibility. Whereas Creswell (2014) suggests that this should be done to improve validity. Thus, both authors talk about (more or less) the same but call it differently. For me, all these different concepts mean the same. That is why during this research, I have tried to do research in a sound manner which other people can trust. This meant that there has been constant attention for making the research comprehensible to others, both content wise as process wise.

3.5 Case selection

The criteria as introduced in 3.1 helped to make a selection for two case studies. I will explain per criterion my thoughts and considerations and present the two selected cases.

Criterion one points out that we should focus on cases which have a special focus on regional cycling. Developments in the last decade have initiated several local and regional governments to develop policies to stimulate regional cycling. However, during the preliminary research it became apparent that provinces are more focused on regional cycling than (most) municipalities are. Where municipalities seem to develop policies for the local scale and only sometimes pay attention towards the regional scale, for the provinces it is the other way around. The twelve provinces in the Netherlands are therefore identified as the most relevant actors for this research, in accordance with criterion one as described in paragraph 3.2. It however does not mean that all provincial policies solely influence regional cycling. Likewise, municipalities also try to stimulate regional cycling. But given practical reasons, I deemed it to be more efficient to look at provincial policies, since they have a high probability of being of interest to this study.

Criterion two emphasises the need for ambitious policies in place. Criterion three highlights the necessity to go through the whole Public Policy cycle, which means that there should preferably already have been effects of the policies. After preliminary desk research it was concluded that the

Dutch provinces differ considerably from one another in terms of regional cycling policies. There are provinces which lack a clear and coherent plan on how to improve cycling. This is however not necessarily a bad thing. Zeeland and Drenthe for example are the least populous provinces and already have a well-functioning network, decreasing the need to put new policies in place. Another example is Noord-Holland, which presented its regional cycling policy in 2019. Named provinces are less suitable cases, since the object of study was not (yet) there at the start of this study. There are also provinces which have policies in place, but do not show large ambitions and have allocated few resources for developing these policies. This is however in contrast with criterion two, which also makes these provinces less suitable for this research. Lastly, some provinces have very clear and ambitious goals and have worked out these visions in more practical implementation plans (uitvoeringsagenda's). This means that projects have been carried out and that there are tangible effects.

Following criterion two, the following provinces were deemed most interesting for this research: Noord-Brabant, Gelderland, Utrecht, Zuid-Holland, Limburg and Groningen. Some of these provinces have progressed further than others, meaning that some are at the beginning of the implementation phase, while others are running towards the end of their policy timespan. Following criterion three, the cases must have already had some effect. Very recently published provincial policies will be of less interest here, since it will make it harder to use the full Public Policy cycle.

After more closely examining the policies of the named provinces and taking into account criterion three as introduced in 3.1, two cases were marked as most appropriate for this research: the provinces of Noord-Brabant and Gelderland. Both cases are extreme (as described by Flyvbjerg, 2006) because they are very different from other cases. Noord-Brabant and Gelderland may be considered top notch when it comes to regional cycling policies. Both provinces have strong policies in place regarding regional cycling and have already developed multiple fast cycle routes. Ambitions for both provinces are high and the coming years will feature more fast cycle routes. Next to that, the two cases do not focus on infrastructure alone but have various projects in place which try to activate people to actually start using the bicycle. Both cases differ somewhat in varying respects. Gelderland has been working on regional cycling for a longer time than Noord-Brabant. This therefore made it worthwhile to examine two cases instead of one, as explained earlier on.

We will now continue with the results part. First, the results of the national context will be presented, after which the two cases are covered.



PART 2. RESULTS



The fast cycle route between Arnhem and Wageningen. Along the flood plains of the Nederrijn in Wageningen.



4 NATIONAL CONTEXT

In order to understand cycling policy developments, it is necessary to gain more understanding of relevant policies on a national level. This helps to gain an initial understanding and put the interviews in their context. First, the main national programmes for regional cycling are described, which gives us a first understanding of the topic. Second, this understanding is deepened by introducing the results of the interviews. Lastly, a conclusion is presented which enables to give some rough answers to the research questions. The list of analysed documents and interviewees can be found in the Appendices 11.2 and 11.3 respectively. A list of terminologies is included there as well.

4.1 Regional cycling on the national agenda

4.1.1 Met de fiets minder file

Although the Netherlands is a country where a lot of people take the bicycle, the main means of getting around still is the car. As we have seen in the introduction. It may come as no surprise that this also causes traffic jams, spiking the need to resolve these mobility issues. Increasing the already dense and well developed road network is not always a solution to this problem, which has led Dutch governments to look for alternatives. Regional cycling was at the beginning of the century increasingly seen as one of these alternative solutions, which would enable people to leave the car and take the bicycle instead. A coherent regional network would enable cyclists to cycle further and improve cycling's attractiveness. Coherent means that a route is easily recognisable by cyclists, because it has the same road surface, signs and lighting along the whole route (E1). While the local bicycle network was already quite well developed in the Netherlands, the regional network was not, which thus showed large potential.

During the period of 2006-2009, many initiatives were tested whether these would be able to help decrease traffic jams on roads (MuConsult, 2007). This was done during the FileProof programme of the then Ministry of Traffic and Water management. There were dozens of projects, largely focussed on ways to improve the flow of cars on highways. Next to that, there were also experiments with other modes of transport like cycling. This resulted in the project 'Met de fiets minder file', which literally translates into 'with the bicycle less traffic jams'. 'Met de fiets minder file' was a cooperation between local and regional governments, together with the national government and the Fietzersbond (the national cyclists union). It must be seen as a pilot project, where new experiences were gained which helped policymakers to understand what was needed in order to stimulate cycling on a regional scale. The idea of 'Met de fiets minder file' was to stimulate cycling along five (car) congested routes. More specifically, the focus was on commuter cycling up until 15 kilometres. This was deemed a reasonable distance to cover with the bicycle. In order to stimulate cycling on the five selected routes, the bicycle infrastructure needed to be improved (MuConsult, 2007). The routes were all located in the Randstad, except for the Apeldoorn – Deventer route. Improving the infrastructure meant that the route would become more bicycle friendly: less stops, better road surface and increased safety. This would make the bicycle more attractive, thus relieving pressure on the road network (MuConsult, 2007; Fietsfilevrij, 2010).

4.1.2 Fiets filevrij

The programme FileProof, of which 'Met de fiets minder file' was part of, changed in 2008 to become 'Beter Benutten', literally meaning 'Making better use of'. During this new programme, there was yet again quite a lot of emphasis on cycling. Cycling contributed to about a third of the Beter Benutten



programme's result in the amount of reduced cars on the road (Beter Benutten, 2018). Fiets filevrij built on experiences of the previous programme and functioned as a platform for policymakers and was quite process oriented. The programme's main goal was to *"realise regional cycling routes, through the improvement of current routes and active communication about the routes"* (Fiets filevrij, 2010 p.2). The five routes in the previous project were used again, since none of the cycle routes had been fully realised yet. In total about 80 million euros was spent by all governments combined on the fast cycle routes (Fiets filevrij, n.d.). Throughout the years, Fiets filevrij developed further and the goal became to create a coherent network of fast cycle routes in the Netherlands (Fiets filevrij, 2010). This is something which the Fietzersbond had strongly advocated for. Next to the infrastructure, multiple incentive programmes were set up. The idea was to actively stimulate people to take the bicycle, by rewarding them. These kind of programmes were flanked by communication strategies and try-outs for electric bicycles, to give people the last push to take the bicycle.

The main issue in Fiets filevrij was the necessary cooperation between the different governmental agencies, responsible for the construction and maintenance of fast cycle routes. Municipalities started to work more closely together with one another and with their respective provinces, as regional bicycle routes along provincial roads are developed and maintained by provinces. To make matters more complex, Rijkswaterstaat and the Water Boards in the Netherlands are also important owners of land and infrastructure. There are (potential) fast cycle paths along rivers, canals and highways which these agencies manage. Rijkswaterstaat alone owns about 500 kilometres of bicycle paths and manages 1500 kilometres together with others (Fietzersbond, 2016).

During Fiets filevrij, ways were sought in order to prove sound investments in bicycle infrastructure. Therefore, during the programme a start was made with developing cost benefit analysis. The benefits of cycling include healthier people, less pollution and less costs and were taken into account. This development helped to increase legitimacy of investments in cycling in general and regional cycling in particular. It also created a strong story in order to 'sell' the bicycle story to relevant policymakers and governmental actors (Fiets filevrij, 2010). The experiences which were gained during the Fiets filevrij programme resulted in a method (Fiets filevrij, 2010). The first step is to explore the needs and possibilities in an area to realise a fast cycle route. The second step involves making a sketch design, with the involved municipalities. The third step is aimed at signing an agreement with relevant actors and thereby creating commitment by policymakers and government officials. This is a go/no-go moment. Fourth, the final route will be determined. This is done in a workgroup consisting of all relevant actors. Fifth, after the realisation plan has been drawn up, an administrative agreement needs to be made in order to allocate funds and have a binding arrangement. The sixth step involves the implementation of the plan. The last step is the opening of the new fast cycle route.

Both FileProof and Beter Benutten show that the need for stimulating cycling originated from car traffic problems. We can however also see that through the years, the bicycle became a more important policy domain of its own. The funding for the Fiets filevrij programme was discontinued from 2013 onwards. This has to do with the fact that there was (and still is) no structural funding for (regional) cycling from the national government. Cycling was found to be a topic for lower level governments and not a field of interest to the national government, as we will see in more detail through the interview results. When no new subsidies became available, Fiets filevrij came to a halt. The bicycle returned on the political agenda two years later in the form of the Tour de Force.

4.1.3 Tour de Force regional routes

Fiets filevrij can be seen as an important stepping stone towards the current Tour de Force programme, where a more institutionalised collaboration and exchange of ideas has been created. It was founded in 2015. The Tour de Force its main goal is to achieve a growth of 20% in the amount



of bicycle kilometres in the period 2017-2027 (Tour de Force, 2016b). It focusses on a broad spectrum, but we only focus on the third goal of the Tour de Force, being the 'Quality impulse for regional cycling routes'. The participants of this goal are policymakers and project leaders from municipalities, provinces, the two transport authorities of Rotterdam-The Hague and Amsterdam, the ministry, Rijkswaterstaat, IPO (Association of Provinces of the Netherlands), Fietsersbond and ANWB (Tour de Force, 2017). The group is further accompanied by researchers from various institutions like the Radboud University Nijmegen, TU Eindhoven and the Breda University of applied sciences. The group meets at least five times a year in order to share experiences and create a common agenda. It did however not start with a blank sheet, since many group members had been part of the previous programmes as well (EE1). So, although the names of the programmes and platforms has changed over the years, the representatives within the programmes have changed much less. Tasks are distributed amongst the group members, since there is no dedicated staff for the programme (Tour de Force, 2017). Noteworthy is that provinces seem to be more involved in the Tour de Force than in previous programmes, due to many provinces participating. Utrecht, Groningen, Noord- and Zuid-Holland, Gelderland, Brabant and Limburg seem to be well involved (EE1, EE2, EE3). The other provinces give lower priority and are less often present, which mostly runs parallel to their policy ambitions too.

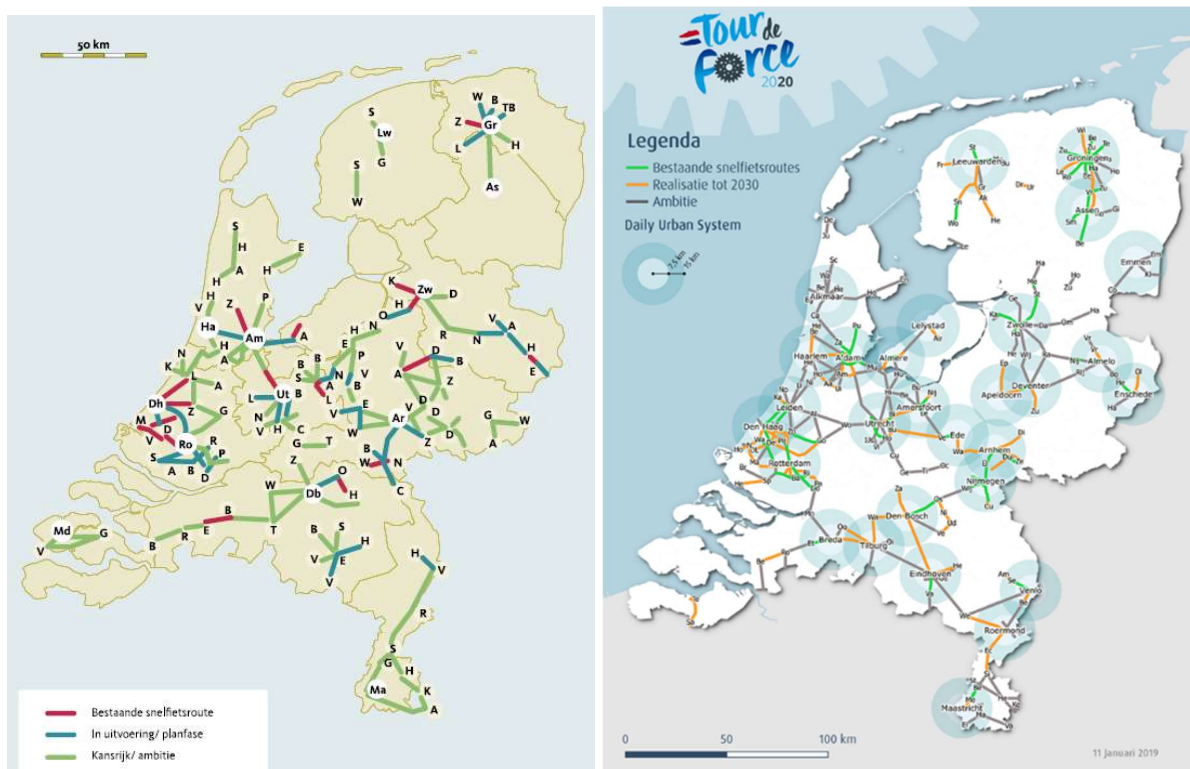


Figure 11 and 12. Left shows the (envisioned) regional bicycle network in the Netherlands in 2013. The right image shows this for 2019. Multiple cities and provinces have made progress in creating or proposing new fast cycle routes.

The speed of realisation and quality of regional cycling routes does not always meet political ambitions (2016a). The most important conclusions are that there is large support for regional cycling but that there needs to be better cooperation, coordination and funding. The provinces have a large role to play and seem to be willing to be more involved in regional cycling and invest in it (Tour de Force, 2019b). The bicycle network for distances up to 15 kilometres should be realised in the near future, since most plans have already been made in the previous years and now is the time "to push through" (Tour de Force, 2019b p.1) in order to make a scale jump and stimulate regional cycling

further (Tour de Force, 2019a). Figure 11 shows the current network of fast cycle routes in the Netherlands.

We have now got a general understanding of the relevant policies which have played on the national level. As we have seen, the word 'policy' implies a broad spectrum which is used to obtain certain goals. Therefore there have been infrastructure measures as well as incentive programmes and communication strategies. Below a timeline of the described national policies.



Figure 10. Schematic chronological overview of important national policy programmes focussed on regional cycling.

4.2 The regional cycling policy process explained

4.2.1 Agenda setting

Regional cycling has come on the agenda by helping to reduce car congestion, as we have seen in the previous sub-chapter. Policymakers have been very successful in using the right words in order to convince not only bicycle minded people, but also to be successful towards more car oriented audience. 'Bicycle highway' and later on 'fast cycle route' are words which triggered people "I have heard people saying, that the attention of ministers was caught because of this [bicycle highway] term. Such a term works" (E4)¹. But who exactly has the agenda setting role for regional cycling? This seems to vary from case to case and depend on specific conditions. Citizens, companies and governments, everyone in essence could have an initiating role (E2). There is thus not one answer to this question, but some more general findings can be presented nonetheless.

On the national level, the interviewees have all underlined that funding from the national government has been important in getting regional cycling off the ground and putting it on the agenda. First, the pilot projects during 'Met de fiets minder file' were funded by the national government and those projects would probably not have been realised otherwise (E1). These projects helped gain experiences as the potential outcomes were not clear from the start. During 'Fiets filevrij', new national funding came available. According to Wim Bot from the Fietzersbond, this new funding is due to their own lobbying efforts: "We have been able to get this [regional cycling] on the agenda of the Tweede Kamer and keep it there" (E1). This role of the Fietzersbond is emphasized by other interviewees multiple times too (E2, E3, G1). More generally speaking, the Fietzersbond has often been involved in presenting new regional cycling ideas. The Fietzersbond did this on their own behalf (E1), or sometimes for other actors like the ministry (E3). Yearly, about 500-600 million euros are spent on cycling in the Netherlands (E1). The aim of the Fietzersbond is gather more funding for cycling, since regional cycling requires extra financial resources (E1). Next to that, political parties and individual members of parliament have written plans and amendments themselves because they found cycling important (E1, E3). Few political parties however place cycling consistently high on the agenda. This is also the reason why interest for cycling on the national level in general varies,

¹ In the text I refer to the interviews by using interview codes, as provided in Appendix 11.3.1.

because it is quite person dependant. So when these people leave parliament, so does their agenda setting role (E3).

A lot of effort is therefore put into keeping regional cycling on the agenda, in order to gather funding (E1). This highlights a problem shared by all interviewees on the national level: a more structured way of funding is lacking. Whereas roads have got constant funding, for the bicycle this is less so (G1). One can thus conclude that political changes have a big influence on attention for cycling policies. Especially for regional cycling this seems problematic. Regional cycling infrastructure requires higher quality infrastructure (i.e. wider paths, tunnels, bridges), meaning higher costs. This issue seems fairly contradictory to the general image that The Netherlands is the number one cycling nation. The Netherlands may have the highest modal share of the bicycle in the world, there are however relatively few resources available (E1, G1). When confronted with this, one interviewee says the following: *"Cycling is always cheaper and self-evident. That is why no one cares so much to invest in it." [...] actually you would want to make arrangements for the long-term about funding"* (E2). This lack of structured funding from the national government not only has implications for the agenda setting phase, but especially for the decision making phase when funding distribution ratios need to be determined, as we will see later on.

The development of regional cycling has met with the effects of decentralisations in the past. The idea during the Rutte I and II administration was that the national government should not interfere much with lower level governments. *"When it is the responsibility of municipalities and provinces, then it is not our responsibility"* (E3) says an interviewee from the ministry, referring to this period. The national government focussed itself on the national infrastructure, while other governments should take up the regional and local level. This attitude of the national government has changed in recent years because in practice this idea did not always work out. Many mobility problems play on the regional level (E2, E5, G1). The national government subsequently became involved more, partially because of the Rutte III government and the state secretary which place the bicycle in general higher on the agenda (E3, E5). It is all the more interesting to see that Rijkswaterstaat, the national executing agency for highways and water infrastructure, is not well equipped to do much in the field of regional cycling. Rijkswaterstaat's current infrastructure, like canals, seems to offer a large potential for regional cycling. Alignments along canals are direct and most of the times there is enough space available for fast cycle routes. Nonetheless, Rijkswaterstaat is not able and allowed to initiate (large) projects, it relies on regional partners to propose ideas for regional cycling. And *"when the regional partners do nothing, we do nothing too"* (E5). This thus limits the development of regional cycling routes. The way the infrastructure funding system is organised keeps this in place, as the national government is not allowed to fund smaller infrastructure and instead focusses on larger projects of 112,5 million euros and more (E3).

Most important and pivotal development which has put regional cycling higher on the agenda, is the increased interest of provinces in regional cycling. Provinces are involved in regional cycling because they want to improve regional mobility (E2). The bicycle is perceived as a means to realise this goal, the *"bicycle is not a goal in itself"* (E2). The increased involvement of provinces is most notable since the start of the Tour de Force, since many policymakers from the provinces are involved in the programme, whereas before this was less so. Provinces have got large ambitions nowadays and put cycling on the agenda (E2, E3). The provinces are able to look at a larger scale, beyond municipal borders and bring parties together. Municipalities may put regional cycling on the agenda, but would not easily take individual initiative for a regional cycling route on their own (E2). Organising the process seems too hard for a municipality on its own.

Lastly, setting up national or provincial programmes has an important agenda setting role. When municipalities know that there is funding available, this opens up new possibilities and spurs actions (G1). External funding is thus an agenda setting tool on its own (E1, G1). One interviewee notes that

the national government structurally underestimates the impact which its funding allocation has (G1). By not engaging in cycling, it limits the possibilities of municipalities and provinces, since they rely heavily on funding from the national government (G1).

4.2.2 Policy formulation/Decision making

During a policy formulation phase, actors define what problems exist and what needs to be done. But a decade ago some cycling problems were not identified at all: *"A good example which is often referred to is Rotterdam Delft. At the time it was part of two city regions, one province and two municipalities. And they all did something within their own territory. But the route as a whole, max 15 km, was out of sight"* (E3). Municipalities within their own boundaries may not experience a certain problem. However, when the experiences of different municipalities are combined, the need to act on the above local scale may arise. Improved cooperation between actors has been the reason for this increased awareness (E2, E3). How this cooperation is exactly coordinated and managed differs a lot, depending on ambitions of both local and provincial governments (E1, E2, E3). So called 'policy entrepreneurs' seem to be important to not only get regional cycling on the agenda, but also turn ideas into more concrete measures (E4). These 'policy entrepreneurs' are people who are committed to an idea and put a lot of effort in it. The interviewee from Rijkswaterstaat (E5) is a good example. He has made people within the organisation more aware of the bicycle and increased the role of Rijkswaterstaat in cycling. This was not done because it was obligatory, but because current ways of working were unstructured which meant that there was large unused potential in his view. This unused potential was identified by the interviewee and this sparked actions. In essence it means that cyclists' needs are tried to be more actively involved in processes where Rijkswaterstaat is going to work, or Rijkswaterstaat tries to cooperate better when ideas are proposed which interact with their own infrastructure (E5). This does not necessarily mean that this always goes well, as we will see in the two case studies. It seems hard to change a large organisation which mandate does not include cycling.

After a policy formulation, decisions need to be made. Decisions are ultimately made by politicians. Aldermen or provincial executives, and sometimes the minister or state secretary, therefore need to be convinced. Policymakers are very important in influencing policy formulations and decisions. Policymakers from governments interact and feed politicians with information about the development of regional cycling. The cooperation between both policymaker and politician is therefore found to be of great influence (E2, G1). Information can be framed and brought in a way which fits a politician best: *"[...] important in decision making, is to be able to read your politician"* (E2). The reason for this is that cycling may not directly appeal to some politicians, who are more car oriented for example. However, when (regional) cycling contributes to reduced car congestion, these politicians seem to be willing to invest in cycling. The issue is in that case framed in a different way (E2). Through statistical models it was calculated during Fiets filevrij that because of certain bicycle measures, there could be a 5% reduction in 'vehicle hours lost' for example (E4). These kind of percentages then sprung up everywhere, even in the national parliament. These 'lost-vehicle-hours' calculations were thus not done for the bicycle, but to convince car minded policymakers and politicians. This has been quite a successful strategy (E4). It has for example helped the Rijn-Waal fast cycle route in gathering funding from the national government, because there was a direct link with the car (E3, E5).

Another important factor which has been identified are cost-benefit analysis. They may be considered as a political instrument, rather than a fact based tool (E4). For a cost-benefit analysis many assumptions need to be made. This is due to the fact that the positive effects of cycling are important in the model, but also harder to measure. How much is a bicycle trip to one's work worth, in terms

of improved well-being? Further on, under 'evaluation', I will elaborate on this. Decision makers and policymakers want to know what the potentials of a specific policy or route are in order to make sound decisions. Traffic models are used to inform them and help in their considerations. For the car there are many well developed models, but this is much less so for the bicycle (EE3). In recent years different models have been made or adapted to create better insight in cycling, mostly by provinces, transport authorities or the ministry. But these models remain substandard. Also the interaction with policymaking is low. For cycling within urban areas the models seem to be fairly okay, but modelling longer routes which cross the countryside is still problematic and not trustworthy enough (EE3). This is especially problematic for regional cycling. The reason for this is that there are not enough continuous measuring points in order to calibrate the models. The models therefore also only give relative predictions. Models do however help in starting conversations about potentials of new routes and they are increasingly used for that purpose (EE3). It is suggested by one interviewee (G1) that making decisions around cycling relies, and should rely, for a part on gut feeling. There are many factors which influence cycling and it is terribly complex to take it all into account. Trying to bring all these factors together makes it complicated to make decisions, while the topic itself is very practical (G1).

While measures to improve regional cycling often focus on infrastructure, it has been a real eye-opener to see that this is not enough on its own. Only about one or two percent of people on a newly opened regional cycling route used the car before and switched modes (E3, E5). When you want to have a large impact, then it would cost a lot of money if you would do it via infrastructure alone. Therefore *"[...] none asphalt arrangements are increasing"* (E3). The decision making process thus not only covers infrastructure but also incentive programmes. The most important actors in this respect are the ministry and provinces. This approach originates on a higher scale level and is implemented in a specific region (E3). Municipalities seem to have limited role in this.

Lastly, it must be noted that regional cycling is a somewhat harmless topic, which makes it accepted more easily (E4). No politician gets really upset about it, whereas decreasing car space within the city can meet with great resistance. Regional cycling is therefore somewhat *"conflict evading"* (E4) which of course positively influences the decision making process in favour of the bicycle. This is shifting however, due to increased speeds of bicyclists. This people living close to proposed fast cycle routes less in favour of such routes through their neighbourhood (G1). The end result of the decision making process for a regional cycling route is an administrative agreement between all different governmental parties. This includes the municipalities, In this document, binding agreements are made regarding who will be responsible for realising which section. It is a crucial step before going over to the implementation phase.

4.2.3 Implementation

The interviewees on the national level are mostly not involved in implementing policies 'on the ground'. This is something which municipalities and to some extent provinces are responsible for. Given their expertise and overview, the interviewees are however able to give insight in the implementation phase. Implementing means that ideas formed in previous phases need to be turned into reality. Ideas about what a regional cycling route is however seem to vary (E4, EE2), which makes implementation difficult. Because, how will this fast cycle route exactly look like? The following quote is exemplary in this respect: *"What struck me is the continued debate about standards for fast cycle routes. Almost every session I joined was about these standards"* (E4). The reason for this debate seems to lie in the fact that there is no blueprint design for a regional cycling. Local physical conditions as well as local support for a regional cycling route have a lot of influence on the final outcomes. And even though a decision has been made, this does not mean that it is realistic.



Oftentimes, plans have been drawn up but funding has not been fully organised, hampering implementation (E1).

The most important actor in implementing regional cycling policies undoubtedly are the municipalities. Because, "*Without municipalities you can do nothing*" (E2). In the end, regional bicycle infrastructure will be built within municipal boundaries and municipalities will be responsible for maintaining large parts of this infrastructure. However, political support in a municipality can change, which makes the implementation phase more difficult and longer (G1).

Last but not least, incentive programmes to take the bicycle more frequently are mostly implemented by provinces or the ministry (E3, E4). This is one of the only direct fields where provinces can influence bicycle policy implementation directly themselves (E4). Through all sorts of different approaches, people are stimulated to take the bicycle more often, primarily for going to work. While this may sound like a very promising method, it is hard to activate employers to embrace it (G1). Nevertheless, there are some good examples available and more and more commercial companies want to invest and take over programmes which governments have set up (E3).

All in all, the described difficulties have raised the question who should get all parties together and have oversight. The provinces are by some (E2, G1) identified as the ideal actor to do this. Some also refer to the former city regions, which had a better size to manage such topics (E1, E4, G1). They form a governmental layer between municipalities and provinces, but were abolished in 2015 as such. Provinces try to steer through funding. By accepting funding, the municipalities also accept certain conditions like realisation time and quality (G1). It has also helped to overcome problems with regard to smaller municipalities. These municipalities have often limited funding possibilities and less interest, while larger municipalities have higher ambitions with regard to regional cycling and more funding capabilities (G1, EE1).

4.2.4 Evaluation

Regional cycling remains much less understood than public transport or the car (E3, E5). The bicycle is beloved because of its flexibility, but therefore also harder to keep track of. Taking the bicycle thus stays under the radar. Determining the exact effects of new infrastructure therefore seems difficult (E1, E3, G1). Are the people using new regional cycle routes also new cyclists? Or did they use other routes before and are there hardly any new users? On the other hand "*[...] bicycle incentive programmes are easier to measure*" (E3) and thus provide with clearer data as to how many people have been using the bicycle on regional distances. In order to improve the decision making, it is important to improve information on which politicians and policymakers base their decisions. Thus, the information which feeds traffic models and cost-benefit analysis needs to be improved (E2).

Evaluation is primarily a task of the responsible governments, since they have developed the policies. It however stays difficult to evaluate the effects of policies. Current evaluations are mostly project evaluations (E5). Questions like 'has the project gone to plan?' are answered, while one would want to reflect on the effects the policies have had (E5). Next to that, most notable is the increased effort to promote regional cycling research. A partnership with the Breda university of applied sciences (E2), several PhD's at the technical university of Eindhoven (E5) and an EU research project (E4) are clear examples of this. The ministry of Infrastructure and Water focusses a lot on evaluation (E3) and data exchange is being improved too (E5). Municipalities mostly find evaluations much less important and sometimes see it as interference by the national government (E3). Provinces are somewhat in between, depending on their ambitions. Provinces with higher ambitions and realisations are more keen on evaluations. In the case results chapter we will go more in-depth on



this. There are also limits to the extent in which evaluations of regional cycling can be improved. It will probably never reach the levels of other modes of travel, like the car or public transport. Simply because regional cycling costs much less than building highways, which thus also has an effect on the budget for evaluations and its comprehensiveness. Differing views exist on the needs for policy evaluation. Some interviewees note that the ministry tries to make evaluations as if it were evaluating other infrastructure like highways (E4, G1). Regional cycling is however something very different. On the whole, one thing is clear, evaluation in regional cycling has improved and still is in major development.

4.3 Concluding

We have seen that cycling in the Netherlands has gotten a more prominent position and has shifted from mainly local oriented towards a combination of both local and regional scale. This makes cooperation between relevant actors very important. Regional cycling has developed from being a bi-product of car traffic congestion towards a policy domain on its own. The definition of what regional cycling actually is, stays somewhat ambiguous though. 15 kilometres is often noted as a distance which cyclists are well able to cover and multiple programmes have focussed on this distance. However, now that regional cycling routes have become more widespread, these definitions have become more flexible and adjustable to case specific conditions. Many regional cycling routes are much shorter than 15 kilometres, especially when considering that cyclists do not cycle the whole route. Also the aspect of speed is important and gets increasing attention. Let us thus conclude that regional cycling can be defined as connecting local bicycle networks, aimed at distances of about 15 kilometres and focussed on raising cycling comfort and speed. Next to that, provincial involvement in regional cycling has been growing very strongly. All these developments combined have given regional cycling a huge boost. Cooperation seems to be key in the development of regional cycling, as the analysed documents have shown. How this cooperation comes about still stays somewhat unclear.

The results show that regional cycling is a fairly decentralised policy domain. The national government only interferes to a limited extent. The national government, on instigation from the parliament, has incidentally made funds available to realise certain fast cycle routes. This seems to have been crucial in the development of regional cycling as a whole, because municipalities lack the resources to fund routes on their own. Municipalities are the most important actor involved in policymaking for cycling in the Netherlands, but in the need of an actor to help facilitate the process of working together with other municipalities. Provinces make increasing efforts to get involved in cycling policymaking and fill in this gap. This however differs from province to province. The role of former city regions, as an intermitting and facilitating layer between municipalities and provinces, seems to have been one of the reasons for success in Gelderland. The main roles of the different actors are presented in figure 13.



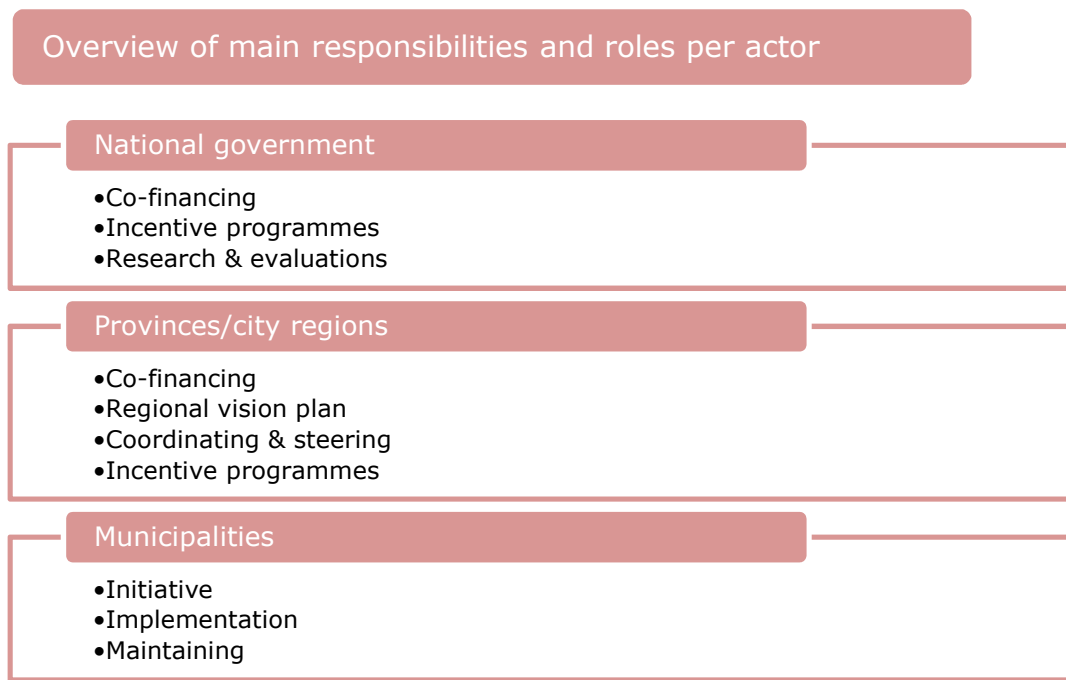


Figure 13. Overview of actors and their main roles.

Lastly, whilst doing the interviews, it became apparent that the development of regional cycling policy itself can hardly be separated from how it is practised. Every time the question was raised how the process is organised, historical developments were described which seemed to be important for today's ways of working. Both elements are thus needed to further understand the topic and can be distinguished as follows: 1. The development of regional cycling policymaking *itself* on a national level (how the policy domain has come on the table and has attracted attention and developed itself). 2. How regional cycling policymaking is *practiced* on the national level (how ideas are exchanged and measures are taken). With all this information in mind, we now turn towards the first case study.

5 GELDERLAND

In the previous chapter we have been able to gather a general idea of how regional cycling is developed and organised in the Netherlands. In this section, we will take a closer look at the first case: Gelderland. First, some general information about the province of Gelderland is presented. After this, an overview of the main developments regarding regional cycling policies will be discussed. Next, we will go more in-depth to uncover how regional cycling is exactly developed in Gelderland. We end with a short conclusion for the chapter as a whole. The list of interviewees with their corresponding codes can be found in Appendix 11.3.

5.1 General information

Gelderland is the largest province in the Netherlands in terms of surface area, and the fourth largest in terms of inhabitants. Its population is for a large part concentrated in the Arnhem and Nijmegen region, although there are many other cities and towns spread across the province. Another important urbanised area is the so called 'Stedendriehoek' between Apeldoorn, Zutphen and Deventer (located in the province Overijssel). Gelderland consists of many different sub-regions, each with its own (landscape) characteristics.

Gelderland

Capital	Arnhem
Total inhabitants	2,06 million
Land cover	5136 km ²
Inhabitants per km²	415
Total number of municipalities	51
Most populous urban area	Arnhem – Nijmegen region (consisting of 18 municipalities)
Length of total bicycle network	5000 km (Fietzersbond, 2013b)
Fast cycle routes	92 km realised and 52 km planned (Regio Arnhem Nijmegen, 2018)

Information taken from Provincie Gelderland (2018b) unless stated otherwise.



Figure 14. Location of the province of Gelderland within the Netherlands.

5.2 Overview

The regional cycling policies in Gelderland have gradually been developed from 2006 onwards. This started when the municipality of Nijmegen wanted to realise a bicycle path with fewer stops, towards the town of Wijchen (G3)². This met with many difficulties and the project was perceived by the Nijmegen city council to be too much of a prestige project (G3). The development of the bicycle path was subsequently halted and finished for about half. The time was not yet ripe for higher quality bicycle paths (G3). Nevertheless, the route served as a pilot project to gather experience for the municipalities and the Stadsregio Arnhem Nijmegen, which was also involved (G3). The Stadsregio Arnhem Nijmegen (or simply city region) was a governmental layer until 2015. It was set up in order to increase collaboration between the 18 municipalities which it represented (G1). The city region worked on many domains, including mobility. It had no own infrastructure but did have its own budget and staff.

The next fast cycle route in Gelderland was developed with more success. The first concrete ideas for the so called 'Rijnwaalpad', linking Arnhem and Nijmegen, stem from 2008 when the project got funding from the national government (G3; Fiets filevrij, n.d.). The Rijnwaalpad route was completed in 2015 and is the first fast cycle route in the Netherlands (G1). It links the cities of Nijmegen and Arnhem and towns along the route. Later on in 2010, Nijmegen – Beuningen and Arnhem – Zevenaar were awarded co-funding by Fiets filevrij (G3). The Fiets filevrij programme was strongly linked with decreasing car congestion, as described earlier on in chapter four. Roads around Nijmegen and Arnhem were often congested, which was a necessary condition in order to obtain the programme's funding (G3). After the Rijnwaalpad started, many other fast cycle routes were developed with the experiences gained (Provincie Gelderland, 2017). The projects spurred the ideas of creating a network for regional cycling in the Arnhem Nijmegen region.

The city region Arnhem Nijmegen has played an important role in regional cycling's development in Gelderland. In 2010 it published their vision document for the bicycle (see also the timeline on the next page). The city region positioned itself to be involved in cycling as well, next to the car and public transport (G1). The reason for getting involved in cycling was that car congestion was becoming an increasing problem (Stadsregio Arnhem Nijmegen, 2010). As a result, the city region aimed to get people out of their car and on the bicycle. Since many car drivers are commuters, focus lay on commuting by bicycle. While the basis of the bicycle network was good, the regional links were missing (Stadsregio Arnhem Nijmegen, 2010). This is why the city region specifically chose for regional cycling, as this had the highest potential (G1). In total 14, fast cycle routes were studied, with rough estimations in terms of costs and potential (Stadsregio Arnhem Nijmegen, 2010). This study was the responsibility of the city region (G1). To date, many of the identified routes have been realised or will be realised in the near future. See also figure 16 and Appendix 11.5 for a list of fast cycle routes in Gelderland.

When the city regions in the Netherlands were abolished in 2015, the province took over the Stadsregio Arnhem Nijmegen's responsibilities (G1, G2). Just like the Stadsregio, the province has no legal task to work on the bicycle (Royal HaskoningDHV, 2017). Gelderland's role is thus because of political commitment (G2). Many fast cycle routes which the province has worked on, or is still working on, were developed during the time of the city region (G2). However, the province needed to create its own policy vision. A more comprehensive policy was therefore established in 2018, called the 'Hoofd fietsnet Gelderland' (main bicycle network Gelderland) (Provincie Gelderland, 2019). This policy has specific focus on regional connections which are important for mobility in the province (Royal HaskoningDHV, 2017). One of the aims of the policy is to increase cycling's modal share from

² In the text I refer to the interviews by using interview codes, as provided in Appendix 11.3.2.



28% to 35% for all transportation movements by the year 2030 (Provincie Gelderland, 2018a). The policy of the province is aimed at supporting and facilitating projects by giving financial support to municipalities (Provincie Gelderland, 2017). The province emphasizes working together with other actors since most infrastructure is owned (or will be) by municipalities (Royal HaskoningDHV, 2017). Fast cycle routes are defined by the province as bicycle paths which cross municipal borders, or even provincial borders (Provincie Gelderland, 2016). They should facilitate speedy cycling and substantial amounts of cyclists, at least 2000 cyclists per day (both directions combined) at the busiest point and 1000 cyclists for 70% of the route (Provincie Gelderland, 2017). A route is somewhere between 10 to 25 kilometres long (Provincie Gelderland, 2017). The fast cycle routes themselves were first stated to need a minimum width of 3,5 metres, whilst 4 or 4,5 metres is currently the norm (G3). This width is needed to accommodate increased speed differences between cyclists.

Since 2015, municipalities have increasingly worked together under the newly formed 'Regio Arnhem Nijmegen' (Regio AN). It is the continuation of the former city region for the 18 municipalities around Arnhem and Nijmegen. The Regio AN is however much smaller in terms of staff and financial resources (G3). At the end of 2018, Regio AN presented an ambition document regarding bicycling, with special focus on the realisation of fast cycle routes (Regio Arnhem Nijmegen, 2018). The document states a clear goal; bicycle must be the most used modality in 2025 for transportation up until 10 kilometre (Regio Arnhem Nijmegen, 2018). It is published, but not yet approved by the relevant municipal councils. A timeline of the described policies is presented below.



Figure 15. Chronological overview of the most important regional cycling policies for Gelderland.

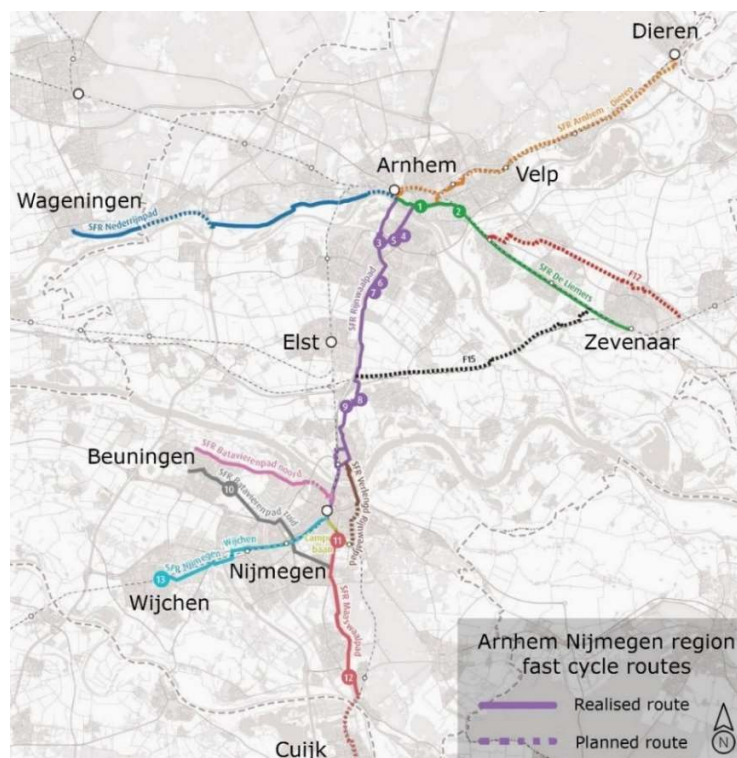


Figure 16. The fast cycle network in the Arnhem Nijmegen region.

5.3 A closer look into the policymaking process

The following structure is derived from the Public Policy cycle and walks through the different steps of creating policies. Both policy programmes as well as projects are analysed.

5.3.1 Agenda setting

The first developments in the region Arnhem Nijmegen were initiated by the municipality of Nijmegen in 2002 (G3). The city council got a left party coalition, which was quite a novelty in the Netherlands at the time (G3; NRC, 2014). The council had an increased interest in cycling and the city council was willing to step up funding. The local network was subsequently improved a lot during the years thereafter, which in turn positively influenced the council to further increase the budget for the bicycle (G3). Because the local network was improved, it let the municipality look beyond its borders and see for new opportunities to connect with neighbouring towns (G3).

As described in the previous sub-chapter, the city region Arnhem Nijmegen was involved in regional cycling projects. This was however not done intentionally. The city region wanted to bring down its investments in cycling, because it was perceived to be a purely local activity, which the municipalities were responsible for (G1). However, external funding from the national government put regional cycling on the table and spurred actors like the city region to get involved in regional cycling. Both the executive of the city region and the province were enthusiastic for the idea of the Rijnwaalpad between Arnhem and Nijmegen. The executives made a commitment to put in money and a project was born. *"All of a sudden there was 13 million euro funding available"* (G1). External funding thus acted as an agenda setting element in this case. The next two projects, Nijmegen – Beuningen and Arnhem – Zevenaar were helped through national funding as well (G3). The Rijnwaalpad generated a lot of attention and experiences, which made it easier for other projects to be accepted as well (G2). Because of the experiences gained during the first projects, the city region was able to develop a vision document in 2010, which describes the potential routes in the region. In the years to come this vision acted as a guideline and an agenda setting tool (G1).

In 2015, the province took over the bicycle responsibilities of the city region, being the fast cycle routes (G1, G2). The province continued to work on that what the city region has set up. With its 'Hoofd fietsnet', established in 2018, potential new regional routes were marked in maps covering the whole province (Royal HaskoningDHV, 2017). This is important, since network maps have proved to be a good agenda setting element at the city region (G1). The main reason for regional cycling to come on the table has stayed the same throughout the years. It mainly has to do with car congestion. The goal is to keep the province accessible and the bicycle is a means and not a goal in itself (G2). Next to that, the province increasingly wants to connect cycling with other domains than congestion alone though. The bicycle is used to improve health and sustainability, especially in the light of the future Omgevingswet (Environment law) in the Netherlands (G2). It is too early to tell how this will work out in practice though.

The network of fast cycle routes has not only been developed in the Arnhem Nijmegen region. Further away, around the cities of Apeldoorn, Deventer and Zutphen, a regional network of bicycle paths is strived after too. These three cities form the so called 'Stedendriehoek', referring to the triangle shape of the area when looking on the map. The Stedendriehoek is a collaboration of six municipalities. It has its own bicycle policy advisor, who coordinates and guides bicycle projects for the involved municipalities (G4). The aim is to create a regional bicycle network (Regio Stedendriehoek, 2012). This is perceived too difficult for the individual municipalities alone and the Stedendriehoek can manage this better than the province (G4). One of the reasons might be that the province seems to fear to impact the autonomy of municipalities (G4). A first attempt to give shape to the regional network in the Stedendriehoek was by creating a fast cycle route between

Apeldoorn and Deventer. This was done during the national programmes 'Met de fiets minder file' and Fiets filevrij. The realised route was not a fast cycle route by in the opinion of the Fietzersbond though (G4). The Fietzersbond addressed the issues in 2013 and 2014. As a result, the Stedendriehoek took the initiative to make improvements, which were subsequently realised in 2015 (G4). The Stedendriehoek has in the years thereafter initiated other routes in the area. Fast cycle routes between Deventer and Zutphen and Apeldoorn – Epe are currently being studied amongst others (G4). The province of Gelderland does have a role in the process, but as a partner rather than an agenda setting actor.

5.3.2 Policy formulation/decision making

Regional cycling was a new policy domain and municipalities and the city region in the beginning thus met with many questions. 'How should a bicycle path for cycling look like, how to approach such a project?' For the Nijmegen to Wijchen project, the Nijmegen municipality was the driving force (G3). It could not demand anything from Wijchen though, since that is a municipality in its own right. Cooperation between actors was thus a key element. The developments of the projects around Nijmegen cannot be seen apart from the city's policy. In 2011, Nijmegen published a new policy note for mobility, where a more integrated approach was sought after of the local network within the regional network. This was a crucial step, because it enabled the policymakers in Nijmegen to better argue for their proposed decisions which were not only directed at the local network but also at the regional (G3). This more integrated approach which the policymakers in Nijmegen were able to work on is one of the main reasons why the developments around Nijmegen have gone faster than around Arnhem, where relevant municipal policies were lacking (G3).

Since problems between municipalities often arise at municipal borders, commitment from the municipalities is essential (G1). During the time of the city region, this actor had an important role to facilitate and coordinate the cooperation process among municipalities. Even more, the city region was not a democratic entity itself but an intermediary, which meant that the city region existed by the grace of cooperation of municipalities. The city region had a vision on regional cycling, but it had no formal rights since municipalities were the responsible authorities (G1). The city region made sure that a coherent route was created (G1). The decision for the first fast cycle route was based on "*gut feeling*" (G1) and "*common sense*" (G3). The same is true for the routes which followed in the Arnhem Nijmegen region (G1, G2). For each of the fast cycle routes, there is a working group and a steering group. The steering group includes the decision makers, being the executives from the municipalities and the city region (G1). The working groups discussed the available options for a route. A working group was made up of representatives from the different municipalities, the city region, province and Fietzersbond. The goal was to develop a coherent problem definition for a whole group and develop plans accordingly (G1). This shared ownership is identified as a key element for a good process. Later on, problems may arise and the partners need one another to overcome these difficulties (G1). For example, what to do when there are cost overruns or the scope of the project is altered? Creating shared ownership decreases the effects which these issues have on the progress of developing a route (G1). Next to that, close cooperation helps to overcome local issues, because the municipalities feel that they are backed by one another. A local environmental protest group for example opposed a trajectory between Nijmegen and Cuijk. This might have seemed unimportant in the bigger picture. It was however of importance to the aldermen from the municipality of 'Mook en Middelaar' (G1). The shared image by all municipalities was made concrete by signing a declaration of intent (G1, G3). In that way "*the aldermen of municipality A was not only responsible for his own part of the route, but together with the steering group for the whole route*" (G1).

The city region made an analysis of potential routes. These had varying potentials in terms of cyclists, with a bottom line of about a 1000 cyclists (G1). Surprisingly, not the routes with the highest potential were selected. The first routes which were developed after the Rijnwaaipad were the ones for which municipalities were most eager. Nijmegen – Beuningen was thus not realised because of its high potential, but because the municipality and the aldermen of Beuningen wanted it to be realised (G1). The route with the highest potential, Arnhem – Velp, takes much longer to realise because both municipalities were less eager and the project is more complex (G1, G2).

Another aspect which needs to be dealt with is how financial contributions are calculated. The less densely populated municipalities Over-Betuwe and Lingewaard, situated between Arnhem and Nijmegen, benefit less than the large cities from the new Rijnwaaipad (G1). Simply because they have less inhabitants and are not situated well along the route. At the same time both municipalities have considerable parts of infrastructure for the Rijnwaaipad within its domain and had less financial resources available. These differences between municipalities were bridged by the city region, through subsidising smaller municipalities relatively more and by requiring extra funding from larger cities (G1, G3). In essence, the larger cities pay for parts of a route within another municipality. The process was finished by signing an administrative agreement. This is a binding letter, where municipalities pledge to develop the route. It also has the specifications of the quality of the route.

When the city region Arnhem Nijmegen was abolished in 2015, the way of working on fast cycle routes passed on to the province of Gelderland. Working and steering groups were set up in the same way, administrative agreements stayed important and preliminary research was done to explore a route. In the beginning, this met with resistance within the province (G1, G2). The city region worked out plans for the municipalities, while the province was not accustomed to do this for another government (G1). The reason is that the province is an administrative layer in its own right and works on its own plans (G1). During the city region time, a plan was commissioned, approved and subsidised by a small team (G2). This now had to be done in a larger constellation, making arrangements more complex and requiring extra time (G2). There is thus a difference between the former city region and Gelderland, mostly in terms of decisiveness (E1). A positive thing is that the province has a broader focus than the city region and it therefore also looks beyond the urbanised region of Arnhem Nijmegen (G2). The interviews have shown little emphasis on bicycle incentive programmes, from both municipalities, city region as well as the province. Last but not least, the Fietzersbond's participation in the working groups has also been continued. This sometimes met with scepticism from civil servants in a working group, but it is important in order to represent cyclists (G2). The Fietzersbond looks with a close eye whether developments are positive for the bicycle or not. This is sometimes forgotten in local politics (G4).

The city region did not only have a coordinating role and prepared work for the municipalities. It also acted as a platform for the local authorities, to meet one another and create a common agenda (G3). Therefore, the involved municipalities have increased their cooperation through the Regio Arnhem Nijmegen (G3). It is only a collaboration though, with only a few staff members. So, the relevant municipalities bring in their own policymakers and advisors. This method has its limitations, since time for these policymakers is scarce when they need to combine different tasks (G3). In the beginning of 2019, a regional mobility director has been appointed for the Regio Arnhem Nijmegen who tries to coordinate the activities better (G3). The different mobility issues are subsequently headed by one person, aided by five other policymakers, all from different municipalities. These people prepare meetings and information, for the other participants. In this way the collaboration process is given shape and the limited resources are shared between the municipalities. This method is fairly similar to that of the Tour de Force, which forms a national platform for policymakers.

5.3.3 Implementation

The implementation of regional cycling policies in Gelderland is largely done by municipalities. The municipalities are responsible for the design, public participation, allocation of budgets and the request for co-funding (G3). The tendering process, to find a suitable contractor, is also a job of the individual municipalities (G3). While a project is worked out in more detail, there may be all sorts of issues along the way though. Especially since there is about five to seven years between first ideas and realisation (G2). There can be resistance for certain proposed routes, which has a large impact on the pace of realisation (G1, G2, G4). Municipalities also have somewhat little manoeuvring space, because preliminary studies identify a preferred route (G4). To make matters more complicated, funding from the national government can have time restraints (G2). The route must be finished within a certain time frame, which sets a hard deadline for the realisation of a project.

Developments of a fast cycle route interact a lot with its surroundings. Fast cycle paths are embedded in the local infrastructure (G4). As a consequence, there can be strong opposition against a route since *"people living in a street only see the importance of the street itself"* (G4) and find it hard to place a bicycle path within a regional context. Even though an administrative agreement has been made, deciding on the final route can be a difficult process (G2). The Arnhem – Dieren fast cycle route is a good example. The municipality of Rheden consists of the towns Velp, Rheden and Dieren and thus forms the eastern part of the route. A lot of local residents do not want the route to go through their street (G4). Therefore, the municipal council finds it hard to make a decision for the final route. So, while Arnhem is for about 90% finished (G4), cyclist thus need to wait for the route to be continued. The province of Gelderland has assisted the municipality of Rheden a lot, but in the end it is up to Rheden to go forward (G2). It is suggested by one interviewee (G4) that residents should participate earlier on in the process, to decrease opposition. Plans can then be adapted more easily than later, on when a lot has been worked out already. Next to that, strong political commitment is key, since there will always be people against certain decisions even though these decisions are well substantiated (G4).

After a route has been finished, municipalities become the owner of most parts of a fast cycle path (G2). Through new subsidy rules of the province in 2019, local authorities need to maintain a path under certain conditions, for the next 10 years (G2). This previously was 5 years. This goes to show that the province is searching for a way to maintain the high quality of the routes, despite the scattered ownership. The province is looking into the possibilities to develop maintenance contracts in the future in order to better manage the quality of fast cycle route (G2). Lastly, the interviews have shown little emphasis on bicycle incentive programmes, from both municipalities, city region as well as the province. It is sometimes noted to be important and it is being implemented on some places, but does not seem to stem from a regional strategy and depends on local initiatives.

5.3.4 Evaluation

While on a national level there is a lot of emphasis on evaluation (E2, E3, E5), on a regional and local level where plans need to be implemented, this seems to be less so. Especially the ministry seems to have the tendency to see fast cycle routes as highways, while this makes no sense according to one interviewee (G1). The question thus arises what the exact purpose of evaluations are. Fast cycle routes are relatively in-expensive and evaluations are therefore also limited in terms of extensiveness. Next to that, the evaluations done by the ministry are aimed at proving that cycling has reduced car use. But this is not of interest to cyclists. Questions like *"is cycling safer and are cyclists happier?"* may be more worthwhile (G1).



In the beginning, there were no policy targets in Gelderland (Stadsregio Arnhem Nijmegen, 2010). Which meant that evaluations were in any case difficult. Decisions were made on the basis of gut feeling: *"we did not have any policy targets with the fast cycle routes, we just did it"* (G1). Regional cycling during the time of the city region was simply unknown territory and formulating policy goals seems to have been too difficult. This has improved over the years. Currently, the province of Gelderland coordinates all the data input and exchange (G2). Part of the monitoring is managed by the province itself, mostly on fast cycle routes or along provincial roads. Other data is gathered by the respective municipalities. Some places are constantly monitored, while others are counted once every year during a few weeks. The province has taken up its role because it wanted to make the data better available for policymakers, of municipalities and the province itself (G2). The outcomes are positive for the fast cycle paths, because these present a larger growth than normal bicycle paths (G2). This in turn shows policy makers and decision makers the effects and potential of the policies put in place. It therefore helps to convince decision makers of new plans (G2, G3). So, although the evaluations in Gelderland also have their limitations when compared to the road network (i.e. less input) they are becoming more reliable and increase in importance (G2). Now that some routes have been finished in Gelderland, there is also focus on maintenance and monitoring. There are all sorts of developments which influence the routes on comfort and safety. The municipalities, together with the province and Fietzersbond, therefore evaluate the realised paths (G4). This is the case along the Rijnwaalpad for example, where more dangerous situations are happening on level crossings. This is due to increased traffic on roads and the Rijnwaalpad itself (G4). Actions need to be taken to keep the route as safe as intended. The Fietzersbond proposes a tunnel instead of a level crossing, whereas the province proposes a roundabout (G4). A tunnel is safer, but also more costly and probably a lot more discussions will be needed to identify the solution to the problem. These kind of evaluations thus directly fuel the next policy cycle.

5.4 Concluding

Gelderland has been a forerunner in developing regional cycling in the Netherlands. The first fast cycle route of the country has been realised in this province. This development was not initiated because of a policy vision, but happened because of external funding from the national government, political enthusiasm and a bit of luck. The first fast cycle route projects started a development to create a coherent network, which is still largely in development. This network is most developed around Nijmegen, which improved its own local network which in turn made it possible to look beyond its borders. Regional cycling has increasingly been conceptualised and definitions have become clearer over the years. A fast cycle route is defined by the province of Gelderland and since it subsidises potential routes, other actors (i.e. municipalities) need to comply with this definition. The definition revolves around function and physical characteristics. Fast cycle routes connect important destinations with one another, which generate a considerable amount of cyclists. A fast cycle route should have a potential use of at least 1000 cyclists per day in both directions for 70% of the route and it can be about 10 to 25 kilometres long.

There are many governmental actors involved in developing regional cycling: municipalities, city region Arnhem Nijmegen, the Stedendriehoek, province of Gelderland and to a limited extent the national government. The Stadsregio Arnhem Nijmegen has had a strong agenda setting role and tempted municipalities with subsidies. The most enthusiastic municipalities were selected. The city region had a facilitating role, so that the municipalities could focus on issues within their own domain. The process was smoothened by having preliminary studies done. Initiative from municipalities was then awaited. When there was enough commitment, possible routes were further investigated. An administrative agreement was signed between the relevant governmental actors, which contained

clear rules to the quality of a route, in order to secure a coherent path. Differences between municipalities in terms of financial resources were bridged by the city region through subsidising smaller municipalities relatively more and by requiring extra funding from larger cities. When the city region Arnhem Nijmegen was abolished, these methods were largely adopted by the province. Not entirely though, since the province is a different organisation than the city region. It is a lot larger, with more separated tasks and formalities which has had an effect on the policymaking process. The role of the province is to keep the overview and direct the process, because municipalities are often not fully aware of developments along a route. It is also noted however that the province should take a stronger role and be a driving force for regional cycling.

While the province and the city region can be defined as essential actors, another development is important too in this respect. Municipalities require a common platform, to create a shared agenda and manage affairs which they individually cannot do so well. The developments in the Stedendriehoek region show that a common platform can be very meaningful in order to create a network. The same goes for the Regio Arnhem Nijmegen. Within this collaboration, regional cycling plays an important role to improve mobility region. The reason to create a common platform between municipalities is twofold. Municipalities in Gelderland are an important actor, especially in the implementation phase. They are however also in the need of an actor who can help in realising their ambitions. The cooperation of municipalities seems to provide this needed assistance.

It can be concluded that regional cycling in Gelderland has matured through the years, although there are still issues which significantly influence and slow down the realisation process. Nevertheless, regional cycling has become part of many municipalities' and the province's policy domain. Its future looks fairly bright because of the continued attention for the topic.



6 NOORD-BRABANT

We now turn towards the next case: Noord-Brabant. First, some general information about the province of Noord-Brabant is presented. After this, an overview of the main developments regarding regional cycling policies will be discussed. Next, we will go more in-depth to uncover how regional cycling is exactly developed in Noord-Brabant. We end with a short conclusion for the chapter as a whole. The list of interviewees with their corresponding codes can be found in Appendix 11.3.

6.1 General information

The province of Noord-Brabant (or simply Brabant) is situated in the south of the Netherlands and is the second largest of the country. It is the third most populous province with about 2,5 million inhabitants (Provincie Noord-Brabant, n.d.). Five large municipalities informally work together under the name BrabantStad or B5, being Eindhoven, Tilburg, Breda, Den Bosch and Helmond. Eindhoven is the largest city located outside of the Randstad area. Furthermore, there are other smaller cities like Oosterhout, Roosendaal, Bergen op Zoom, Waalwijk, Veghel, Uden and Oss. These are sometimes referred to as 'M7'. The province is characterised by its relatively high population density, especially in the central part, whereas on the outskirts it is more rural. The landscape is very varied and sometimes referred to as the 'Brabant mosaic', where urban areas alternate with farming and nature.

Noord-Brabant

Capital	's-Hertogenbosch
Total inhabitants	2,51 million
Land cover	5.082 km ²
Inhabitants per km²	501
Total number of municipalities	64
Most populous urban area	Metropoolregio Eindhoven (consisting of 21 municipalities)
Length of total bicycle network	5000 km (Fietzersbond, 2013b)
Current fast cycle network	34,5 km

Information taken from Provincie Brabant (2017) unless stated otherwise.

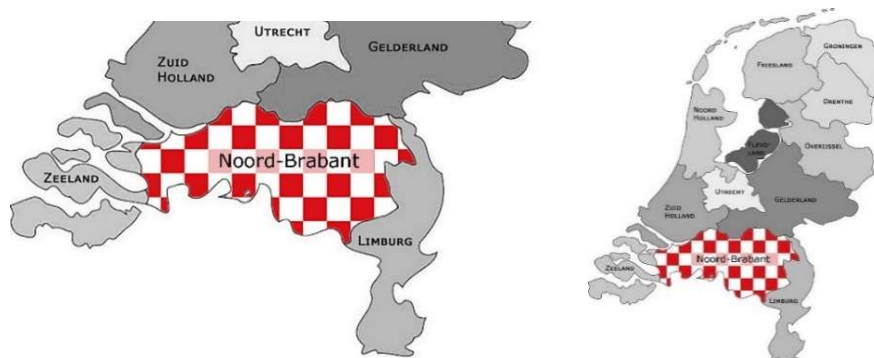


Figure 17. Location of the province of Noord-Brabant within the Netherlands.

6.2 Overview

At the beginning of the 21st century, there was a first experiment with the concept of regional cycling in Brabant. In 2004, a fast cycle route of 7,5 kilometres was opened between the city of Breda and the town of Etten-Leur. The route was for a large part funded and initiated by the province of Noord-Brabant, who wanted it to act as an exemplary regional cycling project (Fiets filevrij, n.d. 2). The route has a width of 3,5 metres and few stops, but is relatively short and not always recognised as a fast cycle route (B3). The next step of regional cycling's development in Brabant can be traced back to a development within the so called GGA Regions (Gebieds Gerichte Aanpak, literally Area-oriented approach). Within the GGA regions, municipalities work together on mobility issues (B4; Provincie Noord-Brabant, 2016). Brabant is currently divided into four different GGA Regions: West-Brabant, Hart van Brabant, Zuid-Oost Brabant and Noord-Oost Brabant. In 2008 for example, the then GGA region 's-Hertogenbosch (which merged to form Noord-Oost Brabant) made plans to stimulate commuting by bicycle. The goal was to better connect the networks of the 11 municipalities in the region and to foster cycling on longer distances (GGA Regio 's-Hertogenbosch, 2008). Until then, municipalities focussed on their own network, which did connect with neighbouring local networks. There was however less oversight on the regional network.

Regional cycling in Brabant got a real boost when the province started to have a more active role. In 2009, the province of Noord-Brabant adopted the vision document 'Fiets in de versnelling'. This vision runs from 2009 up until 2020, see also the timeline further on. The vision's goal is to increase cycling's modal split from 24% of all transportation movements in 2009 (which was below the Dutch average of 26%), to somewhere between 28-30% in 2020 (Provincie Noord-Brabant, 2009). The vision document revolves around three elements: 1. Increasing comfort for cyclists, both for commuting and recreation, as well as parking facilities. 2. Attracting car users by stimulating people to take the bicycle. 3. Reinforcing cooperation between actors. The province wants to take on a directing role, help other actors (i.e. municipalities) and is the main responsible actor for bicycle campaigns. The vision is largely directed at regional cycling and bicycle highways are noted to be very important for increasing quality and attractiveness. The province used the term 'bicycle highway' in their vision, but not long after publication the province began using the term 'fast cycle route' because this met with less resistance (B1). The vision 'Fiets in de versnelling' is somewhat general and foremost acts as a guideline for the medium term. The three implementation plans (uitvoeringsagenda's) which followed, proposed more concrete measures.

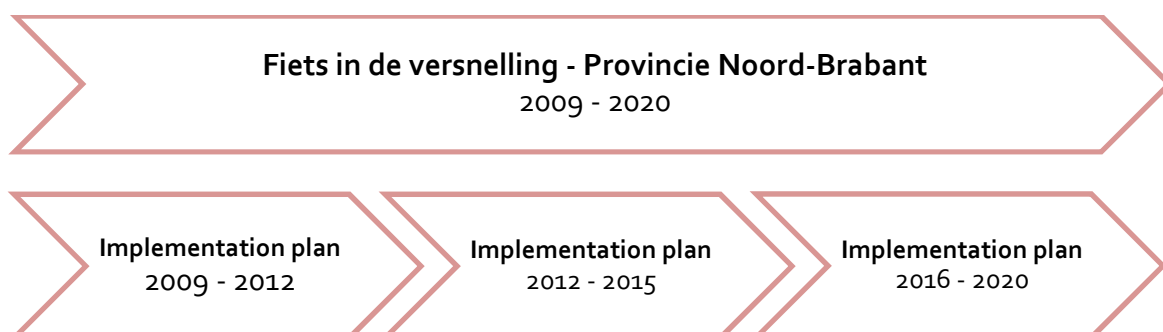


Figure 18. Chronological overview of the most important regional cycling policies for Noord-Brabant. The implementation plan

The implementation plans present how much money will be spent, what routes will be upgraded and how cooperation is given shape. In the most recent implementation plan, which spans the years 2016-2020, the province has become more concrete and ambitions have been ramped up when compared to the previous two implementation plans. A province wide network of fast cycle routes is envisaged, connecting the five large cities (the B5) with one another, as well as with the smaller cities of the M7. The figure below shows a map of this proposed network. The implementation plan 2016-2020 included a so called 'bicycle potential scan', which was made by the Breda University of Applied Sciences (BUAS). 10 Potential routes were identified via this method, totalling 76 kilometres (B1). This list of routes influenced municipalities to start thinking about their bicycle paths in the regional context (B1, B2). The routes shown on the map differ in terms of potential and thus in feasibility (Provincie Noord-Brabant, 2016). In the 2016-2020 implementation plan of the province, a definition of a fast cycle route is provided for the first time: *"a high-quality bicycle connection equipped to handle large numbers of cyclists with greater speed differences, connecting cores at longer distances (up to a maximum of 20 to 30 kilometres) and/or economic (top) locations"* (Provincie Noord-Brabant, 2016, p.25). The approximate amount of cyclists which justify a fast cycle route is not given.

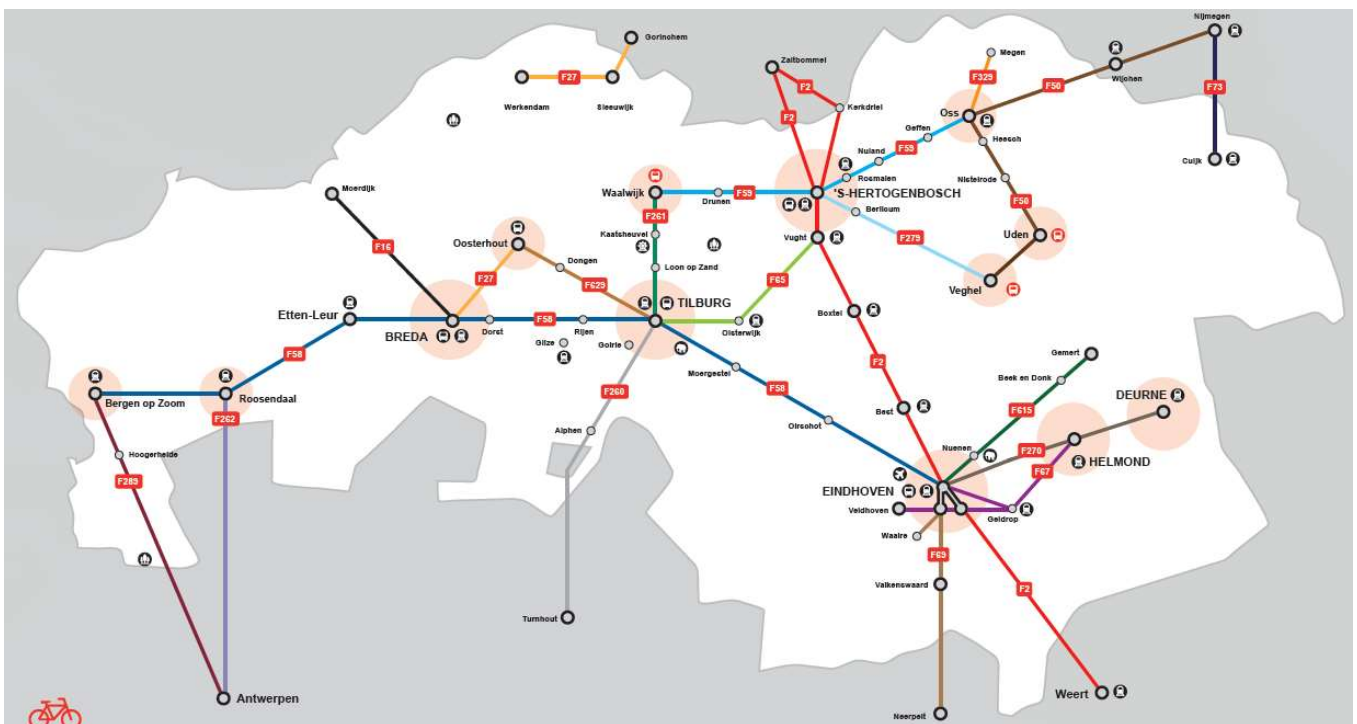


Figure 19. This map shows the proposed future fast cycle network for Noord-Brabant in 2030.

The GGA regions have the desire to play a leading role in the fast cycle route projects (Provincie Noord-Brabant, 2016). The regions however also want the province involved in these sometimes complex projects, because of many different actors and stakes. When fast cycle routes are determined, the province has an advisory role and monitors the level of ambition (B1). When the routes are designed, the municipalities hand in a request for subsidy with the province. When conditions for a fast cycle route are met, a subsidy can be awarded. The province mostly subsidises 50% of costs, except for special infrastructure like tunnels and bridges, which the province finances up to 80% (B1). The rest of the costs are met by municipalities, sometimes aided by funding from the national government (B3). The original policy goal of the province was to realise five routes before 2020 and four routes before 2025 in Noord-Brabant (Provincie Noord-Brabant, 2016). The table below shows the three already finished fast cycle routes and three almost completed routes. It is questionable whether all of these routes will be finished on time in order to realise the province's ambitious goals.

6.3 A closer look into the policymaking process

The following structure is derived from the Public Policy cycle and walks through the different steps of creating policies. Both policy programmes as well as certain projects are analysed.

6.3.1 Agenda setting

As noted earlier on, the province in Noord-Brabant has been a driving force for putting regional cycling on the agenda. As part of the provincial mobility programme, the province has already for a long time had its own network of bicycle paths, alongside provincial roads. Back in 2008, the former bicycle policy programme was not used much and the Provinciale Staten (provincial parliament) began to ask for a new programme (B2)³. The parliament chose specifically for a high ambition level and subsequently set out the direction for the coming years, which is described in the 'Fiets in de versnelling' vision (B2). The decision by the provincial parliament did not come out of the blue though. Mobility issues in the province were increasing, as well as environmental and health concerns (Provincie Noord-Brabant, 2009). These issues are partly due to the characteristics of Brabant, being a fairly urbanised region. The increased political interest for cycling can be described as pivotal, not only because it has been important in the initiating phase but also because of the continued political interest in the years thereafter: *"the story has come from the Staten and it has remained that way"* (B2). The reasons for this do not only lie in the fact that cycling is used to solve environmental and mobility problems, but also because cycling is a nice topic to show yourself as a politician and because of its practical and everyday nature (B1, B2). There was however the question whether the province should be involved in cycling at all (B2). Cycling was still seen as a local activity, by the general public and also policymakers. Thereby cycling was thus a task of municipalities. The development of the electric bicycle showed that this view was not totally true anymore. The bicycle gradually became a more accepted mode of transport on regional distances in the Netherlands and also in Brabant. Not just for the elderly, but also for a growing amount of youngsters. This external development has been crucial to accept the idea of the province's involvement in regional cycling (B2).

Agenda setting is a continually important aspect, since bicycle policies are an ambition of the province and not a legal task (B1). Every four years a new coalition is formed in the provincial parliament, which creates the necessity for bicycle policymakers of the province to propose a programme and gather funding. This negative on the continuity of the programme is partially countered by the fact that funding extends beyond the implementation plans' horizon, thus creating more stability. The reason for this is twofold. It is done on purpose to have more continuity in the programme and because infrastructure takes a long time to realise (B1).

In order to put fast cycle route projects on the agenda in Brabant, municipalities are the main initiators but face many challenges too (B3, B4). Aldermen need to be brought together in order to put the bicycle on the agenda for all municipalities. The aldermen meet one another in the B5 or the GGA Regions (B2, B3, B4). Ideas can be brought forward to see whether there is support in order to make a common agenda amongst involved parties. The aldermen thus meet a select group of other aldermen. When an idea goes through two or more GGA's, this can make cooperation more difficult as well (B4). Simply because the relevant aldermen do not meet each other on a regular basis. A good example is the potential fast cycle route F58 along the Wilheminakanaal between Eindhoven and Tilburg. This is a canal going through a large part of Brabant, linking many cities and towns. It is a potential fast cycle route because of its straight alignment and the fact that there are already bicycle paths along many parts of the canal. Five municipalities are located along the Eindhoven - Tilburg route. The municipalities of Tilburg, Hilvarenbeek and Oisterwijk are part of the GGA Region 'Hart van Brabant', while Oirschot and Eindhoven are part of the GGA Region South-east Brabant

³ In the text I refer to the interviews by using interview codes, as provided in Appendix 11.3.3.

(B4). The municipality of Eindhoven works on its own part. Eindhoven already has a so called 'slowlane', which is a wide bicycle path connecting the city centre with the Wilheminakanaal near the town of Best (Gemeente Eindhoven, 2016). A new area development between the slowlane and Oirschot is planned. This involves creating a new bicycle path, which is co-funded by the province (B4). Oirschot has plans to improve a part of its own bicycle network in 2020, along the Wilheminakanaal. Tilburg has not given priority to the project yet and its own part of the route will therefore remain the same in the foreseeable future (B4). The same goes for the other two municipalities. Parts of the route along the canal are thus improved, but the route as a whole is out of sight. And even though parts are improved, this does not lead to a coherent route which is important for cyclists. The reason why the route is out of sight may be because of its 30 kilometre length, but also because the relevant actors find it hard to see the route as a whole and work together on it (B4). This is one of the reasons why the F58 Eindhoven – Tilburg fast cycle route was not selected by the province. A concrete initiative from the relevant municipalities was simply lacking (B1). The route also scored low on the list of the province, meaning that it has less potential than other routes (Provincie Noord-Brabant, 2016). Another aspect which makes realisation of the F58 route problematic is the required participation of Rijkswaterstaat, which manages the canal. It has been difficult to work together with this agency, because it did not put forward a spokesperson and because it was not willing to make ambitions more concrete (B4). Also does it lack clear guidelines for bicycle paths along its canals (B1). This issue reaches beyond the capabilities of individual municipalities to manage. Even the province finds it hard to deal with (B1). As a result, these issues have frustrated the agenda setting and policy formulation of the F58 project along the Wilheminakanaal in Brabant and a coherent fast cycle route will not be realised in the near future.

The developments of regional cycling cannot be seen apart from developments in the local network. The example of Den Bosch goes to show that it is important to have a good local network, in order to start thinking about the regional network. It is no coincidence that one of the two first fast cycle routes in Brabant has been realised in Den Bosch, linking it with the nearby city of Oss. At the beginning of the century, cycling rates were relatively low in Den Bosch and the network was substandard (B3). The municipality started working on improving the network and bicycle parking facilities, with a substantial budget. As a consequence, Den Bosch was able to make quick improvements. In 2011 already, the city was awarded the 'Best bicycle city' by the Fietzersbond (B3). The development of the local network opened up possibilities to look beyond the municipal borders. This focussed on already existing bicycle paths. Bit by bit, some elements of the route toward Oss were improved (B3). A major impulse was given through the construction of the new Maximakanaal (canal), bypassing Den Bosch (B3). A new railway bridge had to be built in order to cross the water. Since this had to be done anyways, another bridge was built specifically for cyclists. In 2010, during Fiets filevrij, project proposals were requested for bicycle highways along congested national roads. Then for the first time, the route as a whole came on the table. A policymaker of the municipality of Den Bosch got enthusiastic and so was his colleague from Oss (B3). The province was also willing, since it fitted in nicely with their policy programme 'Fiets in de versnelling', published the year before. The highway A59 between Den Bosch and Oss had very frequent traffic jams, which was one of the reasons why the project was awarded funding by Fiets filevrij (B3). The cycle route was dubbed F59, referring to the nearby highway. The discussions about the exact route and funding took quite some time, also since a third and more rural municipality was involved: Maasdonk. This is described in the next section. The way in which Den Bosch – Oss has come on the table was thus a combination of a policy direction which was set out, both by the municipality of Den Bosch and the province, and because of the stimulus from a national programme.



6.3.2 Policy formulation/decision making

When there was political commitment for regional cycling in Brabant, plans needed to be drawn up and goals needed to be formulated. A vision was established with the provincial parliament and regional partners; B5, municipalities, the Fietzersbond and many others (B2): *"You can develop it behind closed doors and then present it, but we have chosen to do it together"* (B2). This process is said to have been crucial, because it connected the different actors with one another and spurred actions to develop the policy. The publication of the provincial vision for regional cycling can be seen as the starting point of the province's involvement in the topic and has acted as a guideline in the years thereafter. A vision is rather unspecific though, without any budget or concrete projects. Coalition agreements between political parties in the provincial parliament were not helpful either, because they did not specify the amounts of funding too (B1). The next step was to get ideas more concrete and create an implementation plan. The bicycle potential scan of the BUAS came in handy here. Through a very rough estimate of 1 million euros per kilometre times 76 kilometre, the budget for the implementation plan 2016-2020 was established (B1). The province funds 61 million euros of this and the rest is met by other actors (B1). The implementation plan was unanimously approved by the provincial parliament (B1).

The list of potential routes has subsequently fuelled municipalities to start working on their own plans, since they knew that they would be able to get funding (B1, B2). The funding of the province thus has helped to steer and make other actors enthusiastic. This is however not always easy, as some municipalities have few resources and the province at the same time needs to keep the quality high. An example where keeping this balance is needed is Bergen op Zoom – Roosendaal (B1). Next to that, the necessity to create a regional cycling connection may not be present in all municipalities along a route (B1). Or, a municipality lacks the means to work on a route (B3). This is especially true for smaller municipalities, who depend on the larger cities in Brabant to act as a driving force for a project (B3, B4). Because even though the province will co-finance a large part, commitment of the municipalities is key (B1, B3). A municipality needs to contribute to the funding, commissions the designs and will most of the times become the owner of the bicycle path (B3). When engagement of municipalities is lacking, the province does not do much either (B2). The cooperation of the province with the largest five cities in the province is most close, since these municipalities have policymakers solely dedicated to the topic, which makes cooperation easier (B1).

For the fast cycle route F59 between Den Bosch and Oss a work group was created. This consisted of the three involved municipalities Den Bosch, Oss and the small rural municipality of Maasdonk, together with the province (B3). There were regular meetings and route variants were worked out. First, the projected costs were 15 million and in the end it was brought down to 4,5 million euros by scaling back in terms of ambition (e.g. level crossings instead of tunnels) (B3). Maasdonk was not able to make large financial contributions, while a substantial part was within their borders. The other municipalities as well as the province needed to close this gap. The right distribution ratio was sought after: *"So then you get a game, how much do we want to put in it"* (B3). Should the distribution ratio depend on users, path length, inhabitants of a municipality? This discussion took a long time, from 2011 to 2014 (B3). Political 'massage' between the aldermen and the deputy in a steering group was crucial. In the end, the problem was solved by the province, which contributed more than initially promised (B3). The F59 was the province's first project and this created the necessity to move forward, in order to show to the provincial parliament that there was progress with the regional cycling programme (B3). Den Bosch also made an extra financial commitment, although its own route was already finished for a large part (B3). The decision was made to go ahead with the project and an administrative agreement was signed between the four parties (B3). This meant that the project could go ahead.

Every fast cycle route project is different as it depends on local conditions (B2). In 2018, an administrative agreement was signed for the fast cycle route between Den Bosch and Waalwijk, through the municipality of Heusden. This was however part of a much larger plan, being the redevelopment of A59 highway between both cities (B1). The local road network in the area is substandard, causing a lot of local traffic to use the highway. A fast cycle route was perceived to help realise the project's goals, and there was soon consensus of its necessity (B3). The idea was brought in and also partly funded by Den Bosch, although the development largely focusses on the municipality of Heusden (B3). It can also happen that a municipality does not want to work on a route, but other municipalities do. This is the case between Eindhoven and Helmond (B1). The smaller town of Nuenen did not want to participate, because it saw no advantage for itself. Eindhoven and Helmond agreed with this and now the route has almost been finished (B1). The distribution of funding is thus troublesome, mostly because of small versus large municipalities (B1, B3). Every route is unique and involves different municipalities, the solutions to problems thus also vary (B2). There is not one single method for working on fast cycle routes, as the interviews prove.

6.3.3 Implementation

As noted earlier on, stimulating regional cycling revolves around two aspects: building infrastructure and stimulating bicycle use. The first is mainly a task of municipalities. Municipalities try to find the most suitable route and make a final design. The municipalities in Brabant are all individually responsible for the design of their parts of the fast cycle route (B3). Another municipality can advise a certain design because it has good experience with it. In the end it is up to the respective traffic planners at a municipality to decide. During Den Bosch – Oss, this met with many difficulties since it is *"[...] very hard to push individual municipalities to create high quality"* (B3). There does need to be consistency in terms of asphalt width, colour, lining and lighting of the route. Altering a design can decrease costs for a municipality, but can have a negative impact on quality of a route. This was the case for the F59, where quality is lower in Oss and Maasdonk than in Den Bosch (B3). The fast cycle route from Den Bosch to Oss has therefore been a real learning process for all involved parties, especially the province (B1, B3). It led the province think thoroughly about its role. It takes the initiative to set up work groups for fast cycle routes and fuels the process (Provincie Noord-Brabant, 2016). Brabant has however deliberately chosen not to take up the directing role. It seems to mainly steer, by having clear rules in the subsidies. Since 2018, there are stricter conditions for its subsidies in order to create more coherent routes (B1, B3). Whether this is enough remains to be seen, as one interviewee notes that *"it would help a lot if the province would be more of a driving force"* (B4).

A fast cycle route required a 3,5 metre wide asphalt road during the F59 project, whilst this is nowadays 4 to 4,5 metres (B3). This is due to the increasing speed differences between cyclists and therefore the needed space to overtake one another. The width of a path however also means that very practical issues are encountered during the design phase. For one stretch of the F59 it was impossible to realise a wide bicycle path without having to cut down many trees and acquiring a lot of land (B3). This would have met with much opposition and was perceived to be too costly as well. Therefore, a so called 'Fietsstraat' was made. This is a street where cars are allowed to drive, but where priority is given to cyclists. It is questionable whether this is the ideal situation for a fast cycle route, because cars may drive 60km/h and make cyclists feel uncomfortable (EE2). With hindsight, the province is not happy with the result either and will not allow something similar in the future (B1). There were however no other options on this part of the F59 route available and the objective of facilitating (fast) cyclists has been reached (B3). This issue goes to show that the implementation phase may provide difficulties which are hard to overcome entirely whilst striving for high quality regional bicycle connections.



The second aspect of regional cycling are the incentive programmes. This is for a large part taken up by the province of Brabant (B1, B2). The province seems to have a better scale level to approach these kind of policy interventions. However, as noted in chapter four, building infrastructure alone does not lead to many new cyclists. There seems ample room to increase the bicycle as a mobility solution. People need to be stimulated to take the bicycle and mostly only need a small push to change their behaviour. In Brabant, this push was given through the B-Riders programme and started in 2013 (B2). It was set up during the national programme Beter Benutten and therefore was linked towards reducing cars during rush hours, along congested provincial roads or highways. People were freely able to participate and get rewards when they cycled. This was a bonus of 8-15 eurocents per kilometre cycled plus some additional things like coaching (Hooghof, 2018). The reward was larger when cycling during rush hours. Cycling movements were tracked with an application on the participants' smartphones. The B-Riders programme was developed by the province because there were no commercial parties which worked on it, while the potential of stimulating a modal shift was there (B2). In 2018, the decision was made to stop with B-Riders and it was subsequently transferred to private companies. The reason for the change is because B-Riders was not seen as a primary governmental responsibility by the province itself (B2). This has also been highlighted by the ministry, which questions whether governments should continue to invest in these kind of programmes and not leave it over to private companies (E3). The B-Riders application is now called differently and focusses on employers who want their employees to take the bicycle (B2). This fits into the broader approach of the incentive programmes of the province, which are mainly directed at employers. The Brabants Mobiliteits Netwerk (BMN), or Brabant Mobility Network, brings together employers who want to stimulate their employees to take the bicycle. Reasons for getting involved range from improved health of employees to lack of parking facilities (B2). The BMN is currently not directed anymore at all employers, as was the case in the beginning. Now, only those who really want to make steps (B1). The idea is that forerunners will encourage more organisations to think about their mobility policies and take on ideas of other companies (B1). Hundreds of companies are participating, but it remains unclear what the results of this programme exactly are in terms of new cyclists. This will probably become clearer in the years to come when the programmes have been active for some more years.

The role of the province has shifted since the beginning of the 'Fiets in de versnelling' programme. This is partly due to experiences gained through the F59 Den Bosch - Oss project (B1). This project was not satisfactory for the province: "[...] *we know from the F59, where we did not intervene, that did not go well*" (B1). Therefore, the cooperation with municipalities has increased and there are more stringent conditions to apply for a subsidy. Municipalities need to have signed an agreement amongst each other about realisation of a fast cycle route and also commit themselves to work on stimulating the bicycle, developing a communication plan and monitor the route. The province not only checks this, but wants to act as a partner in the cooperation (B1). This also proves to be a difficult task. The province of Noord-Brabant may be an important actor, it is not the central organisation for realising fast cycle routes. Since it has only about seven employees dedicated to the topic (B1), it is limited in its possibilities.

6.3.4 Evaluation

The most important actor in doing evaluations in Brabant is the province of Noord-Brabant itself. It already manages a lot of data. Monitoring and evaluation of fast cycle routes are therefore largely taken up by the province (B1, B2). The main reasons for doing evaluations is that regional cycling is relatively new and it is important to understand how people use the network and in that way deduce what kind of improvement can be made (B2). And because when data is presented, what is seen by people is suddenly perceived to be facts (B2). The province wants to create uniformity and make



data well useable. The province used to count on 90 places once every two years. Nowadays, the province continues to do so while also having 40 places where there is continuous monitoring with the help of induction loops. These loops are integrated in the asphalt of a bicycle path and counts the amount of cyclists passing by. The increase of monitoring measures has helped to improve insights in the network (B2). But since many parts of the (proposed) fast cycle route network are maintained by municipalities, they are the ones responsible to deliver data to the province. The province thus functions as the main organ processing and presenting (regional) cycling data (B1).

Since only two fast cycle routes have been realised to date in Brabant, the evaluations of regional cycling is limited. There are no figures yet showing the increase of bicyclists on certain connections, like is the case in Gelderland. The two realised fast cycle routes have had a preliminary measurement and a measurement after realisation. It remains however very hard to understand the decision making of cyclists (B1, B4). Are the people counted new cyclists or not, remains a problematic question. Therefore, questionnaires have helped to improve the evaluation process (B1). Cyclists along newly opened routes are asked how they travelled before. Thus gaining an understanding whether people have moved from other bicycle paths to the new routes, or that they travelled by car or of public transport before. The tracking data derived from the B-Riders programme is also used to analyse the behaviour of cyclists on the bicycle network (B2), which is thus not limited to regional cycling. This tracking data input continues even though B-Riders has stopped, because the companies which took over are obliged to share their data (B2). While evaluation has shown to be important on a national level and also on the provincial level, its effectiveness is questioned by the lowest tier of governments: the municipalities. A good example is the F59. This route has been analysed, but without prior agreements as to what amounts of cyclists can be seen as a success or failure (B3). This has made it hard to adapt policies accordingly (B3). Thus, the F59 has been monitored, but evaluation means going one step further and providing input for the next phase of a policy cycle. This was apparently not the case here. Next to that, while there is a lot of emphasis on new cyclists, improved infrastructure may also be good for the existing ones. But there is less attention to this aspect (B3).

The incentive programme B-Riders has been much easier to evaluate than the cycling infrastructure (B2). During the programme, in total about 10.000 participants were tracked with a mobile phone application (Provincie Noord-Brabant, 2018). This was done from 2013 until 2018, during four different phases. The participants' modal shift from car to bicycle was substantial and ranged between 29% and 58% (Provincie Noord-Brabant, 2018). The control groups did not show any significant change (Hooghof, 2018). This goes to show that the programme had effect and was able to change people's behaviour. People had become accustomed to taking the bicycle more often (B2). Although it is claimed to have a longer term effect (B2; Provincie Noord-Brabant, 2018), it is unclear how many cyclists still use the bicycle as frequently as they did during the B-Riders programme. Nevertheless, the amount of 'spitsmijders' (people avoiding rush hours with the car) had been reached during all four phases. Therefore, the programme could be called a success. Especially since the approach was new and therefore pioneering (B2).



6.4 Concluding

The province of Noord-Brabant has had a clear vision document from the start of 2009 onwards. This has steered the development of regional cycling in the whole of the province. Ambitions of the province are clear and have become more concrete in the most recent implementation plan. Fast cycle routes are the province of Noord-Brabant's main policy elements, supplemented by bicycle incentive programmes and campaigns. The province makes subsidies available when it sees a clear role for the bicycle on a regional scale.

A fast cycle route is defined by the province of Noord-Brabant to handle large numbers of cyclists, facilitate speedy travel and connect important destinations with one another up to 20 or 30 kilometres. No clarification to the minimum amount of cyclists is presented though. The province's subsidies are indispensable for municipalities to realise fast cycle routes. The subsidies' accompanying rules are applied in order to enforce the used provincial definition.

The initiative for realising a fast cycle route mostly lies with the municipalities and partly with the province of Noord-Brabant. The municipalities need to organise the process, especially in the beginning where there needs to be a consensus of the necessity of a fast cycle route and political willingness. The regional cooperation of municipalities is mostly the starting point for initiatives. By having a list of ten highly potential routes, the province has stimulated this cooperation. The results of the research however also show that this approach has its limitations, since routes may cross borders of the GGA Regions, which makes getting a project off the ground harder. Or, municipalities lack the required resources in order to work together. These issues have got effect on realisation time and uniformity of routes. Municipalities are therefore in the need of a central organisation taking up this responsibility. This role is partly fulfilled by the five largest cities of Brabant, which contribute to realisations in more rural municipalities and have policymakers who are able to take the lead. But this issue of "who is in charge" is also the reason why the attitude of the province has changed over time to be more actively involved. This change is clear after the F59 Den Bosch – Oss project. The province however says to take the directing role, but in essence it is mostly coordinating and facilitating fast cycle routes. This is done through rules in the subsidy. For evaluations and incentive programmes, the province however does take the lead and is the main actor. The B-Riders incentive programme has stopped, but the new 'employees approach' will be rolled out further in the coming years. The province has great commitment in terms of funds and a specialised team, albeit small. Municipal forerunners like Den Bosch and Eindhoven have embraced the idea of fast, regional cycling. It is no coincidence that the first routes have been realised in these municipalities.

There are also many improvements to be made to the policymaking process in Brabant. The province could further increase its role and act as a driving force and better direct the process. Municipalities cannot do it alone, especially when fast cycle routes are to be realised in smaller municipalities with less capabilities and resources or when routes are long and involve many different municipalities. Next, the cooperation with the national government and its agency Rijkswaterstaat could substantially be improved, and needs help from the national government in order to do so. Here, the province clearly runs into its own limits. Lastly, it will be interesting to see whether cycling will remain important for the newly elected provincial parliament, since cycling remains an ambition and not a legal task. On the whole, Noord-Brabant proves that regional cycling can be actively stimulated by having clear and ambitious policies put in place. Results of these policies will be coming in in the next few years, when more fast cycle routes will be finished and the effects of incentive programmes and campaigns become visible.



7 DISCUSSION

We are nearing the end of this thesis. Before presenting the final conclusions in the next chapter, I will discuss the quality of this research. This includes the issues of validity and reliability and the limitations of the study in general.

As with any research, there have been several limitations which need to be addressed. First, by no means was it possible to be able to completely answer the research question of this study. Policymaking is constantly developing and this is also true for regional cycling. Therefore, the aim of this research was to gain insight in the policymaking process of regional cycling in the Netherlands. So not an all-encompassing answer, but rather a more general image which helps to understand regional cycling. This approach was also necessary, given the fact that there has been little research on which I could build.

Then, the issue of internal validity. One should ask the question whether the results of the research present an accurate image of regional cycling. For this study, it was necessary to keep a balance between the different steps of policymaking. Policies are developed in several steps and in order to understand the development, you need to be able to describe the whole policy cycle. I have paid special attention to this and have been able to gather a lot of information for all steps. This is crucial in order to create a sound and rich story. To improve the internal validity, I have used different methods of data collection. The interviews have been the most important data source. The interviews differed in length and richness of information. Hence, some interviews have been used more than others. To keep a balance, it has been checked during interviews whether statements were shared and represented by other interviewees as well. Most exemplary in this respect is evaluation, which showed a large difference in meaningfulness for actors on the national level, compared with actors on a local level. The interviews have been complemented by policy documents through desk research. The obtained information through interviews has thus been triangulated. Next to that, I have had contact with my interviewees to check for my findings. This member checking proved fruitful, because from some interviewees I got helpful feedback, which enabled me to improve the clarity and exactness of my statements. The feedback did not alter the contents of the research, but rather the representation or simply added new information. Lastly, I think that there have been enough interviews and policy documents analysed to be able to draw proper conclusions. Different pieces of information have been gathered, which has created a rich and comprehensive storyline where the differing aspects of regional cycling are covered. This storyline is not a complete image of the reality but, as said earlier on, gives insight in the topic.

The issue of external validity is about whether the results of this study be transferred to other situations. As described in the methods part, I have given thick descriptions. Many examples are presented in order to make the results more vivid and the text better comprehensible. The results are also described in such a way that they not only tell us something about the situation in a specific area, but about Gelderland or Noord-Brabant. Since these provinces are the clear forerunners in the Netherlands, they tell us something about the whole of the Netherlands. The thick descriptions have been made possible because I have taken my time for the thesis and as a consequence have been able to gather a lot of information.

When doing qualitative research, it is hard to minimise the influence of the researcher on the results and thus on reliability of a study. During the interviews I interacted with the interviewees and this interaction differed between interviews. I also found it principal to let the interviewees talk and see what they had to say, rather than steering them too much. In this way I was able to talk about the aspects they found to be most important. Some interviewees were more focussed on implementation and thus talked a lot about that aspect, while others knew much more about the policy formulation

process. Hence, the used method does decrease consistency a bit. For this research however it was deemed more important to gather as much rich data as possible. To partly counter the negative effect on reliability, I used an interview guide. In that way the interviewees were treated more or less the same, since all predefined aspects were touched upon. Nevertheless, variations in focal points are inevitable and I am aware of this and open about it.

There were also some more general limitations of the research which are important to note. The exact meaning of 'regional cycling' has been a recurring theme throughout the thesis. I have adopted the term because I did not want to solely focus on infrastructure, but wanted to see what kind of measures exist in order to stimulate cycling on a regional scale. Fast cycle route infrastructure is found to be the most important aspect of regional cycling and thus has had the most attention. Using the term regional cycling has enabled me to see what otherwise might have overlooked, which are the incentive programmes and the need to position cycling more as a mobility solution. Another recurring theme was the demarcation line between regional and local cycling. This difference is somewhat ambiguous at times. I have therefore constantly been sharp at the distinction between regional cycling and local cycling. The focus on provinces has helped a lot in that respect, since provinces have a more regional approach. Reading about cycling in provincial documents, or talking with provincial policymakers already creates this narrowing down effect and has thus been very helpful. The focus on the concept of fast cycle routes has been supportive too. There are regional cycling routes, which however do not specifically aim its users to attain higher speeds and cycle longer distances. Fast cycle routes on the other hand are specifically created for this purpose.



8 CONCLUSION

The conclusion starts by answering the three sub-research questions. The answers on these questions will be used to answer the general research question. The conclusion is ended by making recommendations for future research.

8.1 The policymaking process of Dutch regional cycling

The research objective of this study was to gain insight in the policymaking process of regional cycling in the Netherlands. This was done in an explorative way, since the researcher had limited knowledge about the topic, partly because there is only very limited research dedicated to the topic. Both cases under study show clear similarities, although there are also some differentiations visible. The results from the national context help us draw conclusions as to how regional cycling is developed.

8.1.1 How is regional cycling conceptualized in The Netherlands?

The concept of regional cycling is relatively new and still in development. It is therefore hard to give one conclusive answer to the question. Most definitions relate to the infrastructure, the fast cycle routes, and not so much to the activity itself. Local cycling is focussed on short distances, relatively low speeds, within municipal boundaries which host a dense and extensive network. Regional cycling is quite the opposite. It is focussed on longer distances, relatively high speeds, crossing municipal boundaries per definition and a network consists of only several connections. Fast cycle routes are specifically developed to facilitate regional cycling. Which does not mean that fast cycle routes can solely be used for cycling on longer distance though. Cyclists mostly only use parts of a route and not the entire length. The local network is often needed in order to reach the final destination of a regional cyclist. Both forms of cycling thus interact with one another.

In general for the Netherlands, it makes more sense to focus on function than on distance for regional cycling. Many cities are located relatively close to each other in this densely populated country. Using a certain distance may exclude some routes, while they can make perfect sense for a cyclist. Regional cycling is about linking local networks of cities and towns with one another, in order to facilitate speedy travel. Services of regional importance, like city centres or schools, are thus connected, generating considerable transportation flows. The province of Gelderland uses 1000 cyclists both ways, for 70% of a route, as a bottom line to define a connection to be of regional importance. This seems like a reasonable amount, justifying investments but also leaving enough room for new fast cycle routes to be made in order to facilitate the regional cyclist.

8.1.2 What stakeholders influence the policymaking process regarding regional cycling (and what is their role)?

There is no actor which has the task to look after regional cycling in the Netherlands. Regional cycling has no legal status and it is therefore done because actors see the necessity to get involved in the topic. Regional cycling has been taken up by various governmental actors to varying degrees: national government, provinces, transport authorities, city regions, municipal collaborations and municipalities themselves. Actors who are able to think and act across municipal boundaries have been most involved and important in regional cycling. The national government has been pivotal in the beginning to experiment with regional cycling. To that end, several fast cycle routes and incentive programmes have been set-up throughout the country. The national government's role has relatively



diminished over the years, especially because the role of the other actors has increased. These are the provinces and former city regions. In both cases which were under study, the province has a strong agenda setting role and facilitates and coordinates the policymaking process. Up until 2015, the Stadsregio Arnhem Nijmegen held this responsibility in Gelderland and this role has subsequently passed on to the province. The policies of both Gelderland and Brabant give direction to the development of regional cycling and spur municipalities to work on the topic. The province also has an important role in evaluations. It functions as the main organ for gathering and processing data of the regional cycling network. The province thus not only gathers its own data, but also collects data from municipalities. Nevertheless, cycling remains an ambition of the provinces and not a legal responsibility. This means that the provinces require continued attention from politics in order to have a mandate to work on the topic. The municipalities can be described as the key actors in regional cycling. Without their willingness, regional cycling cannot be made concrete in the form of fast cycle routes. The local authorities are responsible for the design, public participation and in the end the maintenance of fast cycle routes. This maintenance needs to be done in a coherent way with other road managers along the route. The municipalities implement plans and partly fund them as well. Often, municipalities are initiators of a project, stimulated by the broad lines which have been set out by the provinces. Collaborations of actors, on both regional and national level, exist in order for the involved parties to create a common agenda and share experiences. On the national level this is the Tour de Force. On a regional level, the former city regions took up this task. Nowadays, this is done by municipal collaborations. These are formal bodies in which municipalities cooperate to manage their common affairs. Since regional cycling crosses municipal boundaries, this cooperation is highly necessary. Next to all these governmental actors, the Fietzersbond is an advocacy group which is a key player in the regional cycling domain. It is involved on all levels and through all steps of the policy process. The Fietzersbond has been able to put cycling on the agenda and gather national funding, which was specially important when regional cycling was still in its infancy. Nowadays this is important in order to keep cycling on the agenda. Next to that, the Fietzersbond represents the needs of cyclists and tries to bring forward this perspective in projects where it is represent.

8.1.3 How are challenges of actors overcome in order to develop regional cycling policies?

There are many governmental actors involved in the policymaking process with differing needs. Cooperation between these actors is therefore key. Municipalities are the main actor, but have limited resources. Both financially as well as in terms of policymakers which can focus on (regional) cycling. Some municipalities may benefit a lot from a fast cycle route, while others may not. This makes it hard to determine the funding distribution ratio between municipalities. Municipalities mostly lack the oversight within a region and thus can find it hard to collaborate with one another. As municipalities implement the plans for fast cycle routes, they need to deal with local opposition from inhabitants. There are thus many challenges to overcome and the local level needs an actor which is able to bridge the described gaps.

Municipalities are helped out in three ways. First, larger cities can take up a leading role and can act as a driving force. Larger cities simply have more resources available and mostly have more to gain from a new fast cycle route than small towns. That is why these large municipalities can also be willing to fund parts outside of their territory. This seems to only work well when a city has a decent local cycling network. Only then does it make sense (and justifiable) to look beyond municipal borders. The examples of both Nijmegen and Den Bosch show this. Here, the local networks have been improved in the beginning of the century and this spurred the municipalities to look towards neighbouring cities and towns. The local network can provide for stepping stones for a regional connection, when a route in the local network is gradually improved. Second, municipalities can also



organise themselves in the form of common governmental bodies. The Stadsregio Arnhem Nijmegen, Regio Arnhem Nijmegen and Stedendriehoek in Gelderland are examples of this. The same goes for the B5 and GGA regions in Noord-Brabant. These collaborations can form a platform and manage what the individual municipalities cannot. The relevant politicians and policymakers are able to find each other more easily, which increases cooperation. Third, provinces are a governmental layer of their own and have their own agenda. They have a more regional lens, which enables them to connect municipal actors with one another. Provinces are aided by greater financial possibilities than most municipalities. Since fast cycle routes are simply more expensive than normal bicycle paths, it enables the provinces to smoothen the process by co-funding 50%, sometimes up to 80%. Expensive interventions in the network, like tunnels and bridges, then become a serious possibility. The problem with provinces however is that they tend to mainly facilitate the process itself, whilst a more directing role is sometimes needed in order to have speedy progress.

In any case, there needs to be an actor who makes sure that all involved parties, especially the municipalities, feel the responsibility for the whole fast cycle route and not just for a part to their own liking. This responsibility is also needed in order to handle local issues and difficulties with inhabitants or protest groups. These issues may seem small, but can obstruct realisation of part of a fast cycle route and thus completion of the route as a whole. A regional governmental actor is most adequate to handle these issues, because it can help the municipalities, whilst not being one itself.

8.1.4 How are regional cycling policies in the Netherlands developed?

Cycling in the Netherlands is still perceived a lot as a local activity and this is how policymaking is arranged as well. The policymaking process is for a large part dependent on municipalities. This makes sense since many regional cycling interventions impact the local level. Streets need to be altered and the public space will be impacted. This approach however also makes it harder to focus on the regional level and see the necessity of a route in the wider context. When a large municipality is not willing to work on regional cycling, the prospects are dim right away. This also has its implications for regional cycling. In order make the concept work, all actors need to work together. Otherwise cyclists face the consequence when crossing municipal boundaries, while the goal of regional cycling is to let these boundaries become less of an obstacle. There is thus a constant struggle between actors to overcome their differences. The crucial aspect is to be able to manage this process well.

The provinces in the Netherlands have taken up part of this responsibility and some seem to be quite successful. The forerunners Gelderland and Noord-Brabant have developed themselves to be involved in regional cycling in a relatively short time period. Many other provinces in the Netherlands follow their example, although this is certainly not the case for all provinces, since some have very limited ambitions. The provinces may have a lot of ambitions, but have few ways to turn these ambitions into reality on their own. This may sound somewhat contradictive, but simply goes to show that the actors need one another. The ideal of regional cycling is to realise a nationwide network of fast cycle routes. It is however questionable whether the current organisation is sufficient. This organisation has to do with regional planning in the Netherlands, which has been in large development in the last decade or so. Many policies have been decentralised and the lower level governments are giving shape to their new role. These decentralisations have made the national government much less involved in cycling, while cycling could certainly benefit from its increased commitment. Some issues play on a national level and this is hard for even provinces to address. The national government therefore is an important actor, as virtually all the interviewees have noted. In recent years the national government did increase its attention for regional cycling, but a major change has not taken place and is not to be expected in the near future. Not only do the governmental



actors need one another, non-governmental actors are found to be of importance too. The Fietzersbond is perceived to be a very important actor, operating on national, provincial and local level. The Fietzersbond specifically represents the interest of cyclists. Its involvement is not limited to putting the bicycle on the agenda, but the organisation is also involved in the implementation phase and it taken seriously by the governmental actors.

Developing policies involves going through the Public Policy cycle, as described in the theoretical framework. The results of this research go to show that in practice, things may go quite differently. The realisation of the Rijnwaalpad and the subsequent development of the city region Arnhem Nijmegen's policy vision show that developments can happen unexpectedly. In this case, first there was a project and then there was policy. Projects themselves thus have a cycle of their own, interacting with the overall policy plans of a governmental actor. It must also be noted that there is not one policy cycle. Provinces develop policies which in turn interact with policies from the municipalities. Thus creating a complex and inter-dependent network of policies.

Regional cycling is nowadays more in the picture than ever before and policies have had a strong impact on its development. Its importance seems to be recognised more and more, by all involved actors. Regional cycling policymaking in the Netherlands is still developing a lot and probably will be developing further in the coming years.

8.2 Recommendations

Based on the results of this research, some recommendations can be identified which could help researchers to further investigate the topic of regional cycling.

First, this study was of an explorative kind and therefore the conclusions may be somewhat general. It therefore could be interesting to use the cases of Gelderland and Noord-Brabant again and involve more interviewees than currently have been involved in this research. Now, only bicycle policymakers have been interviewed. But some other people can be identified to be relevant to understand the process, like mobility policymakers in general. Overall, this research focussed on the whole policy cycle. It could be interesting to look into just one of the steps, thereby bringing more focus to a study. Examples include what role evaluations have in policymaking. This study shows that on a national level there is a lot of attention to the topic, while in reality it is used to a limited extent by municipalities. Another option could be to focus on the implementation of policies and opposition against new fast cycle routes. This then could include civilians living along projected routes for example.

Second, in this research only two provinces have been selected for the case study, while some other provinces were identified as good potential candidates too. The selection was due to Gelderland and Noord-Brabant being forerunners and therefore highly relevant to this study. However, the provinces of Utrecht, Zuid-Holland, Limburg and Groningen all have interesting policies as well and could therefore be used as case studies in future research. Especially since these policies begin to have effect, since new fast cycle routes for example are being realised in the near future. Utrecht, Zuid-Holland and Groningen have a longer tradition in cycling and are not far behind Gelderland and Noord-Brabant. While the province of Limburg has less of a cycling history, but aims to close the gap with other provinces through its focus on regional cycling.

Third, for this research the Dutch provinces were highlighted as the most relevant level to focus on. It can however also be interesting to focus on municipal collaborations. Since this is found to be very important to facilitate the cooperation between municipalities. And municipalities are in turn key

actors. Examples of these collaborations include the Metropoolregio Eindhoven, Cleantech Regio (formerly Stedendriehoek Apeldoorn Deventer Zutphen) and Regio Arnhem Nijmegen. Eindhoven is interesting because there are many towns in the city's vicinity and fast cycle routes (or comparable) have already been realised. Another option would be to look into the role of the two transport authorities in the Netherlands. The Metropoolregio Amsterdam (MRA) and the Metropoolregio Rotterdam Den Haag (MRDH). These are interesting due to the fact that they are a formal governmental body, positioned between municipalities and the province.

All of these examples go to show that there is ample room for more research. Different cases can be chosen, as well as focus on different aspects of the policymaking process. I hope that this convinces future researchers to delve into the interesting and relevant topic of regional cycling and make contributions to its future development.



9 REFLECTION

It is now time to look back upon the research as presented. This research has given me insights which I would like to elaborate on, also drawing from information which I have not touched upon until now.

9.1 Insights gained

Improving mobility is something which is on the news almost every day. The holy grail for which everyone seems to be searching is how travel times can be reduced further. Reducing travel time is often seen as a pre-requisite to invest in new infrastructure. Be it car, bicycle or public transport, money is spent when it shortens travel time. This however seems somewhat ambiguous, as people have for a very long time already spend about 1 to 1,5 hours per day travelling on average (Hupkes, 1982). So, in essence it is not about reducing travel time, but about giving people the ability to travel further away. This however neglects the fact that travel time can also be something positive in itself. Time spend on a bicycle can also be very rewarding, because it can act as a moment to relax and enjoy being outdoors. And, physical activity in our fairly sedentary society has many positive effects which can hardly be overestimated. We must therefore not use the car logic too much and apply it to the bicycle. Simply because cycling is definitely different than driving a car. The car is mainly there to bring us from A to B, while the bicycle is much more than that in my opinion.

During this research I have seen that all actors have difficulty in finding enough funding for regional cycling. This has to do with the fact that regional cycling is relatively more costly than regular bicycle paths, since it requires higher quality infrastructure. Many interviewees have noted that the problem lies at the sectoral approach of mobility. An important report written by the RLI (the Council for the Environment and Infrastructure) in 2018 also identifies the problem of sectoral, modality bounded funding in the Netherlands. The current approach does not solve the problems, but rather the symptoms. Highways are for example widened to accommodate more traffic, while this traffic uses the highway for many short distances (RLI, 2018). The solution seems to lie in developing an intricate network, where people have many options at their disposal and are not forced to choose one. It thus is not the means of getting around that matter, it is the mobility which should be important to policymakers and politicians. The national Infrastructure fund is the only fund which reaches beyond current administrative borders (RLI, 2018), it is separated in modalities and the bicycle cannot even make use of it. While the bicycle evidently is important for our national mobility (with a modal split of 27% in 2016 (KiM, 2017)). On top of that, the national government has by far the most infrastructure funding available of all governments in the Netherlands (RLI, 2018). It may therefore come as no surprise that other actors expect the national government to help out in developing regional cycling. And this is exactly what struck me the most: the difference between the importance of cycling in the Dutch modality and how much all governments in the Netherlands spend on it combined. The expenditures are estimated to be around 500-600 million every year (E1), which is very low compared to other forms of transport and their role in our mobility system. In order to make a real impact, ambitions should simply go up. Other modalities are reaching their limits and improving the regional cycling network opens up new possibilities. I think that cycling is on a threshold now. Cycling could fulfil an even more important role in the Dutch mobility system and, most importantly, in our daily lives.



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The fast cycle route between Apeldoorn and Deventer, in Apeldoorn.



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Figure 0. Reading guide. Own work.

Figure 1. Own work, based on KiM (2017).

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Figure 5. Own work, based on Jann & Wegrich (2007).

Figure 6. Own work, based on Pülzl & Treib (2007).

Figure 7. Own work.

Figure 8. Own work.

Figure 9. Picture Part 2. Own work. Fast cycle route Arnhem – Wageningen, in Wageningen.

Figure 10. Timeline national context. Own work.

Figure 11. Fiets Snelwegen en Snelfietsroutes in Nederland. Retrieved 05-05-2019: <https://www.stichtingmilieunet.nl/andersbekekenblog/wp-content/uploads/2008/07/Fietssnelwegen-kaart-Nederland.jpg>

Figure 12. Snelfietsroutes in Beeld. Retrieved 05-05-2019: <https://www.fietssnelwegen.nl/kaart.png>

Figure 13. Overview, actors and roles. Own work.

Figure 14. Map of Gelderland. Own work.

Figure 15. Timeline Gelderland. Own work.

Figure 16. Map of fast cycle routes in Gelderland. Own work, adapted from Regio AN, (2018).

Figure 17. Map of Noord-Brabant. Own work.

Figure 18. Timeline Noord-Brabant. Own work, derived from Provincie Noord-Brabant (2016).

Figure 19. Provincie Noord-Brabant, (n.d.). Snelfietsroutes Noord-Brabant. Retrieved on 10-12-2018: <https://www.brabant.nl/-/media/781a56d7a1a845e986df84860e46fe3c.pdf>



Figure 19. References picture. Own work. Fast cycle route Apeldoorn – Deventer, in Apeldoorn. Showing a 'fietsstraat', a space shared by cyclists and cars.

Figure 20. Appendix picture. Own work. Fast cycle route Apeldoorn – Deventer, in Apeldoorn.

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APPENDIX



The fast cycle route between Apeldoorn and Deventer, in Apeldoorn.



11 APPENDIX

11.1 List of terminologies

This thesis is written in English while its topic is situated in the Dutch context. To be precise for both audiences, the used terminologies are represented below, in Dutch and in English.

Dutch	English
Fietspad	Bicycle path
Snelfietsroute	Fast cycle route
Fietssnelweg	Bicycle highway
Gemeente	Municipality
Wethouder	Alderman
Provincie	Province
Gedeputeerde	Provincial executive
(Provinciale) Staten	Provincial parliament
Stadsregio	City region (formal governmental body)
GGA Regio (Gebieds Gerichte Aanpak)	Regionally focussed approach, a cooperation of municipalities in Noord-Brabant.
Ministerie van Infrastructuur en Waterstaat	Ministry of Infrastructure and Watermanagement
Rijksoverheid	National government of the Netherlands
Beleidsmakers	Policymakers
Beleid maken	Policymaking
Trekkersrol	Driving force
Regierol	Directing role



11.2 Document analysis

The following documents were the main information sources used in order to obtain the information for the respective chapters.

11.2.1 National context

Author	Title	Description
MuConsult, 2007	Met de fiets minder file Eindrapport nulmeting	Evaluation of the programme 'Met de fiets minder file'
Fiets filevrij, 2010	Methode Fiets filevrij.	Description of the method Fiets filevrij and the lessons learned on how to realise regional fast cycle routes.
Fietsersbond, 2013	Een toekomstagenda voor snelfietsroutes	Publication about proposed coherent regional cycling network in the Netherlands.
Fietsersbond, 2015	Netwerken van regionale snelfietsroutes	Small publication about proposed coherent regional cycling network in the Netherlands.
Tour de Force, 2016a	Eindrapport snelle regionale routes	Report which sums up the work done under the first years of Tour de Force and gives recommendations when working on fast cycle routes in the future.
Tour de Force, 2016b	Agenda Fiets	Main policy document by the Tour de Force. Sums up all nine goals.
Tour de Force, 2017	Uitvoeringsprogramma Doel 3, 2017-2018	A more practice oriented document of what group 3, working on fast cycle routes, will be doing in the next two years.
Beter Benutten, 2018	Programma Beter Benutten Vervolg Eindrapportage	Beter Benutten presentation of results between 2011 and 2018.

11.2.2 Province of Gelderland

Author	Title	Description
Stadsregio Arnhem Nijmegen, 2010	Fietsvisie Stadsregio Arnhem Nijmegen	Describes the bicycle vision of the city region of Arnhem Nijmegen.
Provincie Gelderland, 2016	Notitie voor snelfietsroutes ter voltooiing van het Gelders fietsnetwerk	Attachment of a letter to the States-Provincial. Describes background, definition and role of the province in developing fast cycle routes.
Royal HaskoningDHV, 2017	Hoofdfietsnet Gelderland	Report made by a consultancy firm for the province to sketch out the technical requirements and definitions of a fast cycle route.
Provincie Gelderland, 2017	Bijlage Definitiekader Hoofdfietsnet Gelderland	Fairly similar to the Royal HaskoningDHV report, but goes into more detail as to the province's role.
Regio Arnhem Nijmegen, 2018	Ambitiedocument samenwerkingsagenda fiets	Document which described the ambition of the region. Its goal is to come up with a 'working agenda', in order to make practical realisations.

11.2.3 Province of Noord-Brabant

Author	Title	Description
GGA regio s-Hertogenbosch, 2008	Regionaal fietsplan	Policy document of cooperation of 11 municipalities for a regional bicycle plan.
Provincie Noord-Brabant, 2009	Visie Fiets in de Versnelling	Vision document for the bicycle describing the period 2009-2020.
Provincie Noord-Brabant, 2016	Uitvoeringsprogramma Fiets in de Versnelling 2016 -2020	Execution programme which describes in more detail the (proposed) developments in regional cycling in Noord-Brabant.
Provincie Noord-Brabant, 2018	B-Riders Eindrapport	Evaluation report for the provincial inventive programme B-Riders.

11.3 Interviewee list

The codes in the last column are used in the results part to refer to the specific interviews.

11.3.1 National context

Interviewee	Organisation	Role	Date	Code
Wim Bot	Fietzersbond	Main policy advisor and lobbyist	17-01-2019	E1
Birgit Cannegieter	Tour de Force	Process manager	11-03-2019	E2
Bert Zinn	Ministry of Infrastructure and Waterworks	Senior policy advisor	13-03-2019	E3
Huub Ploegmakers	Radboud University Nijmegen	Researcher on governance around cycling	11-03-2019	E4
Rick Lindeman	Rijkswaterstaat	Bicycle director within Rijkswaterstaat	19-03-2019	E5
Sjors van Duren (used for both national level and Gelderland)	Royal HaskoningDHV, Province of Gelderland and Stadsregio Arnhem – Nijmegen	Policymaker, project leader, consultant.	25-03-2019	G1

I have been present at three Expert Events which was part of analysing the national level. During these meetings I have made notes of the most important and striking observations.

Expert Events	Organisation	Topic	Date	Code
Knowledge session regional cycling	Tour de Force	Governance: managing and cooperating around fast cycle routes	29-01-2019	EE1
Knowledge session regional cycling	Tour de Force	Experiences with fast cycle routes (ANWB) Provincial elections (Fietzersbond)	26-03-2019	EE2
Knowledge session regional cycling	Tour de Force	Traffic models: what do they tell us?	11-06-2019	EE3

11.3.2 Province of Gelderland

Interviewee	Organisation	Role	Date	Code
Sjors van Duren (used for the national context and Gelderland)	Royal HaskoningDHV, Province of Gelderland and Stadsregio Arnhem – Nijmegen	Policymaker, project leader, consultant.	25-03-2019	G1
Anita Stienstra	Provincie Gelderland	Coordinator team Fiets	01-05-2019	G2
Martijn te Lintelo	Municipality of Arnhem (before that the municipality of Nijmegen)	Policymaker	28-05-2019	G3
Ed Oldengarm	Fietsersbond	Provincial volunteer for Gelderland	11-05-2019	G4

11.3.3 Province of Noord-Brabant

Interviewee	Organisation	Role	Date	Code
Roger Heijltjes	Provincie Noord-Brabant	Programme director	24-05-2019	B1
Nathan Hooghof	Provincie Noord-Brabant	Projectleader	24-05-2019	B2
Arnold Bongers	Municipality of Den Bosch	Traffic planner and policy maker	04-06-2019	B3
Caspar van Hoek	Municipality of Oirschot	Alderman	04-06-2019	B4

11.4 Interview protocol

Name of interviewee	
Organisation	
Place	
Date and time	

This interview protocol is made in order to provide clear information to the interviewees. Next to that, the interview questions help guide the interview but also leave room for spontaneous interaction (semi-structured interview).

The interview will be recorded so that later on it can be transcribed and analysed with a coding programme. The transcription will not be published and will only be read by the researcher, the supervisor and second reviewer. Quotes derived from the transcription will be used with the names of the participants, unless specific interviewees ask to do so unanimously.

The draft report, containing the results of the research, will be send to all the interviewees. This will allow the participants to give feedback and check for possible mistakes. The final report will be published and freely available to anyone, through the Wageningen University library.

Since the interviews will be in Dutch, the remaining part of the interview protocol is so too.

0. Introductie

Ik studeer Landschapsarchitectuur en Ruimtelijke Planning aan Wageningen Universiteit. Specialisatie in Ruimtelijke Planning. De thesis wordt individueel geschreven op de universiteit, met begeleiding van een docent.

Uit verkennend onderzoek voor de thesis viel op dat er veel onderzoek is naar maatregelen om fietsen te stimuleren. Veel minder aandacht gaat uit naar hoe het beleid hiervoor tot stand komt. Klassiek focust fietsen zich op een stad of dorp, de lokale schaal. Tegenwoordig kunnen fietsers grotere afstanden afleggen door opkomst van e-bikes en snelfietsroutes. Fietsen tussen steden en dorpen ligt zo binnen handbereik; de regionale schaal.

Mijn onderzoek richt zich op hoe fietsbeleid tot stand komt op deze regionale schaal. Met name provincies houden zich hier in toenemende mate mee bezig. Echter vormt dit ook een grote uitdaging,



want een integrale benadering met afstemming tussen de verschillende actoren is complex. Centraal in het interview staat de rol van de geïnterviewde als ook de organisatie welke zij vertegenwoordigen in het maken van fietsbeleid. Het theoretisch raamwerk wordt gebruikt om de vragen van dit onderzoek te structureren.

De onderzoeksvraag luidt: *Hoe komt regionaal fietsbeleid in Nederland tot stand?*

Start van de geluidsopname

1. De geïnterviewde en de organisatie

- 1.1. Wat is uw functie binnen de organisatie?
- 1.2. Wat doet uw organisatie met fietsen en fietsbeleid in het bijzonder? Sinds wanneer houdt uw organisatie zich daar mee bezig?
- 1.3. Hoe ziet u de ontwikkelingen in het regionale fietsen?
- 1.4. Met welke partijen werkt u geregeld samen of geeft u advies in het kader van regionaal fietsbeleid?
- 1.5. Waar bent u betrokken geweest bij het ontwikkelen en/of uitvoeren van regionaal fietsbeleid?

2. Agenda Setting, policy formulation, decision making

- 2.1. Hoe kwam het ontwikkelen van regionaal fietsbeleid in de door u genoemde gevallen op de (politieke) agenda?
- 2.2. Op wat voor een manier heeft u en uw organisatie invloed proberen uit te oefenen op de vorming van dit beleid? Welke middelen heeft u daartoe tot uw beschikking?
- 2.3. Op wat voor een manier hebben andere actoren invloed proberen uit te oefenen op de vorming van regionaal fietsbeleid? Welke middelen hebben die daartoe tot hun beschikking?
- 2.4. Welke rol speelt samenwerking met andere actoren in het ontwikkelen van regionaal fietsbeleid?
- 2.5. Hoe groot is de invloed van de afzonderlijke actoren op het proces?
- 2.6. Welke actoren bepalen en besluiten uiteindelijk over het te voeren beleid?



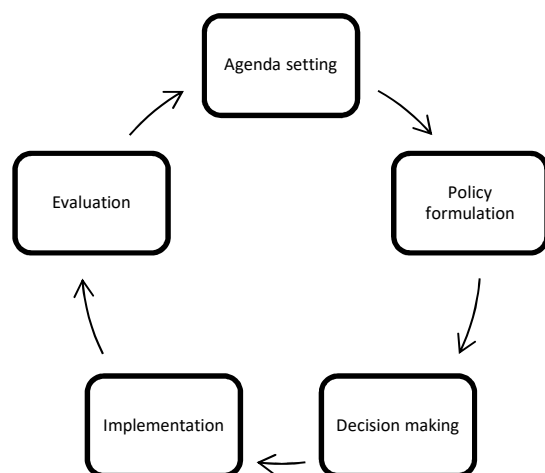
3. Implementation and evaluation

- 3.1. Bent u, of uw organisatie, ook betrokken geweest in de uitvoer van het beleid?
- 3.2. Heeft u, of uw organisatie, de uitvoer van het beleid kunnen beïnvloeden?
- 3.3. Heeft er evaluatie plaats gevonden van het gevoerde beleid en bent u hierbij betrokken geweest? Heeft dit mogelijk gediend als input voor nieuw beleid?
- 3.4. Wat zijn volgens u de uiteindelijk effecten geweest van het gevoerde beleid?

4. Tot slot

- 4.1. Wat zijn nog niet genoemde factoren die een belangrijke invloed hebben op de ontwikkeling van regionaal fietsbeleid?
- 4.2. Waar kunnen volgens u belangrijke verbeteringen in het beleidsmaking proces worden gerealiseerd?
- 4.3. Wat zijn volgens u nog interessante actoren om mee te praten in het kader van dit onderzoek?
- 4.4. Heeft u nog opmerkingen of suggesties over dit onderzoek?

Einde van de geluidsopname



11.5 List of fast cycle routes

List of completed and future fast cycle routes in Gelderland and Noord-Brabant.

Table Gelderland Fast cycle routes	Length (km)	Year of completion
Nijmegen – Wijchen	10,2	2007
Rijnwaalpad, Arnhem – Nijmegen	16	2015
De Liemers, Zevenaar – Westervoort	11	2016
Batavierenpad Noord, Nijmegen – Beuningen	7,6	2017
Batavierenpad Zuid, Nijmegen – Beuningen	7,6	2017
Nederrijnpad, Arnhem – Wageningen	17,4	± 2020
MaasWaalpad, Cuijk – Nijmegen	14	± 2020
F15, Bemmelen (connects with Rijnwaalpad) – Duiven/Zevenaar (with De Liemers)	13	± 2024
Apeldoorn – Deventer (only parts have been finished)	15	Unknown
Apeldoorn - Epe	± 13	Unknown
Zutphen - Deventer	± 18	Unknown
F12, Zevenaar - Westervoort	8,6	Unknown
Arnhem – Dieren	17	Unknown

Sources: Fietsfilevrij.nl, snelfietsroutes Gelderland.nl, slimschoonreizen.nl/vlot-en-veilig-fietsen/meer-informatie.

Table Noord-Brabant Fast cycle routes	Length (km)	Year of completion
Breda – Etten-Leur	7,5	2004
Eindhoven – Valkenswaard	7	2016
F59, Den Bosch – Oss	20	2016
F261, Tilburg – Waalwijk	19	± 2020
F58, Tilburg - Breda	20	± 2020
F270, Eindhoven – Helmond	14	± 2020
Maaswaalpad, Cuijk – Nijmegen (of which only a small part in Noord-Brabant)	14	± 2020
Veghel – Nistelrode	20,8	± 2020
F59, Den Bosch – Waalwijk	18,7	± 2020
Den Bosch – Eindhoven	32,6	Unknown
Breda – Oosterhout	7,7	Unknown
Etten-Leur – Roosendaal	19	Unknown
Bergen op Zoom – Roosendaal	14,5	Unknown

Sources: Fiets filevrij website and Provincie Noord-Brabant (2016).



Picking up speed.

Investigating the policymaking
process of Dutch regional cycling

Master Thesis Spatial Planning
Jonas Geise

