

Overtourism in Dutch coastal municipalities?

*Master's Thesis for the Spatial Planning programme,
Specialisation Planning, Land and Real Estate Development*

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ABSTRACT

Tourism has grown tremendously worldwide in recent decades and will continue to increase in the coming years. The result is that in some places the relationship between the living environment, residents, and tourists has become out of balance. As a result, overtourism can be experienced because the impact of tourism, at certain times and in certain locations, exceeds physical, ecological, social, economic, psychological, and/or political capacity thresholds (Peeters et al., 2018). This research focuses on the Dutch coastal municipalities intending to gain insight into the levers to mitigate the (potential) impact. The question answered by this research is: *'Which policy responses do Dutch coastal municipalities apply to create a balance between a good living environment and tourism, in a situation of overtourism?'*

The research is a multiple case study with a combination of quantitative and qualitative data. Firstly, the fifth percentile method was used to make a heat map of the 31 Dutch coastal municipalities. However, with methods that have already been developed, it is not possible to determine whether there is overtourism, but what the chance is in comparison with other cases. Quantitative data for six indicators has resulted in an overview of the risk of overtourism in coastal municipalities. The result of this is that three geographical areas with a high risk of overtourism can be distinguished: the Wadden Islands, the municipalities of Noordwijk & Zandvoort, and the province of Zeeland.

Subsequently, policy documents were analyzed to inventory the described impacts of overtourism and the applied set of policy measures per municipality. This study shows six environmental impacts, five economic impacts, and seven social impacts due to excessive tourist pressure. The number of impacts described varies greatly per municipality, but infrastructural problems are described most often. Most municipalities therefore focus their policy on measures such as increasing capacity and spreading visitors. A total of 17 policy measures can be distinguished to manage overtourism. Finally, the in-depth case study of three contrasting municipalities has shown which policies are effective in balancing tourism and a good living environment. This showed that the most effective balancing policy focuses on the number of tourists and capacity.

It can be concluded that municipalities have insufficient insight into the current tourism situation and the experience of local residents. Tourism policy must be aimed at an optimal balance between tourist pressure and the carrying capacity of the living environment. The set of policy measures to control this differs per destination and is highly context dependent. Although in many municipalities tourism is linked to economic policy, tourism has an influence on several policy areas and must therefore be tackled integrally.

The political and policy focus on tourism is not in line with its major and social significance. In addition, there is a lack of monitoring of tourist pressure and the carrying capacity of a destination. Monitoring is important to identify potential problems of tourism earlier. With the growth of private rental (eg. Airbnb), this pressure will only increase. When monitoring the carrying capacity of a destination, the 'perceived pressure of tourism' is important, in addition to focusing only on the 'technical pressure' of tourism.

PREFACE

With this research into Overtourism, my student days come to an end. After my HBO bachelor's degree in Management of the Living Environment and this master's study in Spatial Planning, I can apply all knowledge and skills in practice.

I was born and raised in Westkapelle, a beautiful dike village on the western tip of Walcheren in Zeeland. One of my best memories of my childhood is the beach days. When the sun did shine in the summer, I could be found on the beach with my friends. Build sandcastles, play hide-and-seek in the dunes, and bake muffins from the sand.

This brash time changed as I got older. I became aware of the benefits of tourism in my village, but also of the pressure tourism puts on this region. During my period of study, I have always managed to focus on themes related to this subject. In this thesis, I had the opportunity to really delve into the (negative-) impact that tourism can have. I, therefore, hope that this thesis can contribute to better-organized policy.

I would like to thank everyone who contributed to the research during this period. In particular, I would like to thank Prof. Dr. Peter Ache for the guidance he provided from Radboud University. What I have experienced as very pleasant is the freedom he has given me in the direction of this research. This has led to me being proud of the result in which my own interest in this problem has been expressed in this thesis.

Justin de Pagter
July 2022, Westkapelle

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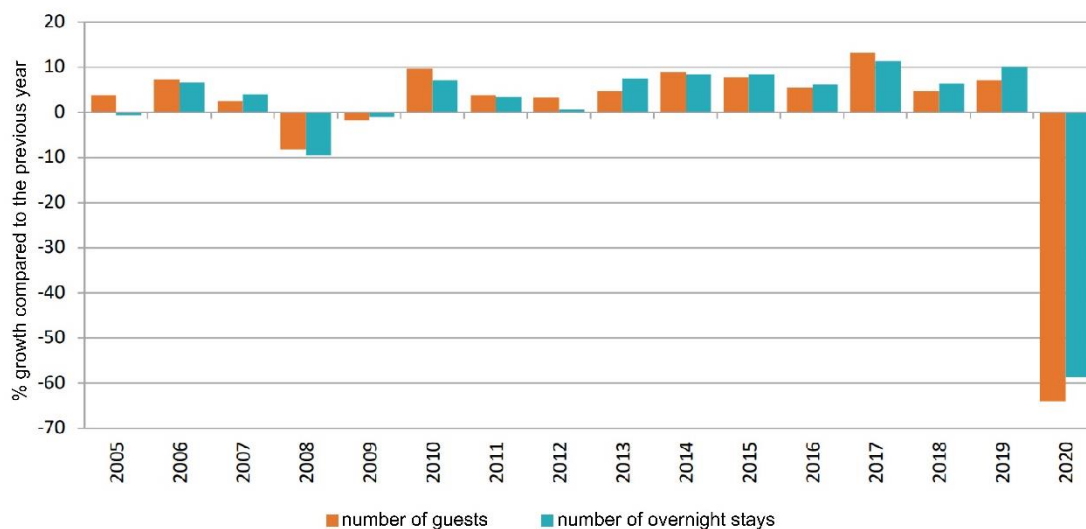
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1. INTRODUCTION AND DEFINITION

1.1 Background

Over the past sixty years, tourism has become one of the largest, and fastest-growing sectors in the world, generating almost 10 percent of global Gross Domestic Product (GDP) (Juul, 2015; KC et al., 2021; Peeters et al., 2018; World Travel & Tourism Council (WTTC), 2015; Zofia et al., 2020). After the trade and distribution, and construction sectors, tourism does score as the third largest socio-economic activity in the European Union (Juul, 2015). Except for the economic crisis in 2008, and the COVID-19 pandemic in 2020, the development of inbound tourism in the Netherlands has steadily increased compared to the previous years (figure 1) (NRIT et al., 2021; Tsoutsos, 2022). According to the Netherlands Board of Tourism & Conventions (NBTC), the number of international guests staying in the Netherlands has doubled, from approximately 10 – 11 million per year in 2006 to 2012, with an increasing trend from 2013 to approximately 20 million in 2019 (NBTC, 2019). *“Based on scenario analysis, NBTC predicts that the number of incoming overnight visitors [in the Netherlands] will grow by at least 50% from 18 million in 2017 to 29 million in 2030”* [translation by the author](NBTC, 2019, p12).

Figure 1. Development of inbound tourism in the Netherlands compared to the previous year.



Source: (NRIT et al., 2021) and translation by the author

The global expansion of capital has led to an increase in wealth. As a result, not only the elite but an increasing number of people have been given the means and free time to participate in recreational tourism (Chambers, 2009). More transport options and low costs thereof have also made it easier to travel (Pechlaner et al., 2020). In addition, digitization and technological developments have accelerated and shaped this development, such as the shared economy platform (e.g. Airbnb, Uber, HomeAway) (Koens et al., 2018; Zofia et al., 2020). This allows tourists to explore a destination without travel guides. Finally, tourists also want to see more of the 'real' and 'authentic' life, so in addition to popular attractions, other destinations also experience more tourist pressure (Chambers, 2009).

As a result of these developments, tourism has increased and its activities have become increasingly intertwined with the lives of local residents (Pechlaner et al., 2020). In many places, this phenomenon results in overload, or overtourism. *“Overtourism develops when one or more of the ecological, physical, social, psychological or economic capacities in a destination is exceeded”* (Peeters et al., 2018, p108). Jungk (1980) and Krippendorf (1986) started this discussion in the 1980s (Pechlaner et al., 2020).

But only in recent years has a tipping point been reached that has radically changed the locals' perception of tourism (Goodwin, 2017). Examples include Berlin (eg 'Berlin does not love you' sticker in the 2010s), Barcelona (eg Anti-tourism demonstration in 2014, figure 2), or Lisbon (eg residents have formed a group 'People live here') (Colomb & Novy, 2016). The rise of anti-tourism movements has even introduced the phenomenon of “tourism phobia”. Continued growth in tourism in popular destinations has sparked public debates about the desirability of the form of tourism (Amsterdam, New York City, Venice, Palawan-archipelagic province of the Philippines, Galapagos islands) (Capocchi et al., 2019; Oklevik et al., 2019).

Figure 2. Anti-tourism sticker near Park Guell in Barcelona.



Source: (Barrena, 2017).

In recent years, society has expressed concerns about protecting the natural and landscape qualities of the Dutch coast (Steen et al., 2018; Schultz van Haegen-Maas Geesteranus, 2017). Its qualities have come under pressure due to the development of the leisure offer and tourism. The National Coastal Vision (2013), with the accompanying Coastal Pact, shows that there is a need for a good balance between protecting and developing the Dutch coast (Deltaprogramma Kust, 2013; Ministerie van Infrastructuur en Milieu, 2017). Local authorities make insufficient use of available policy responses to manage the relationship between tourism and the living environment. Only when the negative effects of tourism become too pressing for the living environment, action is taken (Raad voor de leefomgeving en infrastructuur, 2019).

1.2 Research problem

However, limited research has been done into the policy responses specific to Dutch municipalities to steer towards the prevention and minimization of overtourism. Investigating how decentralized governments use instruments to manage a balance between quantitative and qualitative development of tourism will deepen the information on this type of policy-making. At the same time, it allows to deepen and broaden the findings of Peeters et al. (2018) on impacts and policy responses at the municipal level for overtourism.

Peeters et al. (2018) have used case studies to determine indicators for overtourism in the European Union to indicate the degree of overtourism. They then analyzed the effects of overtourism and policy responses. *“The ultimate goal of the study was to suggest measures to be considered by policymakers, ..., in implementing more coordinated and effective tourism management policies and practices”* (Peeters et al., 2018, p110). Because overtourism has only just entered the European policy agenda, this study has done little more than an indication of directions for policy-making. (Peeters et al., 2018). ESPON Cooperation Program has conducted several studies on assessing the

carrying capacity of a destination and the main impacts of Coastal Tourism (Kidd et al., 2020; Schuh et al., 2020).

This study aims to clarify the overtourism phenomenon in the Dutch coastal municipalities, address difficulties, and ultimately identify policy responses for local governments to steer to mitigate its negative effects. This research focuses on Dutch coastal municipalities as they are characterized by a strong increase in land occupancy, which has serious ecological and social consequences (Garay & Cànoves, 2011). In recent years, society has expressed concerns about protecting the natural and landscape qualities of the Dutch coast (Schultz van Haegen-Maas Geesteranus, 2017; Steen et al., 2018). The great economic and social significance is disproportionate to the current political and policy focus on this (Raad voor de leefomgeving en infrastructuur, 2019).

1.3 Research question

The following research question has been formulated to investigate this:

Which policy responses do Dutch coastal municipalities apply to create a balance between a good living environment and tourism, in a situation of overtourism?

Sub-questions

In order to come to a thorough answer to the main question, the following sub-questions have been determined:

1. In which Dutch coastal municipalities is the risk of overtourism the highest, compared to other coastal municipalities?
2. What are the negative effects of overtourism on Dutch coastal municipalities?
3. What types of policy responses are used in Dutch coastal municipalities to manage a balance between the living environment and overtourism?
4. What lessons can be extracted regarding actions aimed at minimizing the negative effects of overtourism in Dutch coastal municipalities where the risk of overtourism is high?

1.4 Relevance

1.4.1 Scientific relevance

The degree of overtourism in Dutch coastal municipalities has not yet been investigated. This means that there is a gap in the scientific knowledge about this perspective. Overtourism is still a fairly new phenomenon in science. Despite the fact that the study by Peeters et al. (2018) has developed a measuring instrument at NUTS-2 level, it has not yet been applied at municipal level. In addition, the impacts and policy measures are discussed at NUTS-2 level, but not at municipal level.

With this research we can test the effects and measuring instruments of Peeters et al. (2018) in practice in replication at the third tier of government. This can improve the scientific findings on overtourism and the options for action when making (municipal) policy. In addition, it contributes to the further theoretical and analytical interpretation of the possible effectiveness of policy measures..

1.4.2 Societal relevance

This research helps to better recognize overtourism and to make the right policy choices. In addition to the benefits of tourism, citizens in particular experience negative consequences when destinations are or are about to become overcrowded. Understanding strategies to limit the negative impact of tourism enables local governments to adjust their policy choices based on this information. This can improve the quality of tourism policy.

The formulation of tourist policy is mainly done at the municipal level. National and provincial policy have a limited influence on this. The interventions that have to be done with regard to tourism are

therefore best made at this local level because of the context dependence. The insights gained in this research contribute to increasing knowledge about the development of tourism policy and the possible (negative) consequences of the policy.

1.5 Report outline

Chapter 1 of this research consists of an introduction to the research problem and the research questions. Chapter 2 defines overtourism (2.1) with a literature review of the causes and consequences of overtourism (2.2), the impacts (2.5), and finally the theoretical frameworks (2.6) and the conceptual model (2.7). Literature on overtourism in coastal destinations and concerns in the Netherlands are discussed in sections 2.3 and 2.4 respectively. Chapter 3 describes the methodological framework. In chapter 4 the overtourism situation of the Dutch coastal destinations is mapped out using indicators. Based on policy, the described impacts of tourism have been mapped (chapter 5) and policy measures have been identified (chapter 6). Chapter 7 provides an analysis of the results of chapters 4, 5, and 6. In chapter 8 the findings from the analysis chapter are tested and an in-depth study is given with the aid of three cases. The last chapter discusses the conclusions and recommendations.

2. OVERTOURISM

2.1 Definition of overtourism

In the 1960s and 1970s, academics wrote about the changes brought about by growing tourism and how excessive tourism can lead to negative reactions from locals (Koens et al., 2018). In the 1980s, the subject of the 'carrying capacity' of destinations was raised (Mc Cool & Lime, 2001; Watson & Kopachevsky, 1996). As Koens et al. (2018) observed, the term visitor 'overkill' is followed by a period in which environmental sustainability and the role of policymakers and industrial actors are mainly written. According to Koens et al. (2018), the academic world has since then distanced itself from directing tourism because it was a task of industry and government. It was not until the late 2000s that the discussion started again when the term overtourism was used in media by locals (Capocchi et al., 2019; Colomb & Novy, 2016; Koens et al., 2018).

Overtourism was first often used by residents to express their concern about the (extreme) increase in tourism in their area (Dodds & Butler, 2019). While scientific literature on overtourism is limited and much of it exploratory in nature, there has been a significant increase in the number of studies since 2017 (Capocchi et al., 2019).

Goodwin (2017) defines overtourism as a phenomenon that *“describes destinations where hosts or guests, locals or tourists, feel that there are too many visitors and that the quality of life in the area, or the quality of the experience, has deteriorated unacceptably”* (Goodwin, 2017, p1). Quality of life thus refers to the emotions and perceptions of the local population. It's about their daily life and how it is affected by tourists (Gjerald, 2005; Goodwin, 2017). Dodds and Butler (2019) use much the same definition.

Peeters et al. (2018) defines overtourism as “the situation in which the impact of tourism, at certain times and in certain locations, exceeds physical, ecological, social, economic, psychological, and/or political capacity thresholds” (Peeters et al., 2018, p.22).

While Peeters et al. (2018) mainly focus on the negative consequences of tourism where a threshold is exceeded, Goodwin (2017) and Dodds & Butler (2019) also discuss the human experience. Other literature uses sustainability as the basis for the concept of overtourism, but all definitions are characterized by conflicts with residents and other local stakeholders. That's why some researchers argue that overtourism is mainly a social issue (Deery et al., 2012; Koens et al., 2018).

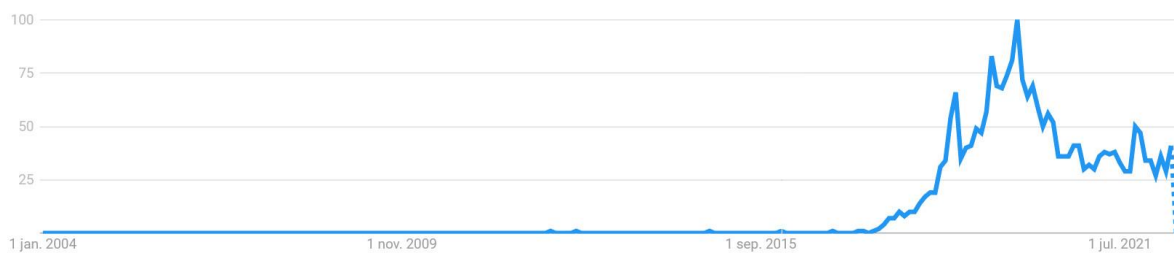
For a more structured understanding of overtourism, Capocchi et al. (2019) use three connected areas: (1) growth, (2) concentration, and (3) governance. Growth is about the increase in tourist flows, which means that more people come to certain destinations. In some places, the tourist flow is highly concentrated, causing crowding, carrying capacity, and environmental problems. Thirdly, the influence of governance on the resources, such as low-cost flights and technologies, is mentioned (Capocchi et al., 2019).

The local population has little influence regarding tourism development (Capocchi et al., 2019). To prevent overtourism, more attention must be paid to regulation and government leadership (Deery et al., 2012; Dodds & Butler, 2019; Koens et al., 2018). If more and more residents experience nuisance and indicate that their quality of life is under pressure, the government must take action to limit the nuisance (Martín et al., 2018; Russo & Scarnato, 2018; World Tourism Organization (UNWTO) et al., 2019). Many governments have always promoted tourism because it contributes greatly to the local economy. Municipalities have an essential role in steering tourism development. For example, municipalities can steer on strategic-level decisions (e.g. land use and zoning policies), but also make investments (e.g. infrastructure) to limit the nuisance caused by tourism (Komppula, 2014; Peeters et al., 2018; Postma, 2013; Tsoutsos, 2022).

The divergent themes surrounding overtourism make this concept so complex. Due to the purpose of this study, the definition of Peeters et al. (2018) will be used.

Due to the increasing pressure on destinations, the use of the concept of overtourism has also increased. The use of this term in a discussion has a lot of meaning. The figure below provides an analysis of the phenomenon of “overtourism”. Using Google Trends, it is shown what meaning this term has acquired worldwide on Google Search from mid-2017. The value of 100 is the peak popularity. A value of 50 means that the term is half as popular (figure 3)(Google Trends, 2004-2022).

Figure 3. Google Trends: use of “Overtourism”.



Source: (Google Trends, 2004-2022)

2.2 Causes and consequences of overtourism

Overtourism is a complex phenomenon that has a major impact on the quality of a destination and the experience of residents, tourists, and others involved or affected by tourism (Koens et al., 2018; McKinsey & World Travel & Tourism Council (WTTC), 2017; Pechlaner et al., 2020; Peeters et al., 2018). Basically, *“overtourism happens when too many visitors or tourists arrive in a particular place at the same time”* (Veiga et al., 2018, p6). This means that overtourism is linked to mass tourism, which means that the city becomes saturated and residents experience problems. Mass tourism is being stimulated by cruise ships docking, cheap flights, and new platforms such as Airbnb (Colomb & Novy, 2016; Dodds & Butler, 2019; NRIT et al., 2021; World Tourism Organization (UNWTO) et al., 2018). Mass tourism is sometimes so extreme that the strategy of depopulation of city centers, also called the ‘Venice Syndrome’ is chosen (Martín et al., 2018). Another cause of the worldwide growth of tourism is the “imitation effect”. The tourist behavior of the Western economies is copied in emerging economies, as a result of which other destinations also attract more and more tourists (Capocchi et al., 2019).

The research *Managing tourism growth in Europe* (Jordan et al., 2018) and the paper *The Challenge of Overtourism* (Goodwin, 2017) provide an overview of the causes and consequences of tourism growth.

Driving factors of overtourism:

- Travel has become more accessible and affordable for all classes, for example, due to the emergence of cheap flights and peer-to-peer platforms (e.g. Airbnb, Uber);
- Travelers prefer a unique travel experience, partly through inspiration from social media;
- Traditionally, tourism has focused on economic objectives (more volume);
- Specific destinations are "a must visit place" and are therefore high on the bucket list;
- Overnight stays are more likely to take place in private homes (via peer-to-peer platforms such as Airbnb, and HomeAway);

- Large groups (such as cruise and tour passengers) strongly concentrate visitors because they want to see the highlights of a destination within a certain time frame;
- Distribution strategies ensure that tourists end up in residential areas.

Source: Managing tourism growth in Europe (Jordan et al., 2018) and The challenge of overtourism (Goodwin, 2017)

The consequences that develop as a destination becomes increasingly involved with tourism are described below. Besides the obvious consequences such as pressure on infrastructure, there are also consequences such as increasing inequality among the local population and loss of authenticity. This gives an idea of the complexity of the phenomenon.

Consequences of tourism growth:

- More chance of congestion;
- Higher pressure on infrastructure;
- The demand for energy and the pressure on the environment is increasing;
- Greater chance of misbehavior by visitors and nuisance in residential areas;
- Damage to historic sites and monuments;
- Adapting to tourists which reduces (e.g. historical sites) authenticity of a destination or location;
- Price increases of products or housing;
- Some locals experience more advantages than others (inequality).

Source: Managing tourism growth in Europe (Jordan et al., 2018) and The challenge of overtourism (Goodwin, 2017)

A large concentration of people in one place, at any location, often results in logistical problems. The spreading of tourists across destinations, through peer-to-peer platforms or government policy, appears at first sight to be a consequence of overtourism. However, these strategies create a new cause for this. By spreading tourists over less visited districts/neighborhoods, they come closer to the living situation of residents of a village or city. As a result, residents within a larger area are more bothered by tourists. In addition, tourists still want to see the so-called 'must-see sights', so that the pressure does not decrease there either.

According to Goodwin (2017), destinations that experience pressure from tourism has to do with an attractive public space, the public good. Because the public good is publicly accessible and the experience of it cannot be taken into account, this attracts new travelers over and over (Goodwin, 2017).

2.3 Overtourism and coast destinations

The coast offers unique features that are attractive to tourists: sun, sea, and sand (European Commission, 2013). As a result, coastal tourism has become one of the most important forms of tourism (Papageorgiou, 2019). About 30% of global tourism takes place on the coast or in coastal zones (Ghosh, 2012). Many tourists visit the coast for sunbathing, athletics and swimming. These outdoor activities are highly dependent on the weather, which means there is a strong differentiation between the high and low seasons in European destinations (European Commission, 2013). Due to the seasonality of tourism, there is a lot of employment in the high season and less employment in the low season (European Commission, 2013; Ghosh, 2012).

The coast, and specifically the dune environment, can be seen as a system. Biological and abiotic factors provide for interaction, with each other and with the environment. Within this environment, there is a constant battle between geomorphological and biological processes in which wind and water play the most important role (Arens, Jungerius, & Van der Meulen, 2001). Coastal tourism is increasingly damaging to these vulnerable natural areas as its intensity has increased (Garcia & Servera, 2003; Ghosh, 2011; Secretariat of the Convention on Biological Diversity, 2004).

In the research of Garcia and Servera (2003) the disturbance of the geomorphological and biological processes becomes clear. This research describes the development of tourism on the island of Mallorca (Spain), where since 1955 tourism has taken a huge refuge. It discusses the consequences of the chaotic developments that have caused the coastal zone to be filled with apartment complexes. This causes erosion of the beach and dune system because the dunes no longer grow in a natural way (Arens, Jungerius, & Van der Meulen, 2001). The consequences of these two developments include overcrowded beaches (erosion) and a lowering of the groundwater level due to high pressure on water resources (Garcia & Servera, 2003).

To determine which developments are better suited to the coast, Cruz and Zaragoza (2019) have conducted research into the optimal tourist accommodation density for coastal areas because of overtourism. The Canary Islands (Spain) are used for this case study, as it is one of the main destinations for mass tourism (Cruz & Zaragoza, 2019). Limiting tourist beds is the most important measure to influence the number of tourists in a destination (Jordan et al., 2018). In order to define the optimal accommodation density of a coastal tourist area, more than just the pressure indicators must be taken into account. The pressure experienced must be taken into account to arrive at a situation in which there is a balance in the tourism of destinations. In addition, this research concludes that social interaction and consequences for nature and the environment also play an important role in determining an optimal accommodation density of a coastal destination (Cruz & Zaragoza, 2019).

The role of the local resident is important for a sustainable balance between tourists and the quality of life of a destination. Postma (2013) investigated the relationship between tourism and the community, from the perspective of the inhabitants, based on 'critical encounters'. The research was conducted on four islands (two in the southern Caribbean, and two Dutch Wadden Islands). The analyzes of the cases have shown that four levels of emotional response can be distinguished. *"These levels range from showing understanding and toning down the incident; being upset, surprised, or taken off-guard; being slightly annoyed or irritated; or being highly irritated and highly critical of the critical encounter"* (Postma, 2013, p151). Four categories can also be distinguished in how the local inhabitants deal with these experiences. *"At the first level the respondents accepted the incident and took no action; at the second level respondents adapted their behavior to avoid the problem, for example by going to a shop at a different time; at the third level they protested to the initiator of the problem, whether that was a person or an organization; and at the fourth level the respondents attempted to change the policy or the public opinion"* (Postma, 2013, p152).

2.4 Overtourism concerns in the Netherlands

Tourists who visit a destination are looking for a certain experience, for example, cultural history, nature, and beach. Use is made of facilities, infrastructure, and public space in general. When there is a situation in which a capacity threshold (physical, ecological, social, etc.) is exceeded, this causes the attractiveness of a destination to decrease (Peeters et al., 2018).

The report: "Valuable tourism: our living environment deserves it [Waardevol toersime: onze leefomgeving verdient het]" describes the situation of tourist pressure on the living environment in the Netherlands. The authors do not use the term overtourism here, as it does not have a neutral meaning. Dutch situations in which, according to this report, there are negative consequences of tourism are, for example, high visitor numbers in Amsterdam. In Giethoren, the village is used as an open-air museum, leaving tourists in backyards and mailboxes being used as trash cans. Or visitor flows in National parks such as the Biesbos and the Veluwe cause damage to nature. With regard to locations on the coast, the destinations are referred to as Veere or Domburg (Veere municipality) where investors drive up real estate prices, and Zandvoort and Scheveningen (The Hague municipality) when it comes to poor accessibility on peak days. (Raad voor de leefomgeving en

infrastructuur, 2019). One of the concerns expressed in this report is: *“The political and policy focus on tourism is not always in proportion to its great economic and social significance”* (translated from Dutch by author) (Raad voor de leefomgeving en infrastructuur, 2019, p.6).

The coast offers different functions and values. First of all, safety against the water. But also ecological value, recreational value, economic value and cultural value. For decades, the integrated national coastal policy has focused on flood protection and preserving the values of coastal areas. Over time, the coastal spatial policy has become increasingly decentralized. A new phase presented itself in 2017 when a Coastal Pact was concluded with nearly sixty parties. The Coastal Pact aims to protect the coast and to maintain a good balance between the protection and development of the Dutch coast (Ministerie van Infrastructuur en Milieu, 2017).

2.5 Overview of the impacts of overtourism

This section explains the main (negative-) effects of overtourism (table 1). The overview from the research for the European Parliament's Committee on Transport and Tourism (TRAN) is used for this (Peeters et al., 2018). This overview is subdivided into three main themes: environmental impacts, economic impacts, and socio-cultural impacts.

Environmental impacts are the most visible impact tourism has on a destination. The impact may be temporary, such as when cruise ships dock or “busloads” of tourists in high season. A more permanent impact is, for example, damage to nature due to the construction of tourism-related facilities such as hotels, airports, or roads.

Economic impacts also manifest themselves in various forms. Due to the increased demand for products and real estate, prices are rising, which can lead to gentrification. As a result of, for example, the rising house price, less affluent residents are forced to move to other places. Another example is the seasonality of Dutch tourism. Due to the climate in the Netherlands, coastal destinations depend on the summer season. The consequence of this is that there is more employment in the summer period than in the winter period. Another impact is that the perceived experience and image of a destination of visitors can be degraded. For example, they experience too many visitors at locations (eg restaurants or the beach) so that they move to another destination next time. In addition, there are often financial investors from outside the region who are interested in making a profit. They are less concerned about local development or deterioration of residents' quality of life (Ghosh, 2012).

Socio-cultural impacts are not as tangible as the other forms of impact and therefore possibly the most threatening. In tourism, it is inevitable that groups of people who differ greatly from each other (eg language, social class, and religion) meet each other, who otherwise would not meet. As a result of tourism, guests and local residents mingle. Spoiling tourism into the daily lives of residents can also lead to more annoyances and conflicts. The behavior of tourists can clash with local norms and values. An example of this is the erosion of the local language/dialect by adapting to tourists (Gjerald, 2005). As a result, tourism leads to social change that can influence the traditional values and the structure of the host society. In addition, perceived safety may be jeopardized or cultural events commercialized. In extreme forms, this can even lead to a decline in the cultural identity of the local residents.

For the social-cultural impacts, a distinction can be made between the standard of living and quality of life. Here, the standard of living refers to the direct effects such as the adjustment of general facilities, airports, and communal infrastructure. Quality of life refers to the emotions and perceptions of the local population. It's about their daily life and how it is affected by tourists (Gjerald, 2005; Goodwin, 2017).

Table 1. Impacts of overtourism.

Impact code	Processes	Type of impact
ENVIRONMENTAL IMPACTS		
ENV-CONG	Tourists' concentration on and in a limited number of routes, activities, and facilities. Tourists tend to go to move over a limited number of routes, causing congestion on these routes	Overcrowding of infrastructure (congestion), facilities, and (commercial) activities
ENV-CROW	High numbers of tourists at natural, historical, and architectural sites	Overcrowding at attractions, including natural, historical, and architectural sites
ENV-POL	Increasing usage of natural resources (land, water, and energy)	Strong/noticeable contribution to pollution of water, land, air, noise, and/or solid waste disposal problems
ENV-DAM	Increased visitation of natural, historical, and architectural sites	Damage to natural, historical and architectural sites
ENV-VPOL	(Construction of) tourism infrastructure like airports, cruise ports, and hotels disturb natural or cultural landscapes	Visual (aesthetic) pollution of natural or cultural landscapes
ENV-INFR	Increasing (sometimes sudden) demand for and usage of (tourism-directed) infrastructure, facilities, and (commercial) activities	Tourism-generated investments in tourism-specific infrastructure impair the investments in infrastructure needed by residents and the wider destination community
ECONOMIC IMPACTS		
EC-INFL	Increasing demand for certain specific tourism goods and services and production factors (intermediaries, land, capital, labor, real estate (gentrification) causing increased prices and disappearance of supply for inhabitants	Inflation of prices and reduction of the availability of certain goods, services, and factors of production aimed at inhabitants and for other sectors and functions (industry, agriculture, housing, etc.).
EC-INFR	Increasing (sometimes sudden) demand for (tourism-directed) infrastructure, facilities, and (commercial) activities	Reduction of the quality and increase in the maintenance cost for infrastructure, facilities and (commercial) activities specifically directed at inhabitants
EC-IMAG	Increasing awareness of non-residents at the destination, possibly leads to negative visitor experiences	Degradation of destination image as perceived by visitors
EC-DEP	Seasonal changes in tourist visitation and/or changes in forms and types of jobs created/demanded	Economic dependence on tourism, including being strongly impacted by seasonality and the degradation of other sectors/types of employment
EC-ACCS	Overcrowding leads to a reduction of accessibility of infrastructure, sites, and facilities	Reduced accessibility of infrastructure, sites, and facilities for both residents and visitors, inhibiting the regular performance of activities of both

		residents and visitors may not be able to reach for instance shops or work in their daily local travel
SOCIAL IMPACTS		
SOC-MARG	Increasing number of visitors vs. residents	The marginalization of the resident population (excessively high number of tourists per resident)
SOC-CRIM	Some forms of tourism tend to attract misbehaving and even criminal guests thus increasing crime at the destination	Degradation of (perceived) safety due to increased crime and violence and problems related to uncivilized behavior, alcohol usage, prostitution, gambling, and drug trafficking
SOC-RES	Tourism accommodation and services spread into residential areas, such as through Airbnb	The character of residential areas changes in such a way that they become less suitable for residents
SOC-INFR	Increasing demand for (tourism-directed) infrastructure, facilities and (commercial) activities (including gentrification)	Degradation of infrastructure, facilities and (commercial) activities specifically directed at residents
SOC-HOST	An increasing number of visitors vs. residents differing from the population in terms of ethnicity, age, gender, wealth, and political, social, religious and/or moral values	High possibility of misunderstanding, leading to varying degrees of host/visitor hostility (for instance, social conflicts and protests), more pronounced with higher 'exotic' visitor shares
SOC-MOD	Increasing visitation by non-residents of sites, events, and activities	Modification of events, activities, and architectural and historical sites to accommodate visitors and based on commercial interest
SOC-TRAD	Changes in the structure, values, and behavior of the resident population (incl. family structures and consumption patterns)	Relinquishment/weakening of cultural traditions, values, and moral standards leads to a loss of community spirit and pride and a loss of cultural identity

Source: Research for TRAN Committee-Overtourism: impact and possible policy responses (Peeters et al., 2018). The codes will be used later when coding in chapter 5.

2.6 Theoretical frameworks

This study uses the model of Peeters et al. (2018) to determine the extent to which Dutch coastal municipalities have policy responses to limit/prevent overtourism. According to this theory, policy responses have a direct influence on (1) tourism capacity, (2) overtourism impacts, and (3) tourism market mix, volume, and growth. This model also provides a complete overview of the relationships between the various variables that influence and influence overtourism. Most importantly, there is overtourism if the Tourism Impact (TI) exceeds the Tourism Capacity (TC).

Overtourism

The definition of overtourism used in this study is that of Peeters et al. (2018, p22) because it focuses specifically on the negative impact of tourism whereby a certain boundary has been crossed. This definition is broad, but it does provide a sufficient basis to arrive at a quantitative measurement of overtourism. The definition is based on the idea that measuring several indicators, in combination with the volume and growth of tourism in a place, provides insight into whether a place is overtourism. This assumes a relationship between the indicators and the volume and growth of tourism.

“Overtourism describes the situation in which the impact of tourism, at certain times and in certain locations, exceeds physical, ecological, social, economic, psychological, and/or political capacity thresholds (Peeters et al., 2018, p22)”

Tourism capacity (TC)

There is a capacity, natural or developed, available for each destination as to how many tourists can use it. When this is exceeded, it brings negative change. This concept was developed from the social science related to sustainability, that there are limits to 'unlimited' economic growth (Mowforth & Munt, 2003; Watson & Kopachevsky, 1996). A distinction is made between:

- Ecological – environmental capacity
- Physical-facility capacity
- Social-perceptual capacity
- Economic carrying capacity
- Psychological capacity (Watson & Kopachevsky, 1996)

Peeters et al. (2018) did add another category to the subdivision for tourism capacity and that is political capacity. *“Political capacity implies the incapability of local governments to grasp, manage, and govern excessive tourism growth consequences, jeopardizing host community quality of life”* (Peeters et al., 2018, p22).

Tourism impact (TI)

Tourism has an impact on the place where it takes place in various ways. There are three main areas in which tourism has an impact (as described in chapter 2.5).

1. Environmental impact - is the most visible impact that tourism has on a place. The impact may be temporary, such as when large cruise ships or "busloads" of tourists dock. To a more permanent impact, such as with permanent damage to nature.
2. Economic impact - also manifests itself in various forms. Due to the increased demand for products and real estate, prices are rising, which can lead to gentrification. In addition, too much tourism can cause too much dependence on it in a place.
3. Socio-cultural impact - is not as tangible as other forms of impact. This concerns, for example, the effects of mixing tourists with the inhabitants of a place. In extreme forms, this can even lead to a decline in cultural identity. In addition, problems in intercultural communication can also cause problems (Peeters et al, 2018).

Measuring the Tourism impact can be done using clear quantitative indicators (McKinsey & World Travel & Tourism Council (WTTC), 2017). This makes it feasible to determine the impact of tourism.

Policy responses

Overtourism is by definition an undesirable situation. There are too many negative impacts of tourism concerning the capacity for tourism. This creates a problem, a discrepancy between the current and the desired situation (Van Deth & Vis, 1990). To change an undesirable situation, a government deploys policy (Van den Heuvel, 2005). In doing so, the government must observe two basic conditions: the undesirable situation must be changeable, and changing the situation must be a government responsibility (Van den Heuvel, 2005). There are various definitions for policy, ranging from very limited to very broad. In this research, Hoogerwerf's definition is chosen: "the pursuit of certain goals with certain means and in a certain time sequence" (Hoogerwerf, 1989, p65). This definition gives the possibility to determine policy using three points (purposes, resources, and time sequence), whereby it is possible to determine which part of overtourism it affects.

Purposes

As mentioned earlier, according to Peeters et al. (2018), policy responses have a direct influence on (1) tourism capacity, (2) overtourism impacts, and (3) tourism market mix, volume, and growth in

relation to overtourism. This makes it possible to determine which of these three (or more) goals the policy is aimed at. It can also be checked whether the government in question has indeed set a target.

Resources

When a government makes policy, the choice is always made to deploy one or more policy instruments. These instruments are used by the government to achieve a goal (Hoogerwerf, 1989). Various theories are used to map and categorize the policy instruments for overtourism. Peeters et al. (2018) list 17 policy responses that appear in the examined case studies for overtourism at the European level. This can serve as a basis for recognizing and finding deployed policy instruments. These policy instruments can then be categorized. To this end, this research uses a combination of different classifications of policy instruments. Bressers and Klok (2003) make a distinction between direct and indirect policy instruments. In which direct instruments change a situation immediately and often visibly. While an indirect instrument aims to influence behavior, through which a situation has to change (Bressers & Klok, 2003). In addition, Van der Doelen (1993) makes a distinction between legal, economic, and communication policy instruments. All three are indirect policy instruments, while spatial planning policy is a direct policy instrument (Van der Doelen, 1993).

Time sequence

The time sequence refers to the time in which the policy hopes to achieve the desired situation. Within this, a distinction can be made between short, medium, or long term (Bressers & Klok, 2003). This can only be determined if timestamps are given in the policy.

2.7 Conceptual model

This research is based first of all on the conceptual model of overtourism developed by Peeters et al. (2018) (figure 4). This model shows variables that influence overtourism and what overtourism affects. Within the model, the research focuses on the following two issues:

1. Overtourism situation

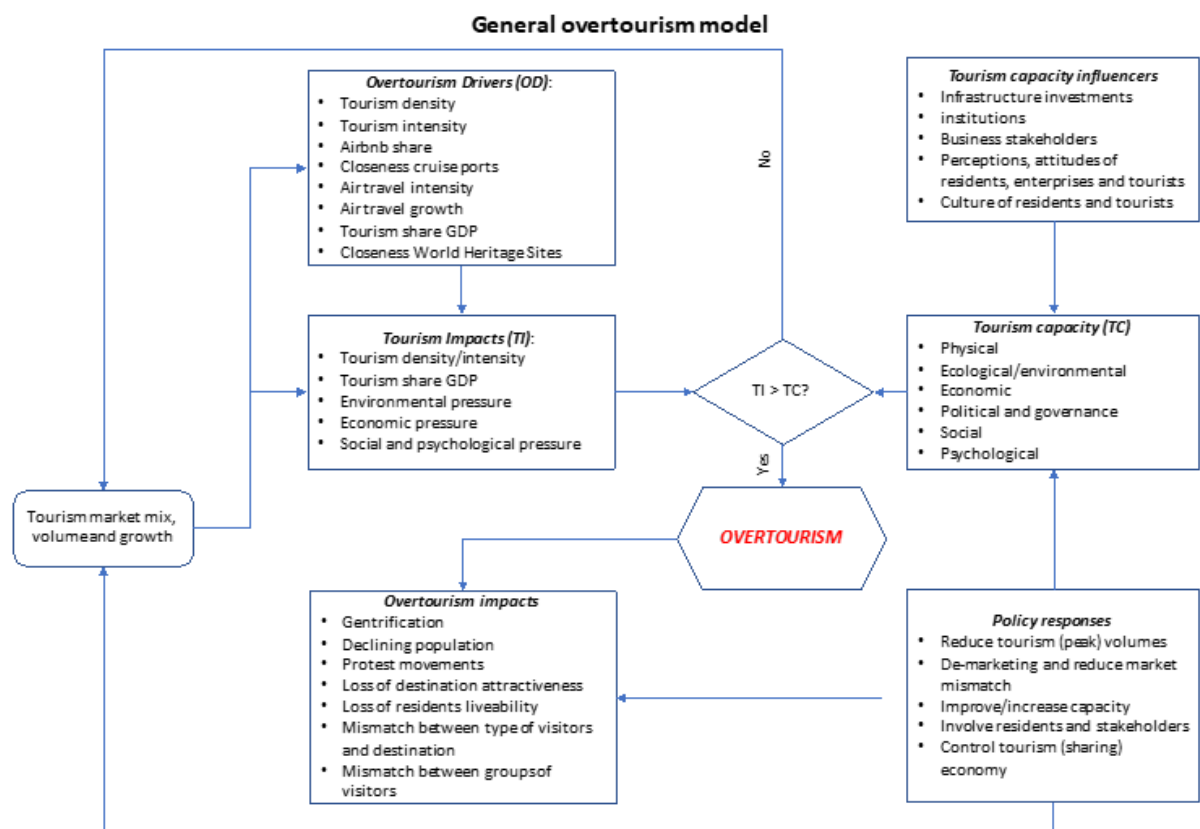
Overtourism occurs when the tourism impacts (TI) are greater than the tourism capacity (TC). This means that for Dutch coastal municipalities it must be mapped out what is the probability that TI is greater than TC. This information is necessary to determine whether there is a risk of overtourism in a municipality. The indicators mentioned in chapter 3.2.1 are used for this. These are further supplemented by the indicators mentioned in Peeters et al. (2018).

2. Policy responses to overtourism

If there is a risk of overtourism, it is examined whether municipalities have the policy to limit overtourism. The 17 policy responses from the study by Peeters et al. (2018) serve as a basis for recognizing policy. However, these are not exhaustive and new policy responses have been added during the study.

The aim of the study is therefore to fill in the 'policy responses' box for Dutch coastal municipalities. This makes it clear how they try to tackle overtourism and whether they focus on the consequences of the causes of the problem.

Figure 4. Conceptual model of overtourism.



Source: Research for TRAN Committee-Overtourism: impact and possible policy responses (Peeters et al., 2018).

3. METHODOLOGICAL FRAMEWORK

3.1. Research strategy

The research is a multiple case study with a combination of quantitative and qualitative data. Dul and Hak (2008) defined case study research as “a study in which (a) one case (single case study) or a small number of cases (comparative case study) in their real-life context are selected, and (b) scores obtained from these cases are analyzed in a qualitative manner” (Dul & Hak, 2008, p4).

A selection is made of a homogeneous group of cases (Dutch coast municipalities). Replication is applicable in a homogeneous group of cases, which contributes to the reliability and validity of the study (Van Thiel, 2022). The multiple-case study design is based on constructivist epistemology and qualitative methodology (Guba & Lincoln, 1994; Harrison et al., 2017; Moses & Knutsen, 2012).

Selection of cases

The study investigates 31 Dutch coastal municipalities (see map 1) and the risk of overtourism. Subsequently, an inventory is made of the policy responses of these municipalities to overtourism. These municipalities are homogenous since they are all located on the Dutch coast and determine the policy for a certain area. However, there are differences in, for example, size, steering capacity, and urban-rural ratio.

Map 1. Map of the Netherlands with the municipalities concerned.



Source: (Gemeenteatlas.nl, 2022) and elaboration by the author. Full-page format in Appendix I.

3.2. Research methods, data collection, and data analysis

In this section, the research method is described. For each sub-question, it is described which method was used to ultimately answer the main question. The diagram below (table 2) briefly shows the four components. These are then further described.

Table 2. Overview of the subquestions.

Subquestions	Purpose	How	Dutch coastal municipalities (31 cases)	Selection of cases (3 cases)
1. To what extent has the risk of overtourism developed in the 2015-2020 period per Dutch coastal municipality?	Overview of the degree of overtourism	Apply diagnostic tool using qualitative data	✓	
2. What are the negative effects of overtourism on Dutch coastal municipalities?	Overview of type of effects per municipality	Inventory negative effects based on policy documents	✓	
3. What types of policy responses are used in Dutch coastal municipalities to manage a balance between the living environment and overtourism?	Overview of policy responses per municipality	Inventory policy responses based on policy documents	✓	
4. What lessons can be extracted regarding actions aimed at minimizing the negative effects of overtourism in Dutch coastal municipalities where the risk of overtourism is high?	Insight into the process of how to arrive at a certain policy	Semi-structured interviews with policy makers		✓

Source: Elaboration by the author.

3.2.1. Measuring overtourism and its risks

Overtourism is a difficult concept to grasp. If the definition from chapter 2.1 is used, it is difficult to determine when a physical, ecological, social, economic, psychological, and political threshold has been crossed and there is talk of overtourism. In most cases, it is a combination of several factors that have caused a destination's capacity threshold to be exceeded. When the time has come when a destination's capacity threshold has been exceeded depends on the context. For example, one tourist destination has better infrastructural facilities, so that residents experience less nuisance. This can differ per destination, even within the same municipality. Quantitative data is used to determine the probability of overtourism per municipality. This quantitative data is used to compare the cases with each other and to rank them on the chance of overtourism.

Various indicators have been used to gain insight into the municipalities that are most likely to experience overtourism. The higher the number or percentage per relevant indicator, the greater the chance of overtourism in that municipality. The indicators are based on the main impacts of overtourism: environmental, economic, and social-cultural (chapter 2.5). McKinsey & Company and World Travel & Tourism Council (2017) have developed a tool to provide more insight into the tourism industry of a particular (urban) destination.

The European Tourism Indicator System (ETIS), developed by the European Commission, is another tool to measure the performance of results using 43 indicators (European Commission, 2016). The main difference between these methods is the number of indicators: 43 in the study by the European Commission, and nine in that study by McKinsey et al. (2017).

Peeters et al. (2018) used the method of McKinsey et al. (2017) in their study of overtourism, not at the city level but at the NUTS-2 level. Due to the variation in size, other indicators are therefore also used.

In this study, the indicators of Peeters et al. (2018) and McKinsey et al. (2017) cannot be directly adopted. This study examines the municipal level (LAU level = Local Administrative Units).

Geographically, this is between the NUTS-3 level and the city level. For this reason, this study differs from the two aforementioned studies on several indicators.

** NUTS stands for 'Nomenclature of Territorial Units for Statistics' and thus forms the geographical unit for European statistics. NUTS-1 are major socio-economic regions, NUTS-2 are basic regions for the application of regional policies and NUTS-3 are small regions for specific diagnoses. In the Netherlands, NUTS-1 areas form four parts of the country, NUTS-2 the provinces, and NUTS-3 COROP areas (a number of municipalities within a province)(Eurostat, 2014; Pechlaner et al., 2020).*

This study does not determine whether there is overtourism in a particular destination, but the probability of this in comparison to the other Dutch coastal municipalities. There is no standard established indicators and threshold values for overtourism. For this reason, it is determined for each indicator how a municipality in question scores in comparison to other coastal municipalities. This method is useful in an initial exploration of overtourism at destinations. A high score therefore, does not mean that there is overtourism, but that compared to the other destinations, the chance of this is considered the greatest. To get a more complete picture of a destination, the European Tourism Indicator System (ETIS) is a better technique. However, the aim of this study is to gain insight into a broader perspective of municipal policy to prevent overtourism. It is not necessary to use the ETIS technique for this.

To rank the coastal municipalities for the risk of overtourism, this study follows the same method as used in the study by McKinsey & Company and World Travel & Tourism Council (2017). The fifth percentile method is used here, which means that the municipalities are divided into five groups. In other words, the data from the cases, 31 Dutch coastal municipalities, are divided into clusters of 20%. The top 20% receive a score of 4, and the lowest 20% receive a score of 1. The intermediate groups are successively given the score '2', '3' and '4'. If the data is skewed, this is a method to limit these extremes in order to arrive at a heat map. A heatmap is a table that provides insight into the risk by means of a color display. It is indicated on the quintile with red (highest risk) and the fifth quintile with dark green (lowest risk).

In addition, several indicators contain outdated data (eg. beach holidaymakers per year), or have been calculated to give the best possible approximation of reality (eg. number of tourist overnight stays). By applying an ordinal measurement level, the influence of, for example, outliers is reduced (Peeters et al., 2018).

Top quintile	Top 20 percent of the sample in terms of overtourism risks (highest risk)
Second quintile	Top 40 percent of the sample in terms of overtourism risks
Third quintile	Top 60 percent of the sample in terms of overtourism risks
Fourth quintile	Bottom 40 percent of the sample in terms of overtourism risks
Fifth quintile	Bottom 20 percent of the sample in terms of overtourism risks (lowest risk)

An equal distribution of 31 municipalities is not possible. Therefore the middle part, the third quintile contains 7 subjects, and all the others 6.

This study investigated the indicators shown in table 3. These deviate from the indicators used by McKinsey et al. (2017) (city level based) and Peeters et al. (2018) (NUTS-2 level based). This has several reasons. First, not the same data is available at the municipality level as at the city or NUTS-2 level. For example, displaying the indicator Gross Municipal Product has expired in 2017 (Vereniging van Nederlandse Gemeenten, 2018, p. 2). This indicator has been replaced by the indicator 'share of recreation and tourism in employment'. Second, several indicators were not considered relevant for the municipal risk of overtourism. For instance, air transport, because of the situation of Dutch coastal recreation, is not an indicator that is relevant for this. Third, data are available that can indicate the degree of overtourism, such as the number of coastal holidaymakers per kilometer of coastline (Broer et al., 2011). This has not been included in the other studies because it applies specifically to the coast.

Another indicator not included in this study is TripAdvisor reviews. In the study by McKinsey et al. (2017), TripAdvisor reviews are used for three of the nine indicators. Reviews (not even Google, for example) are not included because they are not available per municipality, only for sights or attractions per village or city. It was not feasible to do a review analysis of all coastal towns using TripAdvisor or Google.

Below is an overview of the indicators from the study by McKinsey et al. (2017) and Peeters et al. (2018). The table describes which study uses which indicators.

Table 3. List of variables used in this study to assess the risk of overtourism.

Indicator name	Unit	McKinsey	Peeters et al.	This study
Tourism share GDP	%	Yes	Yes	No
Share of recreation and tourism in employment	%	No	No	Yes
Growth in tourist arrivals	%/CAGR	Yes	No	Yes
Growth of number of bed-nights	%/year	No	Yes	No
Visitor area density	number/km ²	Yes	No	No
Tourism density	bed-nights/km ²	No	Yes	Yes
Visitors population density	number/resident	Yes	No	No
Tourism intensity	bed-nights/resident	No	Yes	Yes
Share of negative TripAdvisor reviews	%	Yes	No	No
Air transport seasonality 2016 (ratio between highest and lowest monthly arrivals)		Yes	Yes	No
Share of reviews limited to top 5 attractions	%	Yes	No	No
Annual mean PM10 concentration	µgram/m ³	Yes	No	No
Share of top 20 TripAdvisor attractions that are historic sites	%	Yes	No	No
Growth of air transport (2016 over 2015)	%	No	Yes	No
World heritage site closeness	number within 30 km	No	Yes	No
Cruise harbour closeness	number within 10 km	No	Yes	No
Airport closeness	arrivals within 50 km	No	Yes	No
Airbnb average shortest distance to booking.com addresses	km	No	Yes	No
Airbnb share of booking.com plus Airbnb	%	No	Yes	No
Airbnb nights intensity	bed-nights/resident	No	No	Yes
Airbnb nights density	bed-nights/km ²	No	No	Yes
Airbnb accommodation intensity	number/resident	No	No	Yes
Airbnb accommodation density	number/km ²	No	No	Yes
Airbnb overnight stays per active Airbnb	number/number	No	No	Yes
Air transport intensity	air passengers/bed-night	No	Yes	No
Number of UNESCO World Heritage Sites	number	No	Yes	No
Combined intensity growth score		No	Yes	No
Beach holidaymakers per year per km coastline	number	No	No	Yes

Source: Elaboration by the author.

3.2.2. Impacts of overtourism

The aim of this research is, among other things, to identify policy responses for Dutch coastal municipalities to reduce the negative effects of overtourism. It is, therefore, necessary first to gain insight into which negative effects of tourism can be identified in the Dutch coastal municipalities.

Based on policy documents and policy visions, a number of relevant documents per municipality have been coded using ATLAS.TI. An overview of the sources consulted per municipality is given in appendix III. These sources are used to identify the impacts and the policy responses. By making an

inventory of the effects, insight has been gained into which soft effects occur to a greater or lesser extent. In addition, it can provide insight into which municipality is more or less aware of the effects. The overview of negative impacts of overtourism as described in chapter 2.5, from the study by Peeters et al. (2018), was used to code the documents. A total of eighteen types of effects can be distinguished, with the key domains (1) environmental, (2) economic, and (3) socio-cultural.

It is important to state that the results are based on some relevant policy documents per municipality. It is thus based on literature as established in this study. The absence of an impact clearly does not necessarily mean that no impact appears, it does not emerge clearly from the literature used.

3.2.3. Policy responses to overtourism

In order to gain insight into the measures that municipalities take to manage the negative impacts of tourism, policy documents and policy visions have been coded per municipality. The same method and documents have been used for this as for identifying the impacts of overtourism.

The measures identified in the study by Peeters et al. (2018) were used as the basis for coding. In this study, the policy responses to overtourism were inventoried for 41 cases at the NUTS-2 level. These policy measures have also been identified in the policy documents of the Dutch coastal municipalities. An additional measure has been added to the basic set of measures: encourage tourists to stay longer (see further description in chapter 6.1).

3.2.4. In depth-case study

After analyzing the degree of overtourism, effects, and policies, cases are selected based on expectations about their information content (Flyvbjerg, 2006). Three case studies are used to zoom in on situations where is a high risk of overtourism. These cases each represent a separate type of municipality. The purpose of this deepening is to gain insights into the process and the choices made. Why, at what moments, were certain choices made or not. The answers to this provide insight into the question of which policy responses at Dutch coastal municipalities help to maintain or reduce the balance between the living environment and tourism.

In each case, desk research was combined with an interview with a tourism policy advisor from the municipality concerned. Texel has indicated that it cannot cooperate with an interview but has sent various documents. In combination with a short email exchange, it was also possible for this case to collect sufficient information for a more extensive analysis.

Policy analysis

The relevant tourism policies have been used for policy analysis. These are coded based on the impact codes (see chapter 5) and the policy measures (see chapter 6). The policy documents used for these two chapters have been further expanded with other documents such as newspaper articles. The Grounded Theory method was used for these documents, as described below.

Interview

In addition to the existing literature and documents, interviews were held with tourism policy advisors. Both semi-structured interviews were analyzed with ATLAS.ti using the Grounded Theory method (Corbin & Strauss, 2008). After transcribing the interviews, the first step is to open coding the first interview. For each text fragment, it is indicated what its main theme is, by adding a label/code to it (Dingemanse, 2017). By also adding memos, it becomes clear why a certain, perhaps unclear, code is being labeled. After coding the first interview, the codes were critically examined and 'cleaned up'. The second interview was then coded.

After open coding of the various text fragments, codes were compared with each other, and associated codes were merged. By introducing structure in the codes, main and side issues are separated from each other and eventually main categories and subcategories arise (Corbin & Strauss, 2008). Ultimately, this resulted in seven main categories, which can explain the different subcodes:

1. Threats
2. Policy municipality of Veere/Noordwijk/Texel
3. Current situation Veere/Noordwijk/Texel
4. Insight into data (monitoring)
5. Tourism sector developments
6. Collaboration
7. Future

The interviewees permitted for the interviews to be recorded.

3.3. Reliability and validity of the research

“In the case of study research, triangulation is a necessary way of working to ensure reliability and validity” (Van Thiel, 2022, p2). Therefore, content analysis of documents and interviews are combined. This descriptive part of the study is a replica of the study by Peeters et al. (2018) in many respects. Replica research increases reliability and helps standardize measuring instruments (Van Thiel, 2022). This increases the external validity of the approach of Peeters et al. (2018). By using the measuring instruments and method of documentation from this study, and systematically coding them with the help of ATLAS.TI, the accuracy of the research is increased. The high number of units of study increases the reliability of the findings.

To guarantee sufficient validity, existing measuring instruments and assessment frameworks are used from the research by Peeters et al. (2018). In this study, a homogeneous group is used, Dutch coastal municipalities, but with variation in size, location, and governance. In this study with a homogeneous group of cases, the internal validity will be high and the external validity low (Van Thiel, 2022).

4. INDICATORS OF OVERTOURISM

This chapter discusses the indicators that provide insight into the risk of overtourism in Dutch coastal municipalities. Different things are explained for each indicator used.

First, why this indicator was used, and why there may have been a departure from the studies of McKinsey et al. (2017) and Peeters et al. (2018). Secondly, a description is given for each indicator of what it means, how it was measured and how the data was collected. Finally, the results per indicator are described. The chapter is concluded with a heat map that provides insight into the risk of overtourism per coastal municipality, based on the aforementioned fifth percentile method.

4.1 Tourism density and intensity

4.1.1 The indicator

The indicator tourism density describes the number of tourist overnight stays per km². Tourism intensity describes the number of tourist overnight stays per inhabitant. The combination of these indicators provides a more balanced picture of the number of overnight stays per municipality. The number of tourist overnight stays per inhabitant can be relatively low in terms of size in a small municipality. However, due to its small size, it can be experienced as problematic more quickly. Conversely, the number of tourist overnight stays per km² can be low in a large municipality in terms of size, while the number of tourist overnight stays per inhabitant is still very high. As a result, the resident/tourist ratio can become unbalanced, which has consequences for the social relationships in a municipality.

Previous studies by McKinsey et al. (2017) and Peeters et al. (2018) both use the indicators of tourism density and tourism intensity. The difference here is that the former study uses the number of visitors per square kilometer and resident, while Peeters et al. (2019) researched the number of bed-nights. Because there is no available data on the number of visitors per municipality per year, the number of tourist overnight stays (bed/nights) is calculated using the municipal tourist tax.

4.1.2 Data collection

The indicators density and intensity both need the data set 'number of tourist overnight stays'. At the municipal level, there are (usually) no direct data available on the number of tourist overnight stays. Various municipalities do mention numbers in, for example, policy plans, but often only for a specific year. It was decided not to include these given numbers in municipal plans and visions so one method was applied to all municipalities.

For this reason, it was decided to come to an approximation of the number of tourist overnight stays by dividing the total tourist tax of a municipality by the rate of tourist tax per person per night. If there was a tariff differentiation in a municipality (high/low season, location differentiation, type of accommodation) an average of this was chosen (see further explanation of tariff differentiation chapter 6.2). Policy responses to overtourism). The total tourist tax is obtained via the website Waarstaatjegemeente.nl. The total tourist tax is collected on this through the annual accounts of the municipalities. The 2017-2020 data were available on this website.

Subsequently, the "Ordinance on the levy and collection of tourist tax year 2017-2020 [Verordening op de heffing en de invordering van toeristenbelasting jaar 2017-2020]" for each municipality for the years 2017-2020 was collected via the website: officielebekendmakingen.nl. The tax per person per overnight stay is then stated under the tax rate article. About 1/3 of the municipalities, mainly in the province of South Holland, charged a different rate for a standard overnight stay (for example a hotel) or an overnight stay at a camping site. As mentioned, in those cases the average tax rate of hotel/standard overnight stay and camping site/camping is used.

The other data, the population per municipality and the total surface area were obtained from Eurostat data for the year 2021. This can be downloaded from the Eurostat website under the Local Administrative Units (LAU) section (Eurostat, 2021). In addition, there are two municipalities, Rotterdam and Westland, which levy a percentage tourist tax, instead of a fixed amount. In those cases, the Center for Research on the Economics of Local Governments (COELO) of the University of Groningen was consulted. Data files can be downloaded from the website for taxes per municipality from 2014-2022, where the average amount per night is given and not a percentage (COELO, 2014-2022).

The municipality of Waadhoeke does not levy a tourist tax and therefore the number of tourist overnight stays is based on figures from 2018 in the 'Nota for recreation and tourism of the municipality of Waadhoeke [Nota recreatie en toerisme gemeente Waadhoeke]' (Gemeente Waadhoeke et al., 2020). The municipality of Noardeast-Fryslân merged in 2019, but figures are available from 2017, when this municipality still consisted of three municipalities. The Municipality of Het Hogeland also merged in 2019. The average number of tourists for this municipality has been calculated for 2019.

COVID-19

In January 2020, the first signs of the COVID-19 outbreak came in the Chinese city of Wuhan. To prevent the virus from spreading, the Dutch government instituted the first intelligent lockdown in March 2020. During this year there have been periods of relaxation and tightening of measures, with periods in which all holiday parks had to remain closed (Rijksoverheid, sd). If the corona year 2020 is not included in the calculation of the tourism density, only the municipalities Schouwen-Duiveland and Vlieland will change in the ranking. If 2020 is not included in the calculation of the tourism intensity, only the municipalities Den Helder and Harlingen will change the ranking. For this reason, the average over four years is calculated in this calculation (including the corona year 2020).

4.1.3 Results

Table 4 shows the tourism density and tourism intensity. The tourism density (bed-nights per km²) varies between 456 and 35532 bed-nights per km² and is highest in Zandvoort, Veere, and 's-Gravenhage, respectively. The tourism intensity (bed-nights per inhabitant) varies between 0.44 and 725, and is highest in Schiermonnikoog, Vliegland, Ameland, Terschelling, and Texel. In other words, the Dutch Wadden Islands. Table 5 provides an overview of the percentile distribution for tourism density and tourism intensity.

Table 4. Overview of the tourism densities and intensities for Dutch coastal municipalities (2017-2020).

Indicator	Value	Municipalities with highest or lowest values
Tourism density (bed-nights/km²)		
Average	13686	
Minimum	456	Waadhoeke , Het Hogeland, Westland
Maximum	35532	Zandvoort , Veere, 's-Gravenhage
Tourism intensity (bed-nights/capita)		
Average	114	
Minimum	0,44	Westland , Heemskerk, Rotterdam
Maximum	725	Schiermonnikoog , Vlieland, Ameland, Terschelling, Texel (Dutch Wadden Island)

Sources collected from: Population and total area of municipality (Eurostat, 2021); Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022).

Table 5. Overview of the percentile minimum and maximum values for the Dutch coastal municipalities for tourism density and intensity (2017-2020).

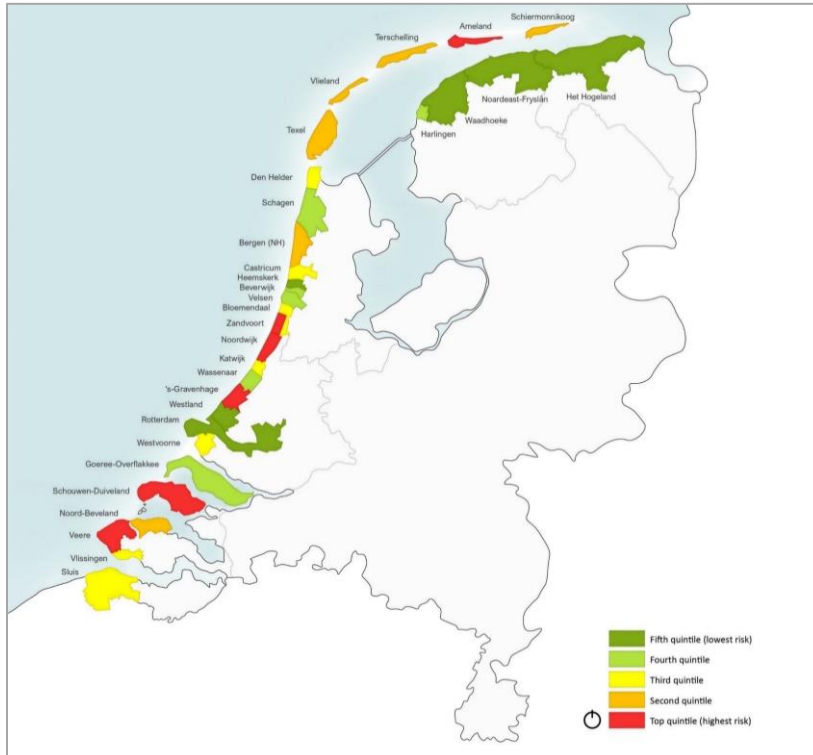
Percentile	Tourism density (bed-nights/km ²)	Tourism intensity (bed-nights/capita)
1 st	456 - 6457	0,44 - 5
2 nd	6457 - 10259	5 - 10
3 rd	10259 - 16506	10 - 47
4 th	16506 - 20596	47 - 215
5 th	20596 - 35532	215 - 725

Sources collected from: Population and total area of municipality (Eurostat, 2021); Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022).

4.1.4 Partial conclusion

The data from map 2 show that the tourism density of municipalities in the province of Zeeland and the Wadden Islands score high and municipalities in the northeast of the Netherlands have a low score. In addition to the high tourism density in the province of Zeeland, the municipalities of 's-Gravenhage, Noordwijk, and Zandvoort also have a high density.

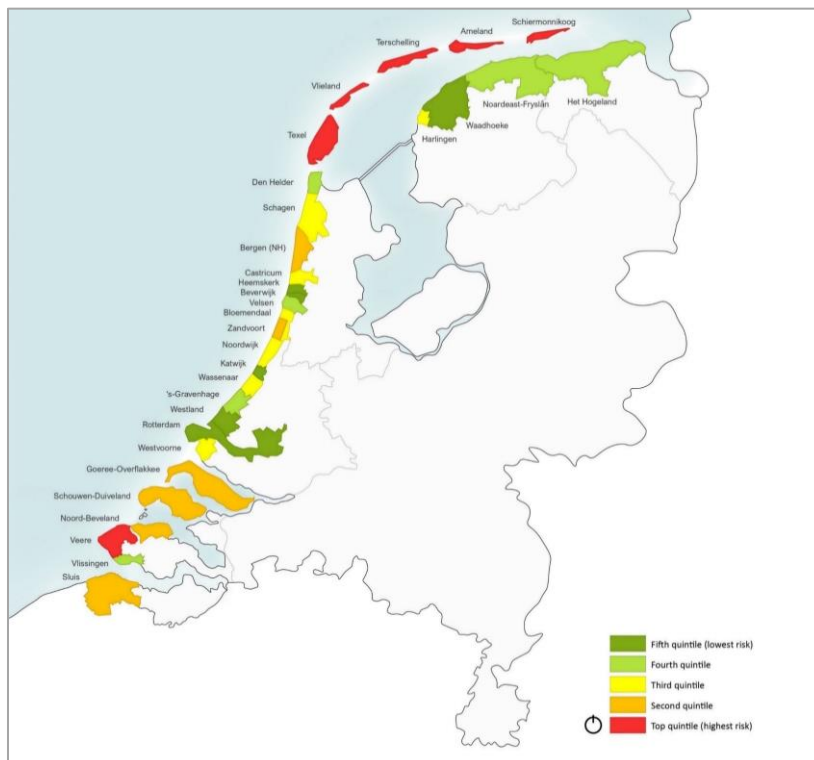
Map 2. Tourism density (5th percentile ranks of overnight visitors/km²) (number/km²) (2017-2020).



Sources collected from: Population and total area of municipality (Eurostat, 2021); Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022). Full-page format in Appendix I.

The data from map 3 show that the municipalities in the province of Zeeland and the Wadden Islands score high for the indicator tourism intensity, while municipalities in the Northern Netherlands and the province of South Holland score low. These results resemble the tourism density in which the same municipalities score high for both indicators. Almost all municipalities result in the same percentile, one higher or one lower. Apart from that, there are three exceptions in which the percentile differs by 2 groups (Goeree-Overflakkee, Katwijk, and Noordwijk). 's-Gravenhage scores on tourism density in the top percentile, while tourism intensity scores in the third percentile.

Map 3. Tourism intensity (5th percentile ranks of overnight visitors/resident) (number/citizen) 2017-2020.



Sources collected from: Population and total area of municipality (Eurostat, 2021); Total tourist tax collected per year (waarstaategemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022). Full-page format in Appendix I.

4.2 Growth of bed-nights per year

4.2.1 The indicator

The growth in the number of overnight stays per year is another indicator to measure the degree of (over)tourism. If the number of overnight stays increases over the years, this can indicate a disproportionate growth in tourism in a municipality. A high growth rate over the years 2017-2019 may mean that the number of tourists in 2017 (base year) was relatively low and that it increased in 2018 and 2019. Relatively slow growth can also mean that a municipality is already experiencing high tourist pressure and that these numbers will continue to grow. A decrease in the number of tourists may mean that measures against overtourism have had an effect.

In the study of McKinsey et al. (2017), the indicator growth in tourist arrivals is used. Because the number of (day) tourists at the NUTS-2 level is unknown, Peeters et al. (2018) propose to use the growth of the number of bed-nights. Data on tourist arrivals (day visitors) is also unknown at the municipal level. It has therefore been decided to take the growth in the number of tourist overnight stays as the starting point.

4.2.2 Data collection

The growth in the number of tourist overnight stays per municipality per year has been calculated in the same way as in the previous paragraph, via the tourist tax (see chapter 4.1.2).

The compound annual growth rate (CAGR) was used to determine the percentage of compound annual growth. The total tourist tax received is divided by the (average) tourist tax per person per night. The year 2017 has been taken as the base year. For the following years, it has been calculated

what percentage they have grown compared to the previous year. Finally, the average growth of the various years is calculated as a percentage.

The COVID-19 year 2020

As mentioned in the previous section, the outbreak of COVID-19 has had a major impact on the tourism and recreation sector. Campsites and holiday parks have been closed at some point, as a result of which almost all municipalities have experienced a decrease in the number of tourist overnight stays. Two municipalities had no decrease but a small increase in the growth in the number of tourist overnight stays from 2020 over 2019: the municipality of Westvoorne and the municipality of Heemskerk. Because 2020 gives a wrong impression of the number of tourist overnight stays, this has not been included in this growth calculation.

5.2.3 Results

Table 6 provides an overview of the growth of bed-nights per year for Dutch coastal municipalities, with the percentile distribution in table 7. It is striking that for 11 of the 31 municipalities a decrease, or no increase, can be seen in the number of tourist overnight stays. The Municipality of Waadhoeke has no decrease/increase because the same number of tourist overnight stays has been used for all years (see chapter 4.1.2). The municipality of Het Hogeland merged in 2019. Therefore, this municipality has a neutral growth rate (0% growth/decrease). With an average growth of 3.5%, the number of tourist overnight stays in Dutch municipalities is therefore increasing every year. If the growth percentage is calculated except for the three highest scoring municipalities and the three lowest scoring municipalities, the growth percentage is +2.5% over the period 2017-2019. In addition, it is notable that all five municipalities in the province of Zeeland have positive growth, whereas this is approximately half of the municipalities in the other provinces.

Table 6. Overview of growth of bed-nights per year for Dutch coastal municipalities averages over 2017-2020.

Indicator	Value	Municipalities with highest or lowest values
Growth of bed-nights per year (2017-2019) (%/CAGR)		
Average	3,5%	
Minimum	-17,4%	Bergen (N.H.), Zandvoort, Katwijk
Maximum	38,0%	Schagen, Noardeast-Fryslân, Noordwijk

Sources collected from: Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022).

Table 7. Overview of the percentile minimum and maximum values for the Dutch coastal municipalities for growth of bed-nights per year.

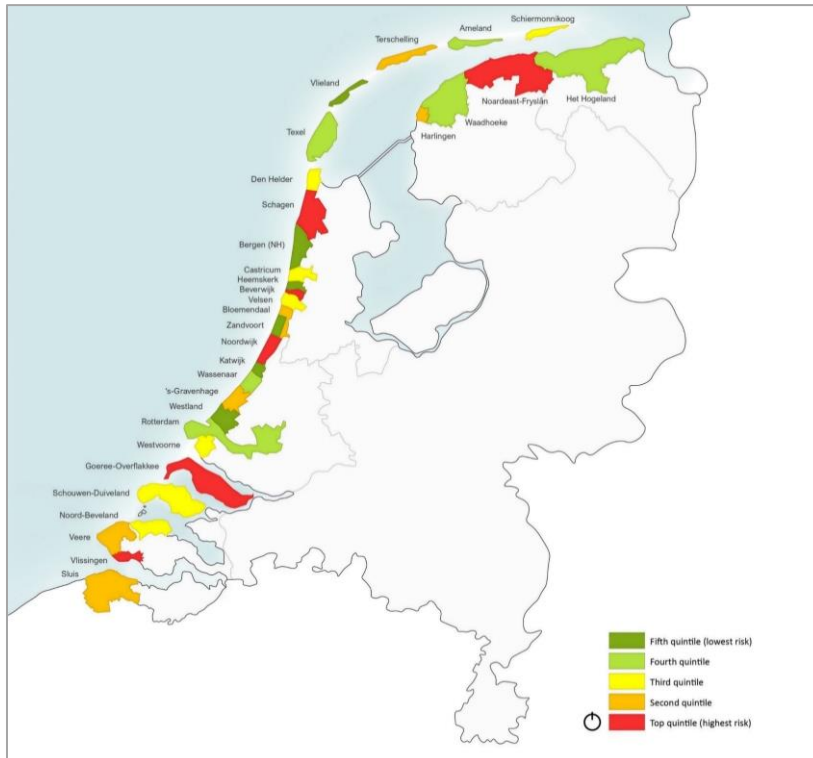
Percentile	Growth in bed-nights per year (2017-2019)
1 st	-17,4 % - %-2,2
2 nd	-2,2% - 0,3%
3 rd	0,3% - 4,5%
4 th	4,5% - 8,5%
5 th	8,5% - 38,0%

Sources collected from: Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022).

4.2.4 Partial conclusion

It is striking that all coastal municipalities in the province of Zeeland show relatively high positive growth (map 4). In the other provinces this is about half of the coastal municipalities and no province-wide relatively high growth.

Map 4. Growth of bed-nights per year (2017-2019) (5th percentile ranks of growth percentage (%/CAGR)).



Sources collected from: Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officiële bekendmakingen.nl, 2014-2022) or (COELO, 2014-2022). Full-page format in Appendix I.

4.3 Importance of tourism

4.3.1 The indicator

The indicator 'importance of tourism' is about the extent to which tourism is important for a municipality from an economic point of view. Tourism generates money for a municipality (tourist tax) and its inhabitants (tourist overnight stays). In addition, tourism has an impact on many other sectors such as education, hospitality, culture, retail, infrastructure, and mobility (NBTC, 2019). However, the greater the share of this indicator, the more dependent a municipality can become on tourism.

Both McKinsey et al. (2017) and Peeters et al. (2018) use this indicator. For this, they look at the share that tourism has in the Gross Domestic Product (GDP). The share of tourism is only known at the country level (Eurostat, 2021). Peeters et al. (2018) calculated the GDP at the NUTS-2 level based on the average income per bed-nights and the number of nights rented. NUTS-2 level is province level in the Netherlands. The results of this research for these indicators are: Zeeland (top quintile: highest risk), Zuid-Holland (fifth quintile: lowest risk), Noord-Holland (third quintile), Friesland (fourth quintile), and Groningen (fifth quintile: lowest risk) (Peeters et al., 2018, p146).

At the municipal level, this indicator is not directly measurable, as was done in the above studies. The main reason is simply that the average earnings per bed-nights are unknown. In addition, the Gross Municipal Product is no longer measured from 2017 because results have become "incomparable"

(Vereniging van Nederlandse Gemeenten, 2018, p. 2). For this reason, it was decided to measure this indicator based on the total number of direct jobs in the recreation & tourism sector per municipality. The indirect jobs, related to tourism, are not included. This gives an approximation of the size of this sector responsible for direct employment in a municipality.

4.3.2 Data collection

To show the economic impact of tourism in differently, the percentage in the recreation & tourism sector has been used over the period 2016-2020. The total number of jobs and the number of jobs in the R&T sector have been collected from these five years. Ultimately, the average percentage of recreation and tourism jobs is given to the total number of jobs in the period 2016-2020. The data is collected from the National Job Information System [Landelijk Informatiesysteem van Arbeidsplaatsen] (LISA). Data is available at the municipal level on this website. The total number of jobs is meant: full-time jobs, part-time jobs and temporary workers. This also applies to the total number of jobs in the Recreation & Tourism sector (LISAa, 2016-2020).

4.3.3 Results

Table 8 shows what percentage of the total number of jobs is employed in the recreation and tourism sector. This share is the largest for the Dutch Wadden Islands, with Vlieland, Schiermonnikoog, and Ameland at the top. In addition, the municipality of Bloemendaal and the municipality of Veere have a high scores. Municipalities around the municipality of Westland and the northeast of the Netherlands score low on this indicator. Table 9 shows the percentile distribution of this indicator.

Table 8. Overview of share of recreation and tourism jobs in employment for Dutch coastal municipalities, average over 2016-2020.

Indicator	Value	Municipalities with highest or lowest values
Share of recreation and tourism jobs in employment (2016-2020) (%)		
Average	17,5%	
Minimum	3,4%	Westland, Waadhoeke, Noardeast-Fryslân
Maximum	56,7%	Vlieland, Schiermonnikoog, Ameland

Sources collected from: National Job Information System (LISAb, 2016-2020) (LISAa, 2016-2020)

Table 9. Overview of the percentile minimum and maximum values for the Dutch coastal municipalities for a share of tourism in employment (average over 2016-2020).

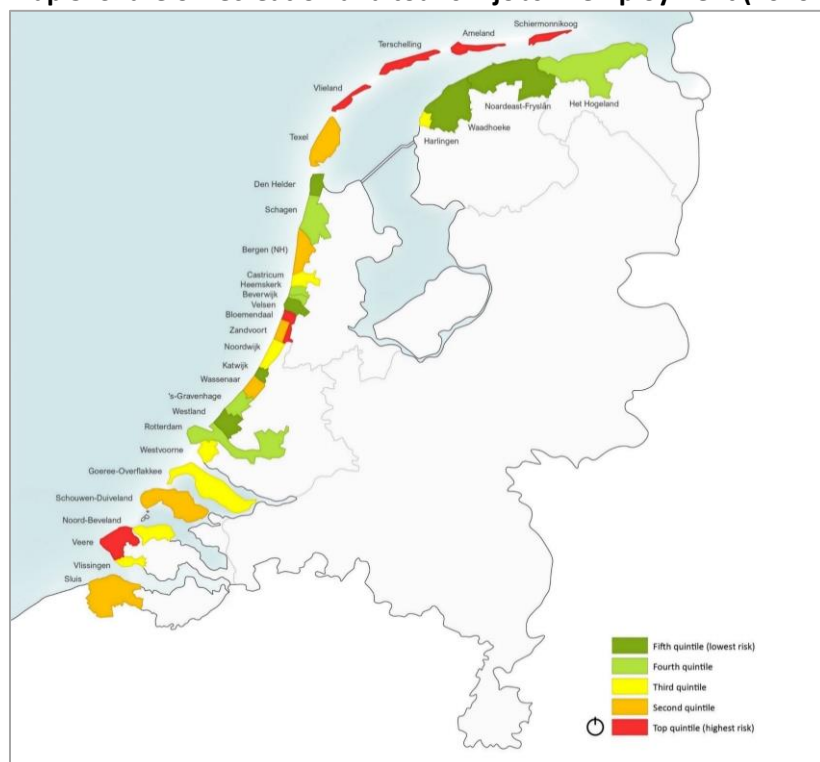
Percentile	Share of recreation and tourism jobs in employment (2016-2020)
1 st	3,4% - 6,4%
2 nd	6,4% - 7,9%
3 rd	7,9% - 16,2%
4 th	16,2% - 32,2%
5 th	32,2% - 56,7%

Sources collected from: National Job Information System (LISAb, 2016-2020) (LISAa, 2016-2020)

4.3.4 Partial conclusion

The results show that the percentage of jobs in the tourism and recreation sector is relatively high for all Wadden Islands (map 5). This percentage is also relatively high in the Province of Zeeland compared to other provinces. This means that employment is strongly influenced by this sector, which can lead to dependence.

Map 5. Share of recreation and tourism jobs in employment (2016-2020) (5th percentile ranks).



Sources collected from: National Job Information System (LISAb, 2016-2020) (LISAA, 2016-2020). Full-page format in Appendix I.

4.4 Airbnb

4.4.1 The indicator

Airbnb (born as Airbed & Breakfast) is a rental platform where hosts can rent out a room, accommodation, or their entire house to visitors. Known as the ultimate example of the sharing economy, the platform was founded in 2008 in San Francisco (Cesarani & Nechita, 2017). The rapid growth has ensured that this platform has an impact on some traditional tourist accommodations as new micro-entrepreneurs (individuals) are emerging alongside the current offerings. In contrast to the larger companies, this type of entrepreneur is less manageable with policy. This has led to policy problems in cities around the world (Guttentag, 2019). In addition to Airbnb, other companies offer private accommodations such as Booking.com, TripAdvisor, and Vrbo (formerly HomeAway). In this study, Airbnb is used as the umbrella term for these online rental platforms.

This new form of tourism allows tourists to get to know the local population. It can also have negative effects such as nuisance for local residents and contribute to a decrease in the available housing stock (Van der Zee et al., 2021). In addition, Airbnb neighbors may experience a reduced sense of security because of a constant rotation of visitors (McGough, 2019). *“Airbnb had 140,000 guest arrivals in 2010; 800,000 in 2011; three million in 2012; six million in 2013; 16 million in 2014; 40 million in 2015; 80 million in 2016; an estimated 115 million in 2017; and an estimated 164 million in 2018”* (Guttentag, 2019, p3).

This huge increase in guests in private residences is also disrupting the hotel industry. Another consequence is the disruption of communities as the residences of the locals are turned into tourist accommodations (Guttentag, 2019). The accommodations of the local micro-entrepreneurs are often located within a village or city. This is in contrast to a hotel or camping site, which are usually located on the outskirts of a coastal village or city. Airbnb is therefore an important indicator because any individual can start an Airbnb. This results in an uncontrolled spatial distribution within the

destination. In addition, Airbnb hosts generally pay less or no taxes and fees, such as income tax, VAT, and tourist tax (Peeters et al., 2015). The advantage of a private rental is that residents can benefit from tourism, which means they can better accept the charges (Gemeente Veere, 2021b).

McKinsey et al. (2017) do not use an indicator for private rental. Peeters et al. (2018) use data from both Airbnb and Booking.com to create an indicator. At the municipal level, no data is available from Booking.com. For this reason, it was not included in this study. It has been decided, however, to compile an indicator based on Airbnb, as this is becoming an (increasingly) increasing share in the Dutch tourism sector (Van der Zee et al., 2021). In the Netherlands, 65.698 rooms and homes were rented out via Airbnb and Vrbo in 2020, with approximately 5 million overnight stays (Van der Zee et al., 2021). With 18.372 accommodations, 28% of these are located in the Dutch coastal municipalities. With 1.568.518 overnight stays, this is 31% of the total number of overnight stays booked through Airbnb (Van der Zee et al., 2021) (Universiteit Utrecht, 2018-2020).

It is worth noting that platforms such as Airbnb have made private rental easier and more accessible. However, there are other options for a private rental than through Airbnb or a similar platform. It is also more difficult for municipalities to manage private rental compared to professional rental (Guttentag, 2019; McGough, 2019; Peeters et al., 2015). In this study, Airbnb, as the most popular and fastest growing platform, is used as an indicator to gain insight into the share of private rentals.

The indicator for Airbnb is composed of five different indicators:

1. Airbnb nights intensity (Airbnb bed-nights / resident)
2. Airbnb nights density (Airbnb bed-nights / km²)
3. Airbnb accommodation intensity (Airbnb accommodations / resident)
4. Airbnb accommodation density (Airbnb accommodations / km²)
5. Airbnb overnight stays per active Airbnb (Airbnb bed-nights / number of active Airbnb)

4.4.2 Data collection

The Airbnb dataset was obtained through (and edited by) Utrecht University of the American company AirDNA. This company collects data from Airbnb and Vrbo by means of 'scrapping' (or extracting). In addition, the company claims that AirDNA data is 97.5% accurate for the active offering (AirDNA, sd). De overige gegevens, de populatie per gemeente en de totale oppervlakte is verkregen via Eurostat data voor het jaar 2021 (Eurostat, 2021).

4.4.3 Results

Table 10 and table 11 provide insight into the percentile distribution for the five different Airbnb indicators (map 6, 7, 8, & 9). The number of Airbnb nights per resident varies between 0.1 and 7.2, with the outlier being 26.4 for Schiermonnikoog. The first 16 municipalities have less than 1 Airbnb night per inhabitant. The number of Airbnb nights per square kilometer is a steady increase in the ranking of the first 28 municipalities (41-987), after which the last three municipalities score very high (2135-2606). The same applies to the number of active Airbnb's per inhabitant. This shows an evenly distributed increase from the municipality of Westland (lowest: 0.0007) to the municipality of Ameland (second highest: 0.084), with the municipality of Schiermonnikoog as the outlier. In the distribution of the number of active Airbnb per square kilometer, the lowest percentile has approximately 1 Airbnb per km², while in the highest group this is approximately 9-21 Airbnb's (with the exception of 's-Gravenhage). The number of Airbnb nights per active Airbnb varies between 63 and 147, with an average of 97 nights. When ranking these scores, a steady upward trend can be seen. It is also striking that the municipality of Heemskerk falls within the lowest percentile group on all five indicators.

Table 10. Overview of active Airbnb accommodations and reserved nights for Dutch coastal municipalities (average over 2018-2020).

Indicator	Value	Municipalities with highest or lowest values
Airbnb nights intensity - nights / capita		
Average	2,6	
Minimum	0,06	Heemskerk, Westland, Katwijk
Maximum	26,4	Schiermonnikoog, Ameland, Noord-Beveland
Airbnb nights density - nights / km²		
Average	595	
Minimum	41	Het Hogeland, Waadhoeke, Heemskerk
Maximum	2606	's-Gravenhage, Noordwijk, Zandvoort
Airbnb accommodation intensity - Airbnb's / capita		
Average	0,02365	
Minimum	0,0007	Westland, Heemskerk, Katwijk
Maximum	0,1792	Schiermonnikoog, Ameland, Noord-Beveland
Airbnb accommodation density - Airbnb's / km²		
Average	6,3	
Minimum	0,4	Het Hogeland, Waadhoeke, Westland
Maximum	32,5	's-Gravenhage, Noordwijk, Zandvoort
Airbnb overnight stays per active Airbnb		
Average	97	
Minimum	63	Bloemendaal, Castricum, Heemskerk
Maximum	147	Schiermonnikoog, Noardeast-Fryslân, Goeree-Overflakkee

Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

Table 11. Overview of the percentile minimum and maximum values for the Dutch coastal municipalities for 5 Airbnb indicators (average over 2018-2020).

Percentile	Airbnb nights intensity	Airbnb nights density	Airbnb accommodation intensity	Airbnb accommodation density	Airbnb overnights stays per active Airbnb
1 st	0,1 – 0,4	41 – 133	0,0007 – 0,004	0,4 – 1,3	63 – 82
2 nd	0,4 – 0,5	133 – 316	0,004 – 0,006	1,3 – 3,5	82 – 97
3 rd	0,5 – 2,8	316 – 601	0,006 – 0,027	3,5 – 5,5	97 – 103
4 th	2,8 – 4,0	601 – 858	0,027 – 0,039	5,5 – 8,9	103 – 112
5 th	4,0 – 26,4	858 – 2606	0,039 – 0,179	8,9 – 32,5	112 – 147

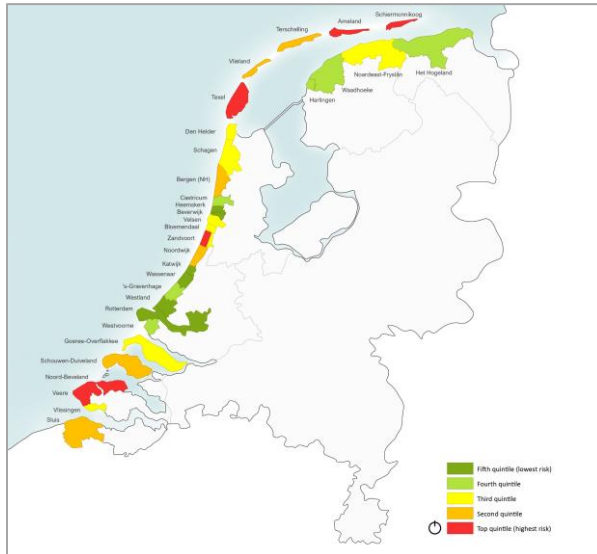
Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

Map 6. Airbnb nights intensity (nights / capita) (2018-2020, 5th percentile ranks).

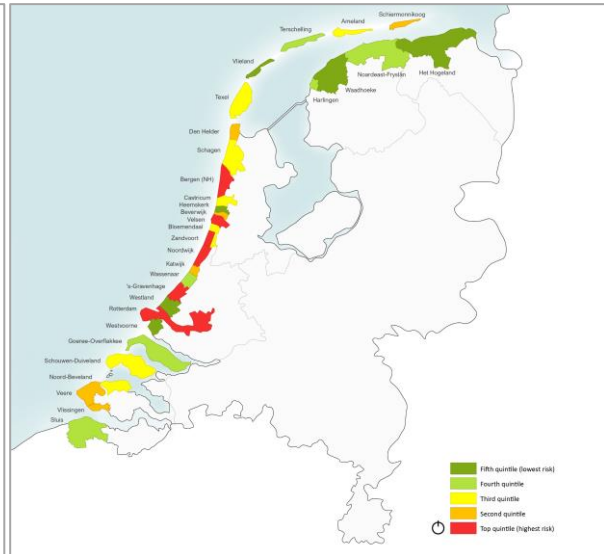
Map 7. Airbnb nights density (nights / km²) (2018-2020, 5th percentile ranks).

Map 8. Airbnb accommodation intensity (Airbnb's / capita) (2018-2020, 5th percentile ranks).

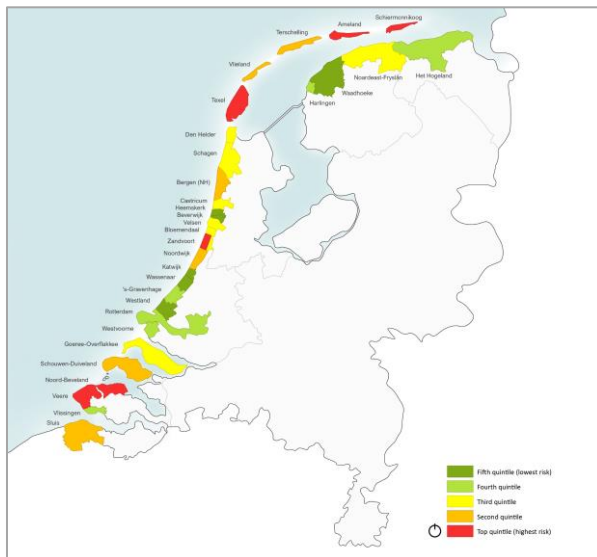
Map 9. Airbnb accommodation density (Airbnb's / km²) (2018-2020, 5th percentile ranks).



Map 6. Airbnb nights intensity



Map 7. Airbnb nights density



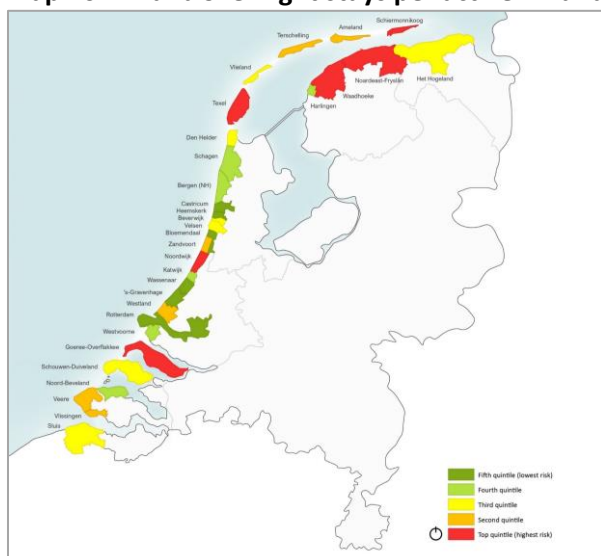
Map 8. Airbnb accommodation intensity



Map 9. Airbnb accommodation density

Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021). Full-page format in Appendix I.

Map 10. Airbnb overnight stays per active Airbnb (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021). Full-page format in Appendix I.

4.4.4 Partial conclusion

It is noticeable that on map 12, the Airbnb nights and accommodation intensity maps do not differ much from each other. However, the Airbnb nights and accommodation density maps differ more. Of the five Airbnb indicators, the municipality of Zandvoort, Noordwijk and Schiermonnikoog score the highest (table 12). When the results of the five indicators are compared at the provincial level, the province of Zeeland has the highest pressure from Airbnb with an average of 3.6 (percentile score). After the province of Zeeland follows: Noord-Holland, Friesland, Zuid- Holland and Groningen.

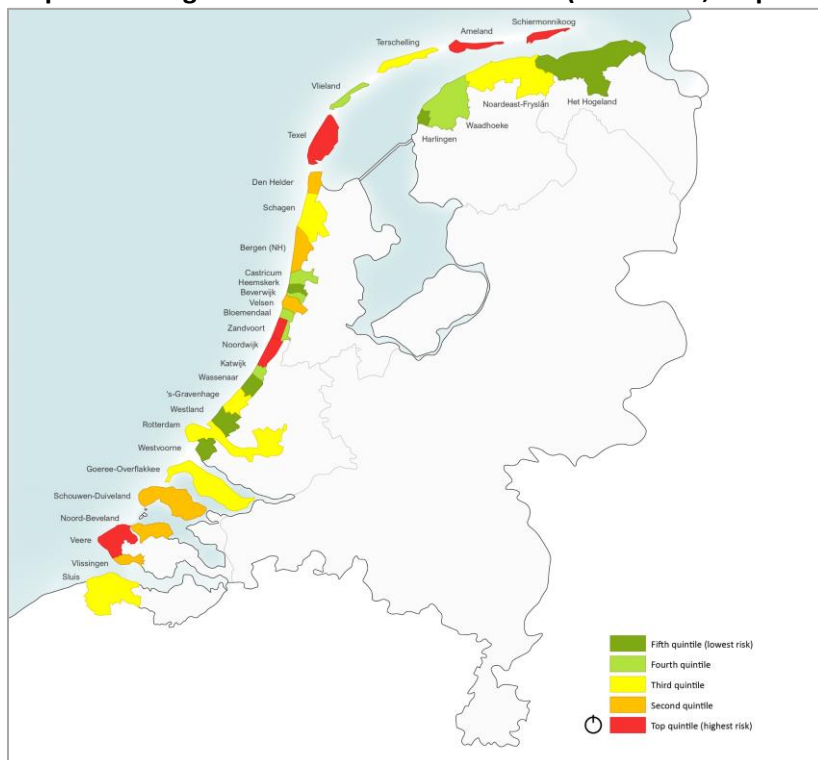
It is also striking that the municipalities of Vlieland and Terschelling have a relatively low average of the five Airbnb indicators, compared to Ameland, Texel and Schiermonnikoog. The same applies to Zandvoort and Noordwijk compared to the neighboring municipalities of Bloemendaal and Katwijk.

Table 12. Overview of the percentile minimum and maximum values for the Dutch coastal municipalities for the average of 5 different Airbnb indicators.

Percentile	Average of 5 Airbnb indicators	Municipalities with highest or lowest values
1 st	1 – 2,0	Heemskerk, Wassenaar, Westland
2 nd	2,0 – 2,8	
3 rd	2,8 – 3,4	
4 th	3,4 – 4,0	
5 th	4,0 – 4,8	Zandvoort, Noordwijk, Schiermonnikoog

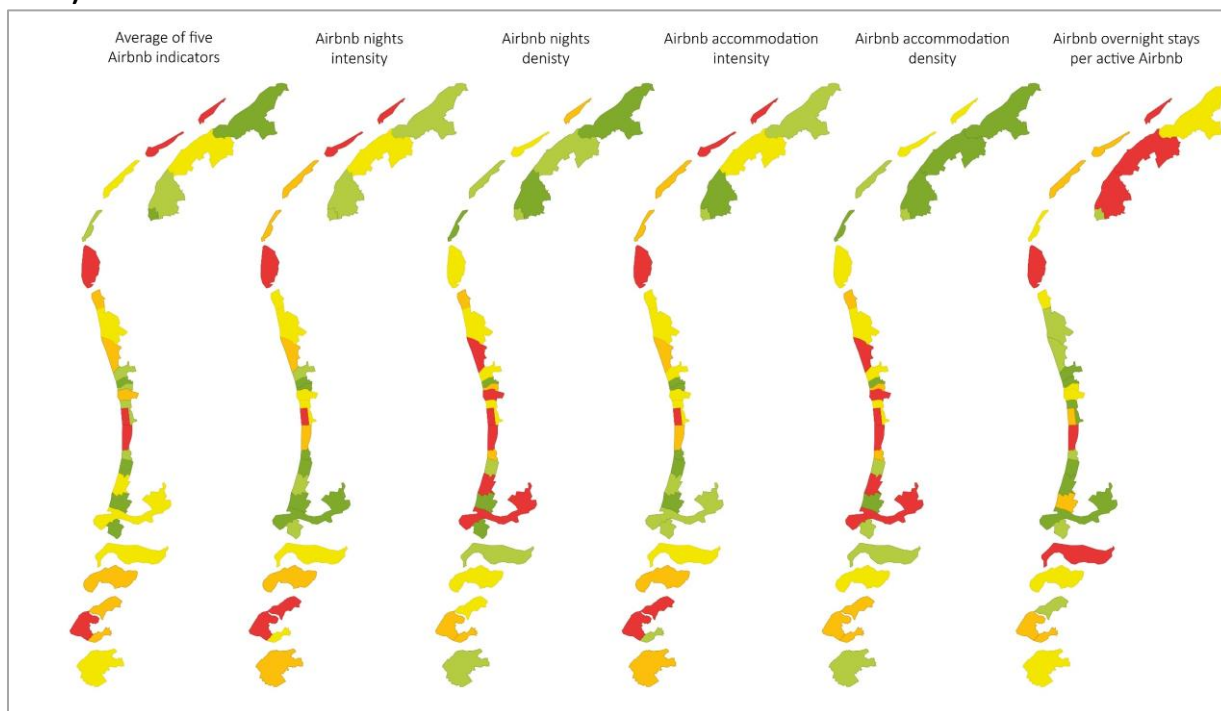
Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

Map 11. Average of the five Airbnb indicators (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021). Full-page format in Appendix I.

Map 12. Average of the five Airbnb indicators and the five indicators (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021). Full-page format in Appendix I.

4.5 Beach holidaymakers

4.5.1 The indicator

Previous studies do not use the average number of beach holidaymakers per year per kilometer of coastline because they do not specifically focus on coastal regions. This is done in this study. This indicator was chosen because a strong concentration of the number of beach holidaymakers can indicate many daytime holidaymakers. Day visitors are tourists who do not stay overnight elsewhere than from the destination. Research has shown that this form of tourism in particular causes peaks (on extremely sunny days during the holiday period). In research where the degree of overtourism was asked, respondents often refer to this period because it is more intense than normal. In Zeeland, day trippers mainly come from Belgium and parts of the province of Noord-Brabant, while in the municipalities Zandvoort and Bloemendaal mainly tourists from the Amsterdam region go to the beach for a day (NBTC, 2019; Raad voor de leefomgeving en infrastructuur, 2019).

4.5.2 Data collection

The concentration of beach holidaymakers per year per kilometer of coastline was calculated using two sources. For this, the appendix report 'Room for recreation on the beach [Ruimte voor recreatie op het strand]' was used (Broer et al., 2011). This report shows the number of beach holidaymakers per year (x1000) per coastal municipality, based on outdated data from 2004. The number of kilometers of coastline was measured via the Coastviewer of Deltares and Rijkswaterstaat. The Basic Coastline 2017 (BKL) layer was used for this (Deltares & Rijkswaterstaat, 2017). This Base Coastline is used to determine the coastline location, and whether there is landward or seaward displacement. The municipalities of Harlingen, Waadhoeke, Noardeast-Fryslân, and Het Hogeland have no beaches and therefore automatically fall into the lowest percentile, with the least chance of overtourism by day visitors.

4.5.3 Results

Table 13 is an overview of the average number of beach holidaymakers per year per kilometer of coastline (x1000) in 2004. This data provides an indication but is no longer current. Because the percentile method has been applied, the exact data is less important. The three municipalities with the highest scores are located in the province of Zeeland. If only the number of beach holidaymakers per year is considered, and not the length of the coast, the municipalities of Texel, Veere, and Schouwen-Duiveland score the highest. According to the study by Broer et al. (2011), the municipalities of Rotterdam, Bloemendaal, and Westland have the least number of beach holidaymakers per year.

The number of beach holidaymakers is combined with the length of the sandy beach to determine the density of holidaymakers per kilometer. Municipalities of Ameland, Veere, and Terschelling have the most kilometers of sandy beach and Beverwijk, Noord-Beveland, and Rotterdam have the least number of kilometers. These two datasets combined result in the highest density of beach holidaymakers per kilometer of coastline in Noord-Beveland, Vlissingen, and Schouwen-Duiveland.

Table 13. Overview of the maximum values for average number of beach holidaymakers (excluding Harlingen, Waadhoeke, Noordaest-Fryslân, Het Hogeland).

Indicator	Value	Municipalities with highest or lowest values
Average number of beach holidaymakers (2004) per year per km of coastline (x1000)(excluding Harlingen, Waadhoeke, Noordaest-Fryslân, Het Hogeland)		
Average	80	
Minimum	2,7	Rotterdam , Bloemendaal, Westland
Maximum	235	Noord-Beveland , Vlissingen, Schouwen-Duiveland

Sources collected from: The average number of beach holidaymakers per year (data from 2004) (Broer et al., 2011) en Coastviewer (Deltares & Rijkswaterstaat, 2017).

Table 14. Overview of the percentile minimum and maximum values for average number of beach holidaymakers (excluding Harlingen, Waadhoeke, Noordaest-Fryslân, Het Hogeland)

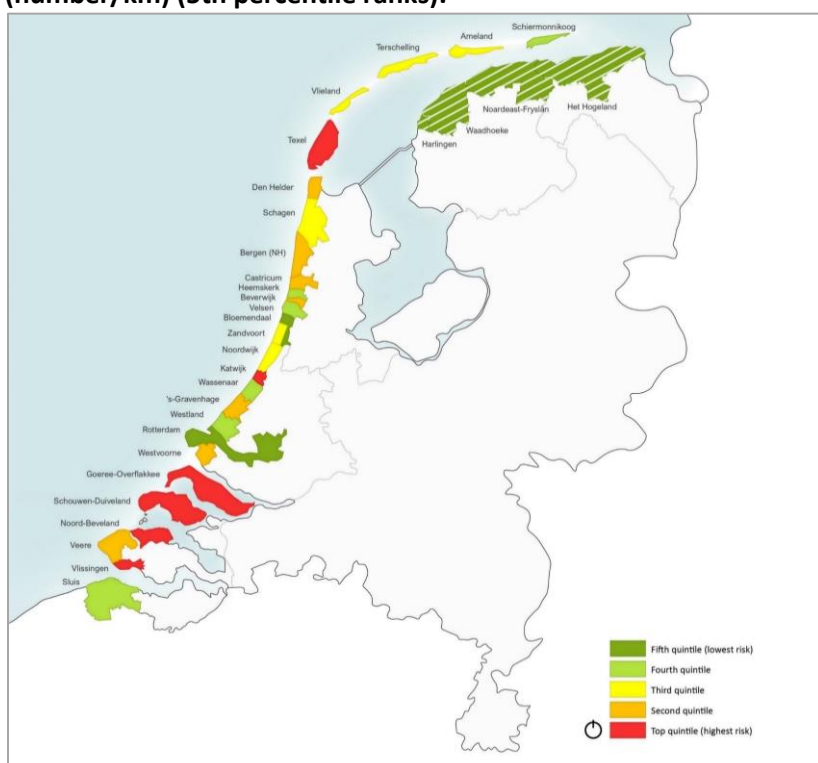
Percentile	Average number of beach holidaymakers per year per km of coastline (x1000) (number/km)
1 st	0 – 13,2
2 nd	13,2 – 43,6
3 rd	43,6 – 73,6
4 th	73,6 – 140,0
5 th	140,0 – 235,1

Sources collected from: Average number of beach holidaymakers per year (data from 2004) (Broer et al., 2011) en Coastviewer (Deltares & Rijkswaterstaat, 2017).

4.5.4 Partial conclusion

It is striking that the municipalities with the most kilometers of coastline (Ameland, Veere, and Terschelling) do not fall in the highest quintile (map 13). In the Province of Zeeland, a number of municipalities do fall within the highest profile, but the municipality of Sluis is an exception and even falls into the lowest quintile.

Map 13. The average number of beach holidaymakers (2004) per kilometer of coastline (number/km) (5th percentile ranks).



Sources collected from: Average number of beach holidaymakers per year (data from 2004) (Broer et al., 2011) en Coastviewer (Deltares & Rijkswaterstaat, 2017). Full-page format in Appendix I.

4.6 Heatmap (percentile average conclusions)

Using the fifth percentile method, a heatmap was made for six indicators. Only the average of the five indicators relating to Airbnb has been included, to avoid a disproportionate distribution of Airbnb in the data. The aim of this is to use data to provide an estimate at the municipal level about the risk of overtourism.

The six indicators from which the average percentile are taken:

1. Tourism density (number of visitors per square kilometer) (2017-2020)
2. Tourism intensity (number of visitors per resident)(2017-2020)
3. Growth in number of bed-nights per year (%) (2017-2019)
4. Share of recreation and tourism jobs in employment (%) (2016-2020)
5. Average of the five Airbnb indicators (2018-2020)
6. Average number of beach holidaymakers - per year per km of coastline (x1000)

For a number of municipalities, the final average of all percentiles added together is the same. In order to maintain the same percentile distribution (6-6-7-6-6) (see method), the municipality with the most extremes is placed at the top, with a higher risk of overtourism (table 15).

Table 15. Overview of the percentile minimum and maximum values for the Dutch coastal municipalities for six different indicators.

Percentile	Percentile average over six indicators	Municipalities with highest or lowest values
1 st	1,3 – 2	Het Hogeland, Heemskerk, Westland
2 nd	2 – 2,8	
3 rd	2,8 – 3,5	
4 th	3,5 – 3,8	
5 th	3,8 – 4,3	Schiermonnikoog, Veere, Ameland, Zandvoort

Source: elaboration by the author

The results show that all five of the Dutch Wadden Islands are in the top 8 with the highest risk of overtourism. The municipality of Schiermonnikoog is at the top together with the Veere, followed by Ameland and Zandvoort. The fourth percentile mainly contains Zeeland municipalities, with Bergen (N.H.) and Goeree-Overflakkee next to it (table 16).

This method does not contain any threshold values. It is therefore impossible to determine whether there is actually overtourism. This means that in the municipalities in the top percentile there is not by definition overtourism, but that the chance of this is greatest in comparison with other Dutch coastal municipalities.

Table 16. Heatmap of the quintiles distribution for the Dutch coastal municipalities for six different indicators.

	Municipality	Tourism density (number of visitors per square kilometer)	Tourism intensity (number of visitors per resident)	Growth in number of bed-nights per year (%)	Share of recreation and tourism jobs in employment (%)	Average of the five Airbnb indicators	Average number of beach holidaymakers - per year per km of coastline	Percentile average
1	Sluis	3	4	4	4	3	2	3
2	Vlissingen	3	2	5	3	4	5	4
3	Veere	5	5	4	5	5	4	5
4	Noord-Beveland	4	4	3	3	4	5	4
5	Schouwen-Duiveland	4	4	3	4	4	5	4
6	Goeree-Overflakkee	2	4	5	3	3	5	4
7	Westvoorne	3	3	3	3	1	4	3
8	Rotterdam	1	1	2	2	3	1	1
9	Westland	1	1	1	1	1	2	1
10	s-Gravenhage	5	2	4	2	3	4	3
11	Wassenaar	2	3	2	4	1	2	2
12	Katwijk	3	1	1	1	2	5	2
13	Noordwijk	5	3	5	3	5	3	5
14	Zandvoort	5	4	1	4	5	3	4
15	Bloemendaal	3	3	4	5	2	1	3
16	Velsen	2	2	3	1	4	2	2
17	Beverwijk	2	1	5	2	2	4	2
18	Heemskerk	1	1	1	2	1	2	1
19	Castricum	3	3	3	3	2	4	3
20	Bergen (N.H.)	4	4	1	4	4	3	3
21	Schagen	2	3	5	2	3	3	3
22	Den Helder	3	2	3	1	4	4	2
23	Texel	4	5	2	4	5	5	5
24	Vlieland	5	5	1	5	2	3	4
25	Terschelling	4	5	4	5	3	3	5
26	Ameland	5	5	2	5	5	3	5
27	Schiermonnikoog	4	5	3	5	5	2	5
28	Harlingen	2	3	4	3	1	1	2
29	Waadhoeke	1	1	2	1	2	1	1
30	Noardeast-Fryslân	1	2	5	1	3	1	1
31	Het Hogeland	1	2	2	2	1	1	1

Source: elaboration of the author

Map 14. Percentile average of six different indicators (5th percentile ranks).



Source: elaboration of the author. Full-page format in Appendix I.

4.7 Partial conclusion

This chapter describes the results of the various indicators that measure the risk of overtourism in Dutch coastal municipalities. The chapter started with an elaboration of each indicator, and an explanation of the data collection and its results.

This ultimately led to an average percentile of these results, which provided a total overview in the form of a heatmap of the aforementioned indicators. This chapter has thus provided insight into the chance/risk of overtourism in Dutch coastal municipalities. The results show that there are differences between the municipalities, even within regions and provinces. The regions with the highest risk of overtourism are: Zeeland, Noordwijk/Zandvoort and the Wadden Islands.

5. IMPACTS OF OVERTOURISM

After determining the risk of overtourism in the previous chapter, this chapter discusses the described (negative) impacts of tourism in Dutch coastal municipalities, whether or not in the case of overtourism.

5.1 Overview of impacts of overtourism

Table 17 is an overview of the negative types of effects due to overtourism. This table is based on section 2.5 Overview of the impacts of overtourism. This presentation is subdivided into three main themes: environmental impacts, economic impacts, and socio-cultural impacts. The abbreviations have been used when coding the policy documents.

Table 17. Impacts of overtourism (codes and descriptions).

Abbreviation	Type of impact
ENVIRONMENTAL IMPACTS	
ENV-CONG	Overcrowding of infrastructure (congestion), facilities, and (commercial) activities
ENV-CROW	Overcrowding at attractions, including natural, historical, and architectural sites
ENV-POL	Strong/noticeable contribution to pollution of water, land, air and noise, and/or solid waste disposal problems
ENV-DAM	Damage to natural, historical and architectural sites
ENV-VPOL	Visual pollution , related to the aesthetics of the tourism infrastructure, facilities and activities
ENV-INFR	Tourism-generated investments in tourism-specific infrastructure impair the investments in infrastructure needed by residents and the wider destination community
ECONOMIC IMPACTS	
EC-INFL	Inflation and/or reduction of the availability of goods, services, and factors of production for other sectors and functions (such as industry, agriculture, and housing), possibly leading to the exodus of residents
EC-INFR	Degradation of commercial infrastructure and activities specifically directed at residents
EC-IMAG	Degradation of destination image (in the case of negative visitor experiences)
EC-DEP	Economic dependence on tourism , including being strongly impacted by seasonality and the degradation of other sectors/types of employment
EC-ACCS	Crowdedness leads to a reduction of accessibility
SOCIAL IMPACTS	
SOC-MARG	Marginalization of the resident population (excessively high number of tourists per resident)
SOC-CRIM	Degradation of (perceived) safety due to increased crime and violence and problems related to uncivilized behavior, alcohol usage, prostitution, gambling, and drug trafficking
SOC-RES	Spread into / touristification of / transformation of former residential neighborhoods
SOC-INFR	Degradation of (social) infrastructure and facilities specifically directed at residents
SOC-HOST	High possibility of misunderstanding, leading to varying degrees of host/visitor hostility (for instance, social conflicts and protests), more pronounced with higher 'exotic' visitor shares
SOC-MOD	Modification of events, activities, and architectural and historical sites to accommodate visitors and based on commercial interest, diminishing authenticity

SOC-TRAD	Relinquishment/weakening of cultural traditions, values, and moral standards leads to a loss of community spirit and pride and a loss of cultural identity
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Source: Research for TRAN Committee-Overtourism: impact and possible policy responses (Peeters et al., 2018).

5.2 Results

Table 18 provides an overview of the impacts that emerge from the case studies. In addition, an extra variable has been added to this table, namely growth. Although this research focuses on the negative effects of overtourism, the analysis of policy documents shows that a large part of the municipalities wants to stimulate tourism and increase the tourist offer. The table below shows that many municipalities that also stimulate growth also recognize other negative impacts. Policy in these municipalities therefore focuses on stimulating growth, while also paying attention to possible negative consequences and how they can be prevented.

Although growth is a policy choice, it has nevertheless been added to this table because it says something about recognizing the (negative-) impacts.

The analysis of the policy documents shows that four types of municipalities can be distinguished:

1. Do identify the negative consequences of tourism and stimulate growth;
2. Do not signal the negative effects of tourism, and stimulate growth;
3. Do identify the negative consequences of tourism, and do not stimulate growth;
4. Do not signal negative consequences and do not stimulate growth.

Table 18. Overview of impacts as found in Dutch coastal municipalities (n= 31 cases).

Municipality	ENVIRONMENTAL IMPACTS						ECONOMIC IMPACTS					SOCIAL IMPACTS							GROWTH
	ENV-CONG	ENV-CROW	ENV-POL	ENV-DAM	ENV-VPOL	ENV-INFR	EC-INFL	EC-INFR	EC-IMAG	EC-DEP	EC-ACCS	SOC-MARG	SOC-CRIM	SOC-RES	SOC-INFR	SOC-HOST	SOC-MOD	SOC-TRAD	
Sluis	x		x							x				x			x		x
Vlissingen						x								x	x		x		x
Veere	x	x				x				x	x	x		x	x				
Noord-Beveland	x	x	x							x		x							
Schouwen-Duiveland	x									x	x	x	x						
Goeree-Overflakkee																			x
Westvoorne	x	x				x			x	x									x
Rotterdam	x	x			x	x					x		x	x			x		x
Westland						x											x		x
s-Gravenhage	x	x				x		x		x				x			x		x
Wassenaar	x					x								x					x
Katwijk						x													x
Noordwijk	x	x	x		x	x	x	x		x	x			x	x		x	x	
Zandvoort	x	x	x	x	x	x	x	x		x	x	x		x	x	x	x	x	
Bloemendaal	x	x	x			x	x				x						x		
Velsen	x	x		x					x	x	x						x		x
Beverwijk	x			x		x				x							x	x	x
Heemskerk						x				x				x					x
Castricum			x	x		x	x	x						x	x		x	x	x
Bergen (N.H.)	x	x		x	x	x	x			x	x	x	x	x	x	x	x	x	x
Schagen						x				x				x			x	x	x
Den Helder	x					x											x		x
Texel	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Vlieland		x	x		x	x	x	x	x	x	x	x			x		x	x	
Terschelling	x		x	x		x	x			x	x				x		x	x	
Ameland	x			x			x		x		x	x					x	x	x
Schiermonnikoog								x		x	x						x		
Harlingen																			x
Waadhoeke						x											x		x
Noardeast-Fryslân																			x
Het Hogeland																			x

Source: elaboration of the author based on the case studies. Consulted documents for this analysis see appendix III.

Table 19 provides an overview of the impacts identified in the cases. Table 18 has been merged for this. The numbers represent the percentage where a certain type of impact occurs. A dark shaded shade indicates that this impact occurs frequently (>50%). Of the 18 types of impacts in the list, it

appears that four of these occur in more than half of all cases. It appears that 68% of the coastal municipalities have to do with tourism-specific infrastructure (ENV-INFR). In addition, 58% of all cases are related to overcrowding of infrastructure, facilities, and activities (ENV-CROW). Of the environmental impacts, the two most common thus have to do with infrastructure.

Of the economic impacts, economic dependence on tourism is mentioned in 55% of the cases (EC-DEP). In the case of Dutch coastal municipalities, this means increasing popularity as the pre-season approaches, peaking in the summer months, a sharp decline from August to November, with a small rebound around the Christmas holidays (Van der Zee et al., 2021). Finally, the most frequently mentioned social impact is adapting events, activities, and architectural and historical sites to accommodate visitors, and based on commercial interests (SOC-MOD) (Peeters et al., 2018). This reduces the authenticity of a destination. If the average is taken for the main category, environmental impacts occur in 40% of the cases, economic impacts in 33% of the cases, and social impacts in 31% of the cases.

The study by Peeters et al. (2018) conducted a similar analysis of impacts at the NUTS-2 level. They have the same impact themes as in this study. However, they subdivide them into cases: Urban, Heritage & Attractions, Coastal & Island, and Rural. When looking at the impacts on Coastal & Islands (only EU cases), the most common impacts (>50%) are successive: environmental pollution (ENV-POL, 83%), environmental damage (ENV-DAM, 83%), environmental congestion (ENV-CONG, 67%) and economic destination image (EC-IMAG, 67%)(Peeters et al., 2018).

It is striking that only environmental congestion (ENV-CONG, 67% NUTS-2, 58% Dutch Coast municipalities) scores high in this study, and the study by Peeters et al. (2018). A possible explanation for why environmental pollution, environmental damage and economic destination image scores lower in this study is that the Dutch coast is generally very well protected and maintained (compared to other European coastal destinations)(Deltaprogramma Kust, 2013).

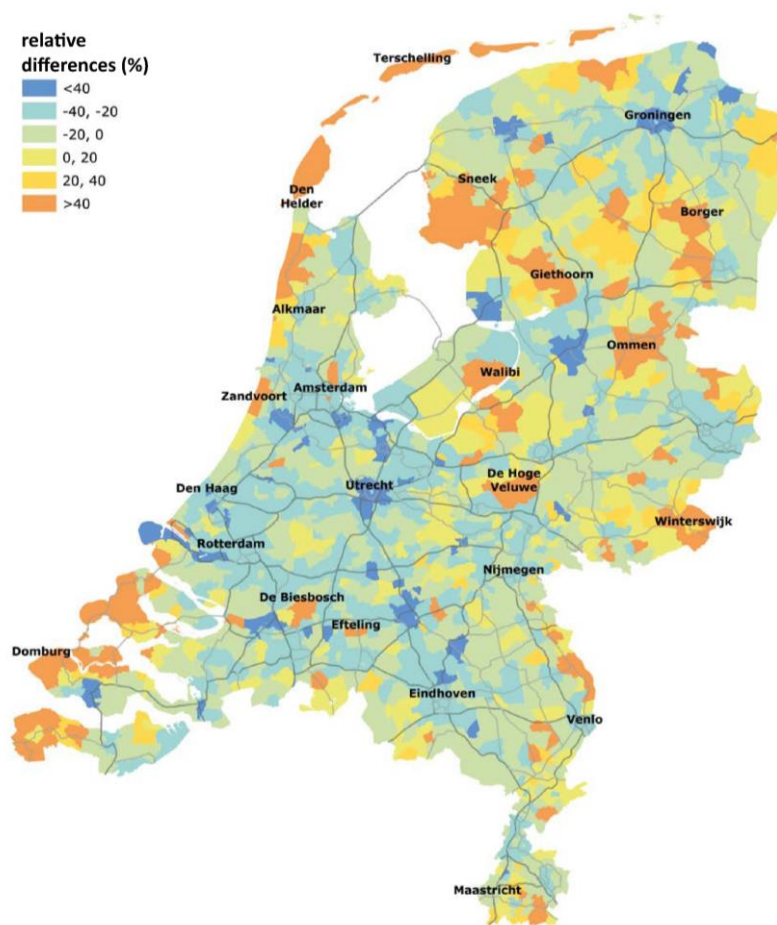
Table 19. Percentage of cases in which impacts occur.

ENVIRONMENTAL IMPACTS						ECONOMIC IMPACTS					SOCIAL IMPACTS							
ENV-CONG	ENV-CROW	ENV-POL	ENV-DAM	ENV-VPOL	ENV-INFR	EC-INFL	EC-INFR	EC-IMAG	EC-DEP	EC-ACCS	SOC-MARG	SOC-CRIM	SOC-RES	SOC-INFR	SOC-HOST	SOC-MOD	SOC-TRAD	GROWTH
58	39	29	26	19	68	29	23	16	55	42	26	13	42	29	10	65	32	68

Source: elaboration of the author

To provide insight into the infrastructural problems, the figure (figure 5) below shows the traffic density on a summer day in the Netherlands. This shows that a large part of the coastal municipalities have a relative difference in the percentage of >40%. It is striking that the coast of the province of Zeeland, the province of Noord-Holland, and the Wadden Islands score high, while the province of Zuid-Holland experiences relatively few differences in traffic volume (Raad voor de leefomgeving en infrastructuur, 2019). The fact that the province of Zuid-Holland experiences less difference in traffic density does not correspond with the inventory of the policy documents.

Figure 5. Traffic congestion on a summer day.



Source: (Raad voor de leefomgeving en infrastructuur, 2019) (Data: Mezuro) - translation by the author

Figure 6 provides an overview of the impacts occurring in the 31 coastal municipalities. This shows that of all cases, Texel scores the highest on all three impact categories. This municipality is followed by the municipality of Zandvoort, where, on the basis of policy, fewer problems have been described for the categories of economic and social impacts. Other cases that have described the most impacts in their policy are successively the municipalities of Bergen, Noordwijk, Vlieland, and Terschelling. It is striking that the municipality of Bergen describes many social impacts and less economic impact. It is also remarkable that the municipalities in Friesland and Groningen hardly mention the negative impact of tourism, while the Wadden municipalities do.

Based on figure 6, three areas can be distinguished where the impacts of tourism are greatest, at least best described in the policy. Municipalities that indicate that they still want to grow are not included:

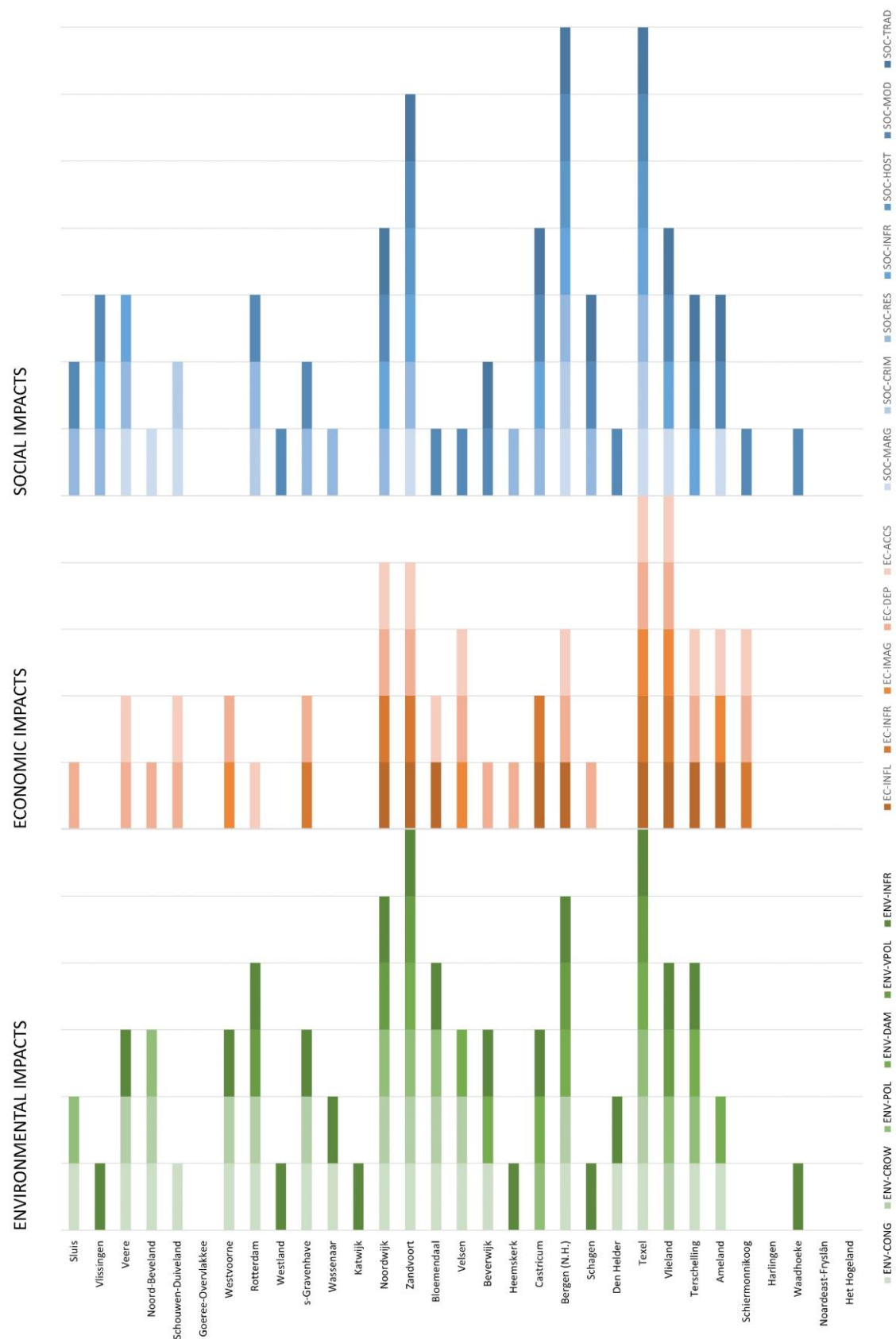
1. Veere (8 impacts)
2. Noordwijk (13 impacts) and Zandvoort (16 impacts)
3. Texel (18 impacts), Vlieland (13 impacts) and Terschelling (10 impacts)

In addition, it was notable that only three of the policy documents studied discussed the term overtourism and its negative consequences. This may indicate the novelty of the phenomenon or its negative association.

5.3 Partial conclusion

Table 18 and 19 in chapter 5.2 shows, in addition to the (negative) impacts of tourism, which municipalities still want to grow in tourist offers. The municipality of Ameland stands out in this regard because it scores in the top quintile (highest risk of overtourism) but also indicates that it can still grow. “This illustrates room for slight growth in the early and late seasons, while at the same time indicating that we recognize that there are limits to growth” (Gemeente Ameland, 2021, p.1). The same applies to the municipalities of Vlissingen and Goeree-Overflakkee, both of which score in the second quintile but still stimulate growth.

Figure 6. Overview of the impact occurring in all 31 cases.



Source: case studies

6. POLICY RESPONSES TO OVERTOURISM

After determining the risk of overtourism and identifying the negative impact of tourism, this chapter identifies which measures coastal municipalities apply to manage tourism. In other words, steering to prevent or minimize negative effects. Managing the policy documents leads to an overview of 17 measures as found in 31 cases. It then discusses which measures will be applied at the municipal level. The paragraph that follows describes, coincidentally, 17 policy response categories at the European level. These are further elaborated in appendix II, in which 121 policy measures are described at the destination level. The aim of this is to gain insight into the measures that Dutch municipalities are currently using to manage coastal tourism and which may have good prospects for the future.

6.1 Measures taken by municipalities

Table 20 provides an overview of measures for (over-)tourism in Dutch coastal municipalities. The overview of measures taken by municipalities to manage the prevention of overtourism comes from the study for the TRAN Committee-Overtourism by Peeters et al. (2018). The measures in this overview were also found in the coding of municipal policy documents, as used in this study.

While coding these policy documents, an extra measure was added to this overview: MS17 – Encourage tourists to stay longer. Extending the stay means that tourist interaction with local communities is less intense and hectic. Because tourists stay longer, they can also spread out better over the region and visit secondary tourist attractions and places (Oklevik et al., 2021).

Table 20. Overview of measures as found in 31 cases.

Measure code	Measure category description
MS1	Laws and law enforcement directed at tourists (e.g. related to alcohol and drug consumption, forbidding access to certain locations/at certain times)
MS2	Distributing tourists to other places, such as via promotion, new attractions, better transportation options, and tours
MS3	Increasing capacities of the destination to deal with higher numbers of people by e.g. improving traffic management, security measures, and waste management
MS4	Increasing prices (at specific times, places, or for specific groups), e.g. via taxation, used to mitigate negative impacts
MS5	Reducing seasonality (via promotion and new attractions)
MS6	'Green measures' such as eco-certification, environmental taxes (payable by tourists or accommodation providers), green fuel, and green buildings
MS7	Stop certain developments; prevent uncontrollable development by measures such as zoning systems, laws, and stops on hotel and Airbnb capacity extensions.
MS8	Improve stakeholder involvement in tourism marketing and development
MS9	(Real-time) information for tourists on, e.g. crowdedness, transport options, and other times to visit
MS10	Promoting high-quality tourism (adjusting the tourism offers and attracting different types of tourists)
MS11	Stimulate developments directed at residents by, e.g. safeguarding the availability of affordable housing, shops catering to residents, and improved living working conditions in tourism
MS12	(Dynamic) caps on access to the destination / attraction
MS13	Less / No promotion

MS14	Awareness campaign to prevent / stimulate certain behavior (directed at tourists)
MS15	Improved monitoring
MS16	Conduct research
MS17	Encourage tourists to stay longer

Source: Research for TRAN Committee-Overtourism: impact and possible policy responses (Peeters et al., 2018). Measure 17 has been added based on the cases.

6.2 Results

Table 21 below provides an overview of the categories of measures identified in the case studies. As in chapter 5, these results are based on available policy documents. The results are therefore based on the literature as identified in this study. The absence of a measure does not always mean that it is not directed by the municipality, but that it does not emerge clearly from the literature used.

In addition, as in Chapter 5, growth has been added. Despite measures being taken to prevent overtourism, the focus is still on growth. Growth tells something about the policy strategy of the municipality and whether or not to recognize an overtourism situation. It is noticeable that the case that does not focus on growth applies 10 or more measures (with the exception of Noordwijk). In addition, there are municipalities with many policy measures, such as Velsen, Rotterdam and 's-Gravenhage, but also allow growth.

Table 21. Overview of measures deployed at Dutch coastal municipalities (n=31 cases).

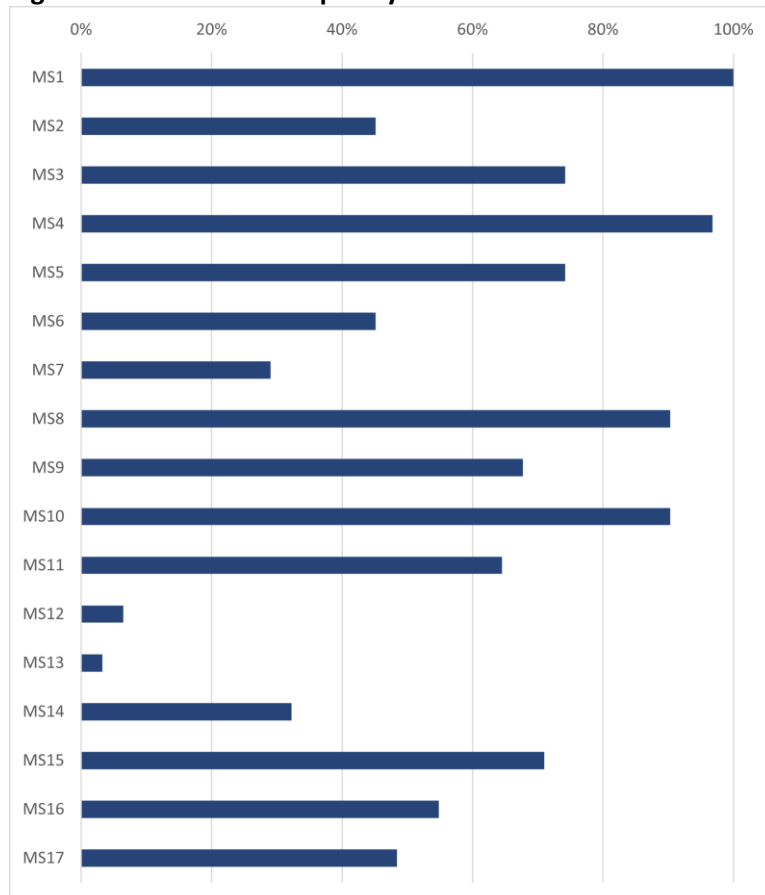
Municipality	MS1	MS2	MS3	MS4	MS5	MS6	MS7	MS8	MS9	MS10	MS11	MS12	MS13	MS14	MS15	MS16	MS17	GROWTH
Sluis	X	X		X	X			X		X	X			X		X		X
Vlissingen	X	X		X	X			X	X	X					X	X		X
Veere	X		X	X	X		X	X		X	X			X	X	X		
Noord-Beveland	X		X	X			X	X	X	X	X			X	X			
Schouwen-Duiveland	X	X	X	X	X			X	X	X	X				X	X		
Goeree-Overflakkee	X		X	X	X	X		X		X					X	X		X
Westvoorne	X		X	X	X	X		X	X	X								X
Rotterdam	X	X	X	X	X	X		X	X	X	X			X	X	X		X
Westland	X	X	X					X		X	X			X				X
s-Gravenhage	X	X	X	X	X	X		X	X	X	X			X	X	X		X
Wassenaar	X			X	X	X		X	X	X				X				X
Katwijk	X		X	X	X			X		X	X				X	X		X
Noordwijk	X		X	X	X			X		X					X	X		
Zandvoort	X	X	X	X	X	X		X	X	X	X				X	X		
Bloemendaal	X		X	X	X	X	X	X	X	X	X		X					
Velsen	X	X	X	X	X	X		X	X	X	X	X		X	X	X		X
Beverwijk	X	X	X			X		X	X	X				X	X		X	X
Heemskerk	X			X	X		X	X	X	X	X				X		X	X
Castricum	X	X	X	X	X			X	X	X	X				X	X		X
Bergen (N.H.)	X	X	X	X	X	X		X	X	X					X	X		X
Schagen	X									X	X							X
Den Helder	X		X		X			X	X	X	X						X	X
Texel	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		
Vlieland	X	X	X	X	X		X	X	X	X	X				X	X		
Terschelling	X		X	X	X	X	X	X		X	X				X	X	X	
Ameland	X		X	X	X	X	X	X	X	X	X				X			X
Schiermonnikoog	X	X	X	X	X	X	X		X	X	X				X	X		
Harlingen	X		X	X				X	X	X					X			X
Waadhoeke	X							X	X						X			X
Noardeast-Fryslân	X			X														X
Het Hogeland	X			X				X									X	X

Source: elaboration of the author based on the case studies. Consulted documents for this analysis see appendix III.

Figure 7 below provides an overview of the measures identified in Dutch coastal municipalities as in table 21. The percentage represents the number of times the measure has been used in the Dutch coastal municipalities (n = 31 cases). All municipalities work with tourist-oriented laws and law enforcement (MS1). Except for the municipality of Waadhoeke, all municipalities also use tourist tax (MS4). Another measure implemented by municipalities is involving stakeholders in the marketing and development of tourism (MS8), and promoting high-quality tourism (MS10).

What municipalities use less often to direct tourism is applying limits on access to a destination/attraction (MS12) and stopping promotion (MS13). In many of the municipalities, promotion is organized differently, for example focusing on quality tourism and seasonal expansion. Many municipalities also specifically refer to which target group they want to attract. For example, the village of Renesse in the municipality of Schouwen-Duiveland was a destination for young people for years. By adapting the facilities (e.g. campsites) and public space, the municipality has focused on families with the help of clear profiling (Gemeente Schouwen-Duiveland, 2018). In addition, there are eight municipalities that indicate that they want to slow down or stop the growth of tourism (MS7). It should be noted that the municipality of Ameland indicates that a limit to the number of tourist beds has been reached and therefore does not want to expand. At the same time, they indicate that there is still room for slight growth in the early and late seasons.

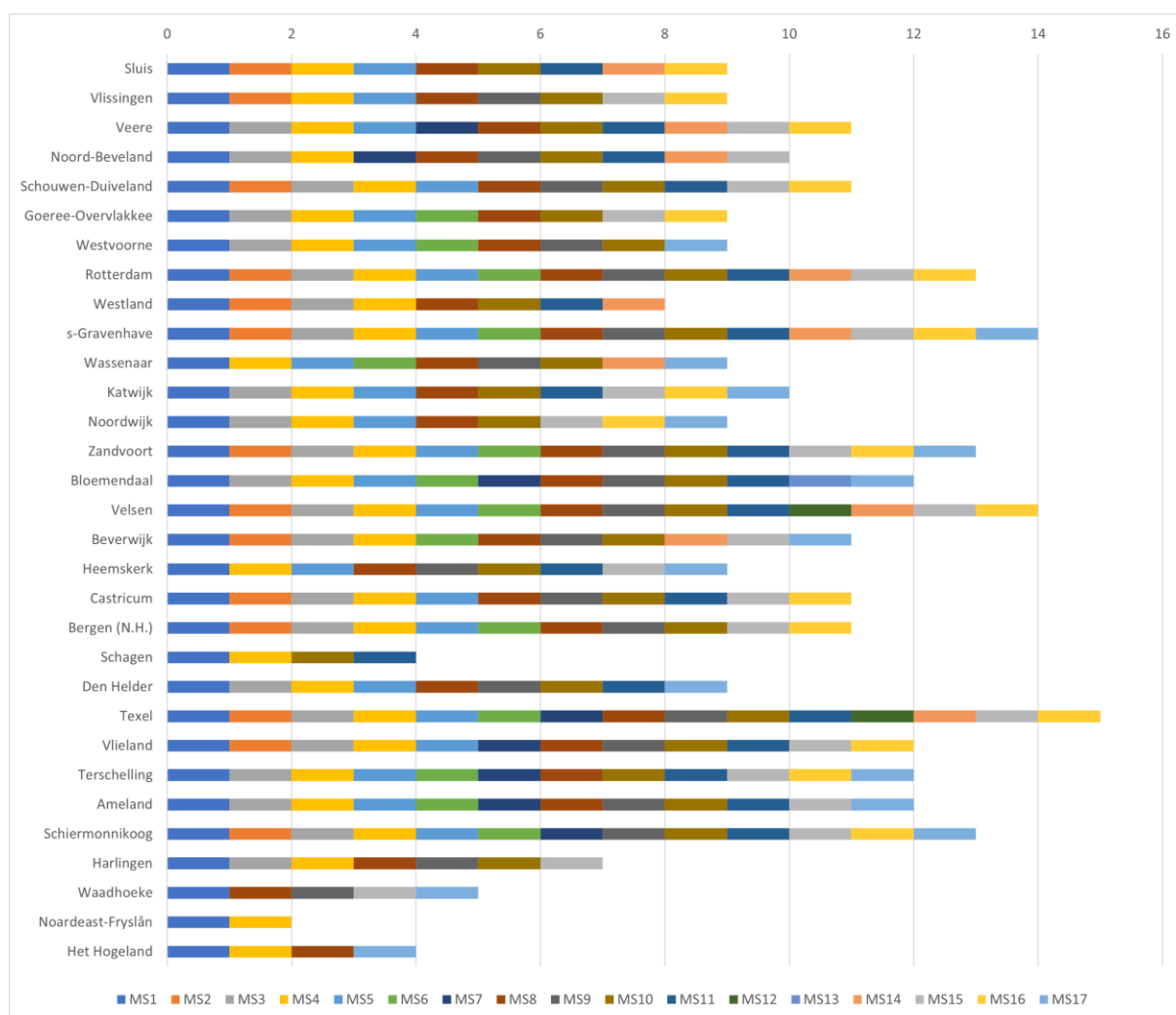
Figure 7. Overview of frequency of occurrence of measures found in the 31 case studies.



Source: case studies

Figure 8 provides an overview of the measures per case. This overview shows that municipalities of Texel (15 measures), 's-Gravenhage (14 measures), and Velsen (14 measures) successively deploy the most policy to regulate tourism. The municipalities of Noardeast-Fryslân (2 measures), Het Hogeland (4 measures), and Schagen (4 measures) have described this the least in their policy plans and visions. These municipalities describe all three measures on at least laws and law enforcement aimed at tourists (MS1) and tourist taxes (MS4). In addition, Schagen opts for quality tourism (MS10) and the stimulation of resident-oriented developments (MS11). In addition, Het Hogeland describes that they will focus on sustainable measures (MS8) about tourism.

Figure 8. Overview of measures as found in 31 cases.



Source: elaboration of the author based on the case studies. Consulted documents for this analysis see appendix III.

When studying the policy and vision documents, it is striking that a large part of the municipality mentions promoting high-quality tourism. However, they do not specify in what way they want to achieve this. In this way, the term quality improvement is used as a meaningless term in many of these policy documents. The definition of a 'quality tourist' is described by the NBTC as: "visitors who contribute to a future-proof destination in the Netherlands. These are visitors who add value and do not cause any nuisance" (NBTC, 2019, p21).

Tourist tax

The levying of the tourist tax is a frequently used policy measure by municipalities. A guest pays for a stay with overnight stay within the municipality where it is not registered in the basic administration of persons. The guest pays the tax to the entrepreneur, who then transfers it to the municipality. Among the Dutch coastal municipalities, the only municipality that does not use this is the municipality of Waadhoeke. "In practice, the tourist tax is usually not levied to deliberately direct tourist flows and thus protect the living environment, but as a means to cover the general costs [translated by the author]" (Raad voor de leefomgeving en infrastructuur, 2019, p20).

There are large differences in the rate that is levied by the municipality. In 2014, the weighted average for all Dutch municipalities together (including municipalities without tourist tax) was 1.06 euros per night. In 2018 this was 1.27 euros per night and in 2022 it was 1.77 euros per night. The

weighted average with only municipalities that levy tourist tax, this was 1.27 euros in 2014, 1.60 euros in 2018, and 1.99 euros in 2022 (prices based on a hotel stay) (COELO, 2014-2022).

Looking at the tourist tax in the coastal municipalities used in this study, major differences are noticeable. In 2014, all Dutch coastal municipalities levy tourist tax. Municipalities of Waadhoeke, Noardeast-Fryslân, and Het Hogeland did not exist then because they later merged with other municipalities (municipalities before the merger are not included in this calculation). The weighted average (including municipalities without tourist tax) in 2014 was 1.37 euros per night. In 2018 this was 1.72 euros and in 2022 an average of 2.26 euros (prices based on a hotel stay).

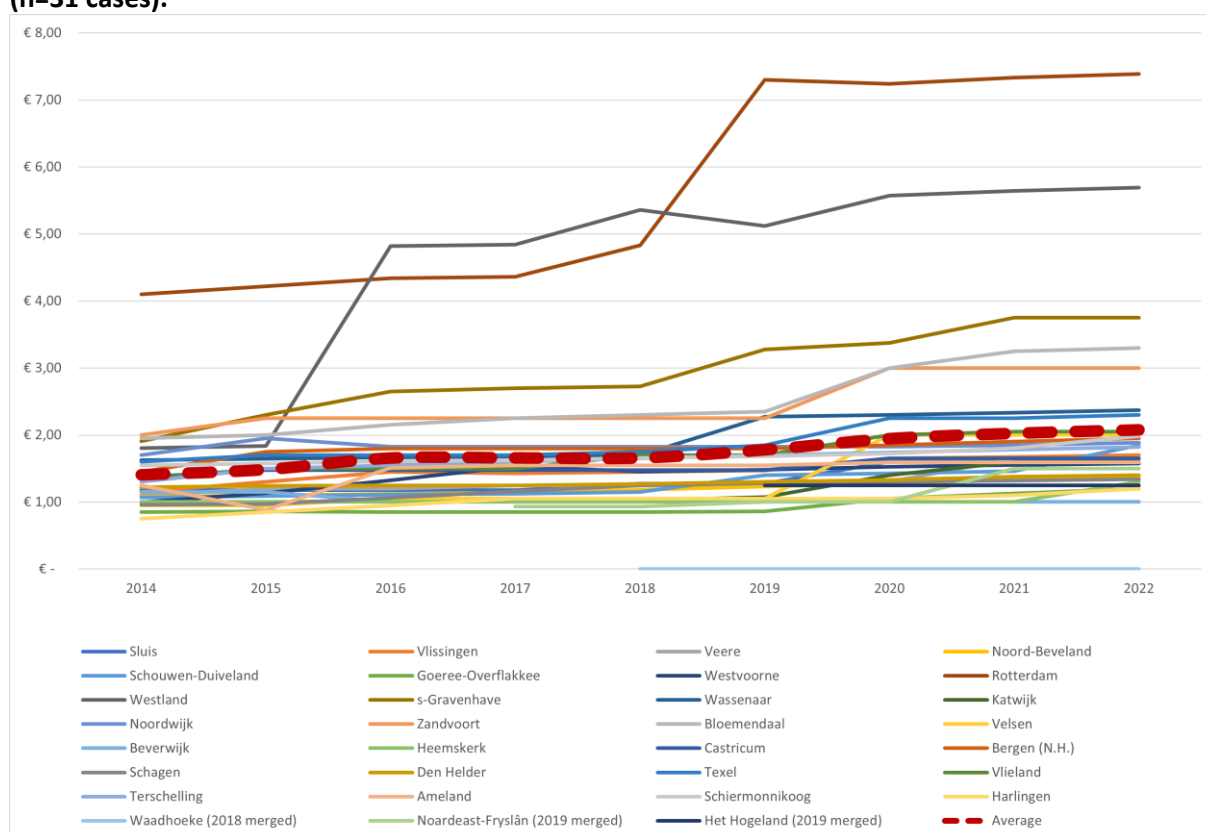
In addition to Waadhoeke, which does not levy a tourist tax, it is striking that the number of municipalities are much higher than other municipalities. The municipalities that levy the highest tourist tax rate in 2022 are successively Rotterdam (average 7.39 euros), Westland (average 5.69 euros), 's-Gravenhage (3.75 euros), Bloemendaal (3.30 euros), and Zandvoort. (3.00 euros). The weighted average excluding these five outliers (municipalities lower than 3.00 euros) is 1.58 euros.

In addition to differentiating between different types of overnight accommodation, municipalities use other forms of distinction in the amount of the tourist tax per overnight stay:

- A higher rate in the high season, and a lower rate in the low season (Schouwen-Duiveland);
- A higher rate for tourist destinations, a lower rate in less touristy places (Goeree-Overflakkee);
- A percentage of the overnight price as tax rate (Rotterdam and Westland);
- A rate for the first day of arrival (Wadden municipalities excl. Texel). This rate is charged by means of the boat ticket.

Figure 9 shows that there has been a slight increase in the average tourist tax and that the number of outliers has increased. In the case of a distinction between season and destination, the average of these two rates has been used. The percentage of the overnight price is based on data from the Center for Research on the Economy of Local Governments (COELO) (COELO, 2014-2022). In the municipalities where tax is levied for day tourists utilizing a boat ticket, only the price for an overnight stay has been used.

Figure 9. Rate (average) tourist tax per municipality, including the average of all municipalities (n=31 cases).



Source: elaboration of the author based on Tourist Tax Regulations 2014-2022 per municipality (when there is a difference in season, location, and accommodation type, the average of these two has been taken).

6.3 Policy response categories

In the previous section, it became clear which policy measures Dutch coastal municipalities apply to steer towards the prevention of overtourism. This list is far from complete but only consists of measures identified in the 31 cases.

This section looks further than just the policy responses from the 31 cases used in this study. An overview is given of possible policy responses at the destination level, derived from the study by Peeters et al. (2018)(appendix II). This research has done an extensive analysis of possible types of policy responses based on four types of sources:

1. **General Tourism Policy Resources** (European Commission, 2007, 2010, 2012, 2014)
(European Parliament and Council, 2011, 2015)
2. **Recent studies on overtourism** (Jordan et al., 2018; Koens et al., 2018; Koens & Postma, 2017; McKinsey & World Travel & Tourism Council (WTTC), 2017; Weber et al., 2017; World Tourism Organization (UNWTO) et al., 2018)
3. **41 Cases** (Peeters et al., 2018)
4. **Foresight study** Looking beyond the first three source groups

Because this list has been carefully compiled and gives a complete picture of possibilities, it does not add anything to research further. In appendix II 17 policy categories and 121 specific measures at the destination level are further elaborated.

In addition to the overview by Peeters et al. (2018), the Council for the Living Environment and Infrastructure (2019) provides recommendations on how to deal with tourist crowds in the report “Valuable tourism: our living environment deserves it [Waardevol toersime: onze leefomgeving verdient het]”. Recommendations are made with five control options for a specific Dutch situation with tourist pressure (table 22).

Table 22. Steering options for the development of tourism in the Dutch context.

Steering options	Possible applications
Steering on the visit to a destination	Optimizing the marketing; increase/decrease accessibility
Controlling access and use of facilities on site	Spread in time; spread in space
Controlling visitor behavior	Steering behavior (eg design of public space); awareness & information; enforcement & supervision
Managing tourism facilities: increasing or decreasing	Increase capacity and improve quality; regulate growth or reduce capacity
Steering towards compensation of residents	Compensation (e.g. physical compensation, financial compensation); increase involvement and control

Source: (Raad voor de leefomgeving en infrastructuur, 2019) [translation by the author].

6.4 Partial conclusion

A number of things can be concluded from the results of the policy choices made by Dutch coastal municipalities. First of all, all municipalities make at least one policy choice. This means that every coastal municipality is involved in tourism in the form of policy. In addition, it can be seen that many coastal municipalities are trying to promote high-quality tourism and involve stakeholders in tourist development. These are policy choices aimed at ensuring quality tourism, a consequence of too much quantity in tourism. So they are reactive policy choices that arise from the negative effects of tourism.

7. Analysis

Now that the results have been collected and set out, this chapter focuses on the analysis of the results. This chapter analyzes the outcomes of the risk of overtourism, the impact of tourism, and the policy choices made by the Dutch coastal municipality. First, an analysis will be carried out per outcome group, after which the analysis will be described the outcome groups as a whole. This helps to provide more insight into policy choices that Dutch coastal municipalities can make to reduce the chance of overtourism and the negative impact of tourism.

To structure the analysis, the conceptual model described in chapter 2.7 is used. This explains that there is overtourism if the Tourist Intensity (TI) is greater than the Tourist Capacity (TC). In view of this model, it is interesting to see what the policy choices of municipalities focus on. It can be seen that this can focus on the Tourism Capacity, Overtourism impacts or on the tourism market, volume and growth. Because the probability of overtourism has been determined and the impacts of tourism have been mapped, it can be investigated whether municipalities with a high probability or many impacts also contribute to policy choices.

7.1 Risk of overtourism

The results of the probability of overtourism do not show whether there is $TI > TC$. This is because there are no standard indicators and threshold values for overtourism. What can be determined is the probability of $TI > TC$. A high score therefore, does not mean that there is overtourism, but that compared to the other destinations, the chance of this is considered the greatest.

What is striking in the results is that there are large regional differences. For example, the Wadden Islands almost all score high in the risk of overtourism. The coastal municipalities in the Province of Zeeland are also among the highest scores. The area along the North Sea coast (North Holland and South Holland) scores average to low on the risk of overtourism. The coastal municipalities in the north, Province of Friesland and Groningen, all score low on the risk of overtourism. This seems to indicate that the probability of overtourism is not determined at the municipal level, but has a regional or provincial component. This shows that certain regions are more popular with tourists than other regions, and the chance of $TI > TC$ is therefore higher.

7.2 Impact of tourism

For the impact of tourism, we investigated what municipalities themselves described as the impact they experience. This reveals differences within regions. It scores the municipality of Veere a 5 for the chance of overtourism and the municipality of Vlissingen a 4. However, if the impact of tourism is examined, it can be seen that the municipality of Veere experiences much more impact than the municipality of Vlissingen. This can also be seen in the Wadden Islands, where the municipality of Schiermonnikoog experiences much less impact than the other islands, while they have a comparable chance of overtourism. This difference can be explained by the fact that it concerns what the municipalities themselves experience as an impact. When it comes to a feeling, it depends on several factors. It can be about the personal feeling of the inhabitants, political choices, or the situational context.

The tourism impacts (TI) and overtourism impacts are described in the conceptual model. In the case where the Tourism impacts (TI) is greater than Tourism capacity (TC), the overtourism impacts occur. A number of these overtourism impacts (eg gentrification, loss of destination attractiveness, loss of residents liveability) are described in the policy documents.

This means that it can be established that in some destinations the Tourism Impacts (TI) are greater than the Tourism Capacity (TC). In a number of municipalities, a distinction is made at destination

level, depending on the context. For example, the coastal destinations in the Municipality of Sluis, Veere, Goeree-Overflakkee have more impacts than destinations within this municipality located more inland.

7.3 Policy responses

The policy choices made by Dutch coastal municipalities are the most important layer of the analysis. Because if there is a good chance that $TI > TC$, do municipalities also make more policy choices? There are indeed visible differences. The Municipality of Texel makes the most policy choices, as expected in a municipality with a high chance of overtourism and a lot of felt impact. The municipality of Noordwijk, on the other hand, has a high risk of overtourism, and relatively many impacts felt but makes little use of policy choices. Because of the different municipalities, no connection can be found between the number of policy choices, the perceived impact, and the chance of overtourism. Only for the coastal municipalities in the north can it be clearly seen that relatively few policy choices are made, with a low chance of overtourism and little perceived impact.

Looking at the policy responses from the conceptual model, municipalities currently mainly focus on improve/increase of capacity. Reduce tourism (peak) volumes (eg arrival limits), de-marketing and reduce market mismatch (eg certain qualities of a destination are kept off the market), involve residents and stakeholders (eg in policy development), and control tourism (sharing) economy (eg private room rental) are not applied or are applied in a minimal way.

7.4 Partial conclusion

Given the above analysis of the results, several things can be concluded. First of all, the differences within the regions can influence the effectiveness of the policy choices made. The effects of a choice in one municipality can be negated by the choice of a neighboring municipality. This requires coordination at the regional or sometimes even provincial level in order to arrive at effective policy choices. This indicates how context-dependent policy choices are, as well as the likelihood of overtourism and the perceived impact.

Second, the lack of objective data on tourism does not allow municipalities to actually measure overtourism. A larger form of data collection, in which municipalities measure in the same way, can provide an objectification of the overtourism measurements.

Policy choices that Dutch coastal municipalities can make to reduce the risk of overtourism should primarily focus on tourism capacity. It is only possible to a limited extent to limit the intensity of tourism, given the global trend of growing tourism. Policy choices aimed at the impact of tourism are mainly symptomatic and do not address the root cause of overtourism. Here too, it is highly context-dependent which policy choices aimed at capacity are most appropriate for a municipality.

What policy choices do have an influence on, given the intensity of tourism, is the specific type of tourism. A specific tourist-target group, for example partying young people, causes a different nuisance than families with children as the tourist-target group. A municipality can steer in this direction with policy choices aimed at the target group, in order to reduce the intensity of tourism.

Finally, there is a so-called trade-off for municipalities if they want to limit tourism. For many coastal municipalities, tourism is a major factor in employment. Focusing on limiting tourism has adverse economic effects and lowers the quality of life. However, if tourism is not restricted, this can lead to overtourism, which also lowers the quality of life.

8. IN-DEPTH POLICY ANALYSIS

This chapter zooms in on three cases where there is a high risk of overtourism (top quintile, highest risk). The aim of this is to provide insight into the context dependence of the overtourism situation and which strategic approaches have been chosen. This is because it differs per municipality which impacts are experienced, and what policy measures are therefore directed towards. The regional context is important here. The aim of the policy responses (see conceptual model in chapter 2.7) that municipalities apply is threefold, and are discussed on a case-by-case basis:

1. Steering tourism makes mix, volume and growth;
2. Improve/increase tourism capacity (TC);
3. Reduce overtourism impacts.

8.1 Case selection

Based on the previous analyses, a distinction can be made between the three types of municipalities. The geographical context provides for variation in, among other things, the type of visitor, type of problem, and type of challenges (figure 10).

1. Southwestern Delta (rural)

The coast of the Southwestern Delta / Estuary Coast consists of an alternation of inlets and islands. The islands are characterized by dunes and beaches.

2. Dutch Coast (Randstad)

The Dutch coast is a varied coastline with the proximity to larger cities. The tourist and recreational links of these destinations with the Randstad have a major influence on the local situation.

3. Wadden Coast (island)

The Wadden coast consists of a sandy coastline and islands that form independent municipalities. The shallow dynamic inland sea has great ecological and cultural value.

Figure 10. Boundary of the plan area with the three sub-areas.



Source: Translation Zuidwestelijke Delta = Southwestern Delta, Hollandse Kust = Dutch Coast, Waddenkust = Wadden Coast (Strootman landschapsarchitecten, 2016).

The analysis of the tourist pressure per municipality, the impacts, and policy responses, has shown that these types of municipalities can be distinguished when it comes to tourism. These three types of municipalities also vary in the dynamics of the policy process, after which it was decided to each select one case for further study.

The first type that we distinguish is the Southwestern Delta, where tourism and recreation are seen as the economic center of gravity. The case that has been further investigated is the municipality of Veere, because it appears that the risk of overtourism in this municipality is the greatest in this region (chapter 4.6). The second type is the Dutch coast, where there is a lot of variation in character, with accessibility as the biggest bottleneck. From the hinterland in this area, there is high pressure from day visitors towards the coast on summer days. The case selected for further research is the Municipality of Noordwijk. In addition to the municipality of Noordwijk, the municipality of Zandvoort was also approached for an interview. Zandvoort scores higher than Noordwijk on tourism density, tourism intensity, tourism share in deployment, and growth. However, the municipality of Zandvoort did not respond to this and the neighboring municipality was approached. The third type, the Wadden coast, has its isolated location and nature as unique characteristics. The municipality of Texel was used for further research. Of the Wadden Islands, this is not the municipality with the highest risk of overtourism (chapter 4.6), but it is with the largest geographical size and inhabitants.

Municipalities on the mainland of the province of Friesland and Groningen are not distinguished as sub-area for various reasons. Firstly, tourism in this area is much less developed compared to the other municipalities. Secondly, there is no sandy coastline here, but a hard coastline with dikes. The lack of large beaches attracts a different type of tourist, who is more inland than the coast. Thirdly, all four of these municipalities are committed to stimulating growth, with the municipality of Waadhoeke being the only coastal municipality not to levy a tourist tax.

8.2 Results: three cases with a risk of overtourism

In many municipalities, tourism policy is part of a broader policy, in which limited capacity is devoted to tourist strategies. This in-depth case study zooms in on the municipality of Veere, Noordwijk and Texel, and analyzes which strategies they apply to prevent negative impacts of tourism.'

8.2.1 Southwestern Delta: municipality of Veere

Context municipality of Veere

The Zeeland coast is characterized by wide beaches with valuable nature behind them. Each island has its own identity with great variation between villages and openness. The range of accommodations is versatile and of high quality (Provincie Zeeland et al., 2017; Verheijden concepten & ZKA leisure consultants, 2016). The island of Walcheren (municipality of Vlissingen, Middelburg and Veere) makes this part of the province the 'tourist hotspot' of Zeeland (Perdok & Lycklama, 2019). Walcheren is surrounded by surface water, which means that the municipality of Veere has the most kilometers of beach in the Netherlands after Ameland.

Of all Zeeland coastal municipalities, the tourism density (number of tourists per km²) and intensity (number of tourists per inhabitant) are greatest in the municipality of Veere. Veere scores the highest on the entire Dutch coast after Zandvoort for the tourism density indicator. The average growth (2017-2019) is slightly less high compared to the other coastal municipalities. However, the table below (table 23) shows the number of overnight stays already showing a strong increase from 2015.

Table 23. Number of tourist overnight stays in the municipality of Veere (2004-2019).

Year	Number of overnight stays	Growth compared to the previous year	Growth compared to 2004
2004	3.879.530	-	-
2005	3.902.400	0,6%	0,6%
2006	3.937.710	0,9%	1,5%
2007	3.897.636	-1,0%	0,5%
2008	3.789.213	-2,8%	-2,3%
2009	3.820.416	0,8%	-1,5%
2010	3.895.306	2,0%	0,4%
2011	3.880.417	-0,4%	0,0%
2012	3.896.297	0,4%	0,4%
2013	3.866.798	-0,8%	-0,3%
2014	3.808.174	-1,5%	-1,8%
2015	4.185.861	9,9%	7,9%
2016	4.385.971	4,8%	13,1%
2017	4.597.959	4,8%	18,5%
2018	4.947.541	7,6%	27,5%
2019	5.209.174	5,3%	34,3%

Source: Number of overnight stays municipality of Veere (Gemeente Veere, 2021b).

In many seaside resorts, rooms have been rented out to tourists for decades. Domburg (the most touristic seaside resort in the municipality of Veere) was already rented out a century ago to people who came to enjoy the beneficial effects of this environment. These rooms became more and more luxurious, and over time holiday homes were also built in the garden (Korteweg Maris et al., 2020). The arrival of rental platforms (e.g. Airbnb) has made it easy for private individuals to offer accommodation. Of the approximately 5 million overnight stays in 2018, 38% were through private rental and 62% through commercial rental (Perdok & Lycklama, 2019).

Overtourism in the municipality of Veere

The peak load in the summer season "causes nuisance, among other things in the field of perceived crowds, traffic nuisance on the roads, and parking problems in several village centers" (Gemeente Veere, 2021, p1). However, it appears that the pressure within the municipality is not evenly distributed. Table 24 shows that the number of overnight stays in the core of Domburg is by far the highest. In addition to Domburg, Oostkapelle, Westkapelle, Vrouwenpolder and Veere (city) are also classified as very high or high tourist pressure (Perdok & Lycklama, 2019). In Domburg, for example, 58% of the number of accommodations is rented out privately and 51% of the accommodations are placed within the village (table 24). Many of these accommodations are located in the garden of a private house (Interview Romijn, 2022).

The number of private overnight stays increased by 134% in 2019 compared to 2014 (Gemeente Veere, 2021b). Rentals at holiday parks have increased by 246% in these four years. This can be explained by the emergence of online rental platforms. As a result, parking pressure in village centers has increased (Interview Romijn, 2022). In total, 18% of sleeping places are located within the cores (table 24). However, for example, in the coastal towns of Domburg (51%) and Zoutelande (35%) this percentage is much higher (Perdok & Lycklama, 2019).

Table 24. Overview of integral analysis per village center of the municipality of Veere (2018).

Village	population	number of overnight stays (x1000)	number of beds	% private rental	% beds within the village	number of passers-by (x100)	tourism intensity (nights per resident)	tourism density (nights per km ²)	final assessment
Domburg	1.665	1.162	9.690	58%	51%	14	685	468	Highest
Zoutelande	1.610	739	10.263	60%	35%	10,9	450	269	Highest
Oostkapelle	2.285	898	11.974	42%	6%	2,1	384	151	High
Westkapelle	2.600	528	9.330	29%	13%	5,4	209	178	High
Vrouwenpolder	1.060	581	8.462	32%	4%	4,1	558	117	High
Koudekerke	3.400	475	7.732	31%	3%	-	145	114	Moderate
Aagtekerke	1.530	264	4.172	11%	10%	-	193	82	Moderate
Biggekerke	885	211	3.480	23%	10%	-	233	67	Moderate
Veere	1.630	110	3.171	5%	19%	7,4	71	33	High
Serooskerke	1.810	170	2.933	11%	10%	-	99	55	Low
Meliskerke	1.470	170	874	14%	17%	-	34	10	Low
Grijpskerke	1.430	170	724	33%	12%	-	34	10	Low
Gapinge	470	170	431	19%	35%	-	34	10	Low
Municipality of Veere	21.867	5.283	73.234	38%	18%	-	242	62	

Source: (Perdok & Lycklama, 2019)

In addition to the pressure on parking spaces, there is also traffic nuisance on roads. An example of this is the through access road through Grijpskerke to Domburg, Zoutelande, and Westkapelle. A number of 8,000 per day is appropriate for this road, but on average 12,000 cars drive there (Calon, 2021).

The data shows that most overtourism problems in the municipality of Veere occur in Domburg. Using the conceptual model, it is clear that the tourism impacts are larger than the tourism capacity ($TI > TC$). The overtourism impacts in the conceptual model are described below (table 25) for the seaside resort of Domburg:

Table 25. Overview of the overtourism impacts in Domburg (Municipality of Veere)

Overtourism impacts	
Gentrification	<i>High plot and house prices, causing real estate investors to take over the market (Raad voor de leefomgeving en infrastructuur, 2019)</i>
Declining population	<i>Compared to 2017, there will be a decrease of -1.4% in the number of inhabitants in 2022 (Gemeente Veere, 2017-2022)</i>
Protest movements	<i>Concerned residents drew up a manifesto in 2018 (NOS, 2018)</i>
Loss of destination attractiveness	Some residents of other villages in the municipality avoid Domburg in high season (Interview Romijn, 2022)

Loss of residents liveability	Community life such as football or music comes to an end due to a shortage of new members (Omroep Zeeland, 2018)
Mismatch between type of visitors and destination	Not directly applicable
Mismatch between groups of visitors	Not directly applicable

Source: Elaboration by the author.

In addition, the number of tourist beds in neighboring municipalities also influences the situation in the municipality of Veere. An example of this is the possible development of Waterpark Veerse Meer on the border of the municipality of Veere but located in the municipality of Middelburg. With the construction of Waterpark Veerse Meer, eight-nine hundred additional recreational units will be added. While the municipality of Veere is working on regulating and reducing possible nuisance from tourism (Interview Romijn, 2022). “A new “recreational village” on the border of the municipality of Middelburg and the municipality of Veere will ensure that the nuisance in the municipality of Veere will only increase” (Calon, Extra toeristische druk door bouw van waterpark, vreest SGP/CU Veere, 2020).

Policy: what are they doing about overtourism

Both residents and the city council have indicated that growth in tourism must be curbed (Municipality of Veere, 2021b). This is also stated in the interview: “We [Municipality of Veere] have a too generous policy. If you want to keep it within limits you have to be able to say no to certain things” (Interview Romijn, 2022). In 2018, intensive research was carried out into the tourism situation in this municipality. Extensive data research and a survey have provided insight into the current situation, which has led to stricter policy (Perdok & Lycklama, 2019; Gemeente Veere, 2021; Interview Romijn, 2022). The current coalition program of 2022 even states: “We want to limit the expansion of recreational rental by private individuals, while respecting existing situations.” (Gemeente Veere, 2022, p5). “This is a nice small step on how we can slow down growth in the private sector” [translation by the author] (Interview Romijn, 2022).

Policy measures are being taken on various themes to inhibit growth and to manage it in a balance between living, working and recreation. The policy responses from the conceptual model are explained below (if possible) on the basis of examples from the policy of the municipality of Veere.

Reduce tourism (peak) volumes

- Campsites and mini-campsites are only allowed to expand to a limited extent, hotels very limited. Private room rental is allowed for a maximum of two rooms, with a private parking space.
- There is a much more generous policy for private individuals than for professional rentals.
- Parking fee is higher in destinations with more tourist pressure.

De-marketing and reduce market mismatch

- Limited marketing of tourism and Spa Status
- The aim is to use regional marketing to steer the distribution of guests in time and location. How this is done is not specified.

Improve/increase capacity

- Improve infrastructure

Involve residents and stakeholders

- Collaboration with City Council, entrepreneurs, residents and knowledge partners (eg. Knowledge Center Coastal Tourism)
- Part of the cooperation cluster coastal municipalities (Zeeland)
- Municipalities of Veere, Vlissingen and Middelburg form the island of Walcheren. There are regular consultations. (However, inhibiting the number of tourist beds in the municipality of Veere contrasts with the desired growth of this in the municipalities of Vlissingen and Middelburg).

Control tourism (sharing) economy

- Municipality recognizes the danger of an economy that is too one-sided
- Balance between living environment and tourism has been made a top priority
- Private letting is pushing up prices in the housing market and the enjoyment of living in various residential neighborhoods is under pressure.

Sources: Interview and policy documents (Appendix III).

The strategic approach chosen is therefore mainly aimed at inhibiting the growth of tourist developments. The municipality of Veere focuses on a large number of themes. Although Veere has a good picture of the current problems and threats, growth does not appear to be slowing down. The figures from 2015 to 2019 show an average growth of 6.5% per year. The number of tourist overnight stays in 2020 and 2021 are not known, but show a distorted picture due to the corona crisis. It is recommended that the extensive analysis of the current situation, including a resident survey, be repeated in the short term in order to gain insight into the effectiveness of the set of policy measures.

8.2.2 Dutch coast: municipality of Noordwijk

Context Municipality of Noordwijk

The municipality of Noordwijk is the northernmost municipality of the province of Zuid-Holland, with the municipalities of Katwijk (Zuid-Holland) and Zandvoort (Noord-Holland) adjacent. The approximately 13 kilometers long beach largely determines Noordwijk's image as a coastal and seaside resort. The only core on the coast is that of Noordwijk aan Zee, with the boulevard as a tourist attraction (Biegstraaten & Van Beveren, 2015). Noordwijk aan Zee has been transformed from a fishing village to a seaside resort, to a Spa resort [Kuuroord]. This exudes a chic atmosphere and focuses on vital, healthy and energetic guests (Gemeente Noordwijk et al., 2018) (Interview Kohabir, 2022). "Nowadays Noordwijk aan Zee is a quality seaside resort, where you will find a combination of international appeal and charming small scale" (Gemeente Noordwijk, 2018, p22). In addition to coastal tourism, Noordwijk also promotes visits to the Dune and flower bulb region together with four neighboring municipalities (Gemeente Hillegom et al., 2022).

Noordwijk was the fourth seaside resort in the Netherlands (Nieuweschans, Cadzand, and Domburg) to receive the official ESPA Spa Status [Kuuroord-Status] in 2020. A seaside resort must meet international criteria such as quality of seawater, air, amenities and facilities (Gemeente Noordwijk, 2021). Strengthening the tourism sector has led to 5% more tourists in 2021 compared to 2018 and 5% higher spending per tourist compared to 2018 (Kamphuisen, 2021). The Spa Status is used to promote a conscious lifestyle, a healthy region, a beneficial seaside resort and high-quality of services, and services throughout the municipality of Noordwijk. (Interview Kohabir, 2022)(Gemeente Noordwijk, 2021).

The report for residential tourism [verblijfstoersime] in Noordwijk & Noordwijkerhout, from 2018, describes that the quality of the tourist offer is under pressure to a large extent. In addition, mainly

small-scale accommodations offer little quality (Gemeente Noordwijk et al., 2018). The municipality of Noordwijk therefore, does not want to invest in quantity, but in quality (Biegstraaten & Van Beveren, 2015). The majority of employment (60%) in Noordwijk aan Zee depends on day and overnight tourism (direct and indirect)(Gemeente Noordwijk, 2009)

The heatmap in chapter 4.6 shows that the municipality of Noordwijk scores in the top percentile on three components: tourism density, growth in the number of bed-nights per year, and average of the five Airbnb indicators. Table 26 shows the number of tourist overnight stays in the municipality of Noordwijk. In the memorandum on hotel policy [nota hotelbeleid] for the municipality of Noordwijk 2010-2015, the lack of renovation is given as a possible cause. The policy was aimed at growing from 510,000 overnight stays in 2008 to 570,000 overnight stays in 2015 (Gemeente Noordwijk, 2010). The municipality has chosen not to share data for the other years. Therefore, the data from Chapter 4 has been used to show the number of tourist overnight stays in 2017-2020. Assuming the same method has been used, previous policies have resulted in a large increase in tourist overnight stays.

Table 26. Number of tourist overnight stays in the municipality of Noordwijk (2001-2008).

Year	Number of overnight stays	Growth compared to previous year	Growth compared to 2001
2001	529.901		
2002	569.146	7%	7%
2003	542.074	-5%	2%
2004	511.716	-6%	-3%
2005	499.144	-2%	-6%
2006	527.856	6%	0%
2007	529.628	0%	0%
2008	513.292	-3%	-3%
2017 (own calculation)	1.402.740	173%	165%
2018 (own calculation)	1.461.918	4%	176%
2019 (own calculation)	1.882.740	29%	255%
2020 (own calculation)	1.198.356	-36%	126%

Source: (Gemeente Noordwijk, 2010). The Municipality of Noordwijk has stated that more recent data is not available to third parties. The data from 2017-2020 are based on our own calculation of the tourist tax (chapter 4)

Table 27 describes the number of accommodations by type. It can be seen that 25% constitute hotels, guest houses, B&B, and apartments. No distinction is made here between private rental and commercial rental.

Table 27. Overview of accommodation by type in Noordwijk (reference year 2017).

Type of accommodation	Number of units	Number of beds	% beds
Hotels, B&B, apartments	1569	3180	25%
Bungalows, holiday homes	1030	5150	40%
Campsites (tourist and permanent pitches)	300	4490	35%
Total Noordwijk	3500	12820	100%

Source: (Gemeente Noordwijk, 2018)

The Noordwijk 2030 Environmental Vision states that 77% of the accommodations are located in the northern outskirts, and 23% in Noordwijk aan Zee (Gemeente Noordwijk, 2018). Because the number

of overnight stays per core is not shown, the tourism density (nights per km²) and tourism intensity (nights per resident) of Noordwijk aan Zee cannot be calculated.

Overtourism in the municipality of Noordwijk

The beach in the municipality of Noordwijk shows a unique and extensive collection of restaurants and bars. Partly because of this, the recreational pressure on the beach has increased, as a result of which stakeholders have expressed concerns about safety, nature, tranquility and space (Biegstraaten & Van Beveren, 2015). The increase in tourists and holidaymakers leads to more demand for parking spaces and puts greater pressure on accessibility and quality of life. This mobility problem appears to be the main bottleneck, causing residents and visitors to experience the most nuisance (Biegstraaten & Van Beveren, 2015; Diegenbach, n.d.; Van der Plas, 2020; Interview Kohabir, 2022). This manifests itself on peak days in the summer, but not the entire season (Interview Kohabir, 2022). During the COVID-19 period, the municipality of Noordwijk has called on several times to stay away from the beaches because it was too busy (Tieleman, 2020). For some periods, all parking lots have been closed on weekends because of the crowds (Schoolenberg, 2020).

In 2017, the Coastal Pact was signed, in which 59 parties agreed to better protect the Dutch coast. In 2020, eight nature and environmental organizations have expressed their concerns to the relevant minister about: *“a number of projects threaten to go ahead that pose a direct threat to the preservation of qualities in the coastal zone”* (Ouwehand, 2020, p. 2). This refers to a specific development in a Natura 2000 area within the municipality of Noordwijk (Ouwehand, 2020).

Nuisance from tourist rental mainly occurs in the centers of Noordwijk aan Zee and Noordwijk Binnen. The result of this is that unwanted fragmentation and nuisance can arise. This also reduces social cohesion in the neighborhood (Van der Plas, 2020). However, the data and table 28 shows that there are few other problems besides infrastructural problems and housing shortage.

Table 28. Overview of the overtourism impacts in municipality of Noordwijk.

Overtourism impacts	
Gentrification	Homes are increasingly used or rented out for recreational purposes, which means that first-time buyers have less chance of entering the housing market (Van der Plas, 2020).
Declining population	No, the number of inhabitants in De Zilk, Noordwijk and Noordwijkerhout is increasing (Gemeente Noordwijk, 2000-2021)
Protest movements	Not directly applicable
Loss of destination attractiveness	No, (tourism-)policy is specifically aimed at improving the quality of the municipality. Infrastructural problems make it less attractive.
Loss of residents liveability	Not directly applicable
Mismatch between type of visitors and destination	Not directly applicable
Mismatch between groups of visitors	Not directly applicable

Source: Elaboration by the author.

Policy: what are they doing about overtourism

The policy of the municipality of Noordwijk is mainly aimed at improving quality. There is no integral tourism policy plan, but tourism is part of various sectoral plans. The qualitative growth of the offer is

reflected in all policy plans. The Beach Memorandum [Strandnota] describes, for example, that the previous memorandum focused on a more versatile beach day with growth in the range of tourist facilities on the beach, but that the current memorandum focuses on quality improvement and a good balance in user options for all users (Biegstraaten & Van Beveren, 2015). The more overarching visions such as the Spa Vision [Kuuroordvisie] and the Environment Vision 2030 [Omgevingsvisie 2030] also focus on the quality improvement of Noordwijk, without mass tourism, monocultures and large-scale buildings (Municipality of Noordwijk, 2018, 2021).

In the policy documents and from the interview that there is limited nuisance from tourism. However, the heatmap of chapter 4.6 shows that there is indeed a risk of overtourism. The policy measures from the conceptual model are described in this regard, with examples from the municipality of Noordwijk where possible.

Reduce tourism (peak) volumes

- Stimulate qualitative growth, without mass tourism. In the Economic Vision 2012-2020, an increase in the number of tourist overnight stays and tourists per day is desired so the economic value of tourism increases. However, the emphasis is on quality tourism – quality over quantity.
- Rules regarding home use (eg. holiday rental up to a maximum of 30 days and room rental up to a maximum of two people)
- Organizing alternative forms of mobility (eg. hop-on-hop-off buses to the beaches)

De-marketing and reduce market mismatch

- By actively promoting the Spa Status, for example, efforts are being made to spread tourism over the whole year, longer stays and a high return visit.

Improve/increase capacity

- Roads and parking capacity will be increased.
- Too little official capacity to, for example, draw up an integrated tourism policy plan

Involve residents and stakeholders

- Yes, for example with the spa vision [Kuuroordvisie]. There is no integrated tourism policy plan.

Control tourism (sharing) economy

- Focus on increasing the economic value of tourism. This policy does not indicate an overtourism situation

Sources: Interview and policy documents (Appendix III).

Due to the lack of a tourism policy plan and a clear analysis of the current situation, insights are lacking. The growth of recent years, and the predicted (global) growth in the future, are causing increasing tourist pressure. Actively promoting this destination with a SPA status [Kuuroord] will only contribute to this. Negative consequences of tourism for the quality of life and living environment in the municipality of Noordwijk can reduce the attractiveness for both residents and tourists. It is therefore very important to prevent or minimize negative effects in order to maintain support among residents. The fact that the municipality of Noordwijk scores in the top 6 municipalities with the greatest risk of overtourism (chapter 4.6), without a tourism policy plan is remarkable. It is therefore recommended that the entire tourism sector be mapped, paying attention to the experience of residents (attitude survey).

8.2.3 Wadden coast: municipality of Texel

Context municipality of Texel

Texel is the largest Dutch Wadden Island, where tourism has made it an attractive place to live because of the amenities. On the eastern side, it borders the Unesco World Heritage Site of the Wadden Sea, with unique and protected natural values. The beach, dunes, forests, and landscapes make tourists want to come and experience nature on this island. Where in the early days residents rented out their own houses to guests, all kinds of accommodation are rented out now. Texel has gradually adapted to tourists (Gemeente Texel, 2021). The Texel residents survey report shows that the advantages of tourism outweigh the disadvantages for now, but that the carrying capacity is already under pressure (IJben, 2020). The type of visitor who visits this island is relatively highly educated and loyal: the majority have been to this island more than six times (Gemeente Texel, 2021).

Texel tourism plan for the future [Toeristisch toekomstplan Texel] mentions approximately 4 million tourist overnight stays per year (Gemeente Texel, 2021). Table 29 provides an overview of the number of tourist overnight stays in the municipality of Texel. This table does not come from policy documents but was requested from the relevant municipality. It is striking that 2007/2008 has much more tourist overnight stays than the following years. However, different calculations for the commuter tax [forensenbelasting] have been used, which may cause these two years stand out. However, the council has promised to invest in a digital night register, in order to get a better up-to-date overview (Gemeenteraad Texel, 2021).

Table 29. Number of tourist overnight stays in the municipality of Texel (2007-2021).

Year	Number of overnight stays	Growth compared to previous year	Growth compared to 2007
2007	3.901.469		
2008	4.185.741	7%	7%
2009	2.748.911	-34%	-30%
2010	2.664.881	-3%	-32%
2011	2.912.262	9%	-25%
2012	2.968.884	2%	-24%
2013	3.079.038	4%	-21%
2014	3.202.955	4%	-18%
2015	3.182.659	-1%	-18%
2016	3.341.158	5%	-14%
2017	3.528.955	6%	-10%
2018	3.668.421	4%	-6%
2019	3.540.935	-3%	-9%
2020 (estimated)	3.569.412	1%	-9%
2021 (estimated)	4.065.721	14%	4%

Source: internal data Municipality of Texel (Gemeente Texel, 2022)

Overtourism in the municipality of Texel

Some residents of the municipality of Texel think that it is too busy, especially in the summer months, and that there is too much nuisance from tourists (Gemeente Texel, 2021; IJben, 2020). Noordhollands Dagblad wrote about committee meetings of the city council in 2021: "Everyone seems to agree that the limit of tourism on the island has been reached" (Roubos, 2021). The resident survey shows that support for tourism is greatest in the residential area of De Cocksdorp.

This report also concludes that the success of tourism is still too often measured on the basis of economic indicators and negative effects are not resolved. Residents in the residential areas of Den Hoorn, Oosterend, and Oudeschild in particular experience the negative effects of tourism the most (IJben, 2020). Positive effects caused by tourism are the high level of facilities for residents and visitors. The level of facilities on Texel is equivalent to that of a city with a hundred thousand inhabitants (Gemeente Texel, 2021).

Negative effects that are experienced are cluttering the public space such as signage, many parked cars, loose bicycles in the core, but also the investigation of some roads (Gemeente Texel, 2021). In addition, the pressure on nature is increasing due to the high visitor numbers (Gemeente Texel, 2020; Gemeente Texel, 2022).

The economic dependence on tourism is high in the municipality of Texel. The share of the direct and indirect added value of employment amounts to 75% (Gemeente Texel, 2021). Direct employment in the Tourism and Recreation sector amounts to 28% (LISAA, 2016-2020) (LISAb, 2016-2020). The Wadden Islands have the highest shopping and catering density per municipality in the Netherlands (number of dining and catering establishments and shops per inhabitant). The municipality of Texel is in ninth place when it comes to most supermarkets per 1,000 inhabitants (Korteweg Maris et al., 2020). Offering accommodation in or around a residence has traditionally been common on Texel, and has ensured prosperity. A total of 44.057 sleeping places have been registered in 2021. The table below (table 30) shows an overview per category. It is noticeable that private room rental/accommodations are not included, they are not registered. However, an estimate results in 800 extra sleeping places (Gemeente Texel, 2021).

Table 30. Registered sleeping places on Texel (except private sleeping places at overnight accommodations).

Category	Number of beds
Hotels en pensions	3.773
Apartments	2.885
Tents and touring caravans	10.762
Mobile homes	5.252
Summer houses	12.476
Group accommodations	1.777
Camping at the farm	2.760
Recreational buildings	2.845
Second homes	1.305
Camping at private properties	222
Total	44.057

Source: (Gemeente Texel, 2021)

Private room rental provides additional income so that the local also benefits from tourism. However, in some places, this is developing into a larger-scale form of accommodation, as a result of which more crowds are experienced in residential areas in the form of parking pressure and more noise pollution. Digital platforms have increased private tourist rental on Texel (Gemeente Texel, 2021).

The data shows that most overtourism problems occur on the entire island, and not only in a specific destination. Using the conceptual model, it is clear that the impact of tourism is greater than tourism capacity ($TI > TC$). The effects of overtourism in the conceptual model are described below (table 31).

Table 31. Overview of the overtourism impacts in municipality of Texel.

Overtourism impacts	
Gentrification	No, the islanders themselves have become rich and have moved up from poorest to richest region (Bies, 2022)
Declining population	The number of inhabitants of Texel fluctuates. However, it has remained virtually the same since 2014, with a slight increase to 2022 (texel.incijfers.nl, 2006-2022)
Protest movements	Not on a large scale. But for example the association Tien voor Texel, founded in 1993 out of dissatisfaction with the tourist policy of the municipality of Texel (10voortexel, 2022)
Loss of destination attractiveness	The tranquility of the island has disappeared, so some people avoid the main season. "We'll never have the island to ourselves again, we're getting flooded (Niks, 2018)"
Loss of residents liveability	Campsites have disappeared and bungalow parks have taken their place. As a result, it is high season for ten months of the year. Years ago it was busy with tourists in the summer, and in the winter the island was again for the residents (Niks, 2018)
Mismatch between type of visitors and destination	No, there are mainly families with young children and people over 50 who walk and cycle (Niks, 2018; Gemeente Texel, 2021)
Mismatch between groups of visitors	Not directly applicable

Source: Elaboration by the author.

Policy: what are they doing about overtourism

Tourism is part of Texel and the island has adapted to this. However, in the 1970s people revolted and in the first Recreation Blueprint 1974 [Recreation Basic Plan] a maximum number of tourist beds of 47,000 was determined (Van der Duim & Lengkeek, 2004). Under current policy, this rule still applies, with the question of whether the current supply of approximately 45,000 tourist beds is not sufficient (Gemeente Texel, 2020, 2021). The resident perception survey in 2019, in which 50% of the residents saw more and more disadvantages of tourism, resulted in the Texel Tourism Future Plan (2021) and a Tourism and Recreation Implementation Agenda 2022-2024 (2022). The Texel Tourism Plan for the future contains an analysis of the current situation and advice for the future. The Implementation Agenda contains the most important actions for the first two years after the adoption of the Tourism Future Plan.

The policy responses from the conceptual model are explained below (if possible) based on an example from the policy of the municipality of Texel.

Reduce tourism (peak) volumes

- Maximum number of tourist beds of 47,000 and registration obligation with registration number.
- Regulations for limiting new tourist beds (eg camping on a farm should remain a side activity and not develop into a full-fledged camping site or room rental with a maximum of six sleeping places)
- Stimulate the spread of visitors across the island

De-marketing and reduce market mismatch

- Discouraging day visits (eg. VVV Texel asks organizations not to promote day visits)
- Stimulate sustainable transport and spread over time
- Research into the guest who meets the criteria 'conscious and valuable' for targeted marketing.

Improve/increase capacity

- Mobility issues have been largely resolved. Use of public transport and cycling is encouraged (already when booking a stay), car use is discouraged.
- New (small-scale) locations are being developed to spread visitors to less visited places

Involve residents and stakeholders

- Joint tourism vision and implementation agenda for the municipality, the business community and other organizations. This is evaluated and adjusted every two years.

Control tourism (sharing) economy

- Updating sleeping accommodation registration and introducing registration obligation for tourist rental of (parts of) homes
- No boat tax (unlike the other Wadden Islands, this is also not feasible for the ferry service TESO).

Sources: Policy documents (Appendix III).

Due to the isolated location (island), it is possible to write policies and draw up rules separately from other municipalities. For example, compared to the other two municipalities, the municipality of Texel can relatively easily manage a maximum number of boat crossings per day, for example to send day visitors. Almost all policy responses from the conceptual model are described in detail in policy plans.

8.3 Partial conclusion

The case studies show that there are differences between the municipalities. For example, the municipality of Veere and Texel focuses on limiting the capacity of tourism, while Noordwijk still assumes increasing capacity. In addition, it should be noted that there is cooperation everywhere within the region, even if there are differences between municipalities. However, the effectiveness of this collaboration is difficult to measure. For example, the municipality of Veere works together with the municipality of Vlissingen, while they pursue contradictory policies. After all, the municipality of Vlissingen is still committed to the growth of tourism. The situation for the municipality of Texel is easier in this respect since its isolated location as an island means they can better see the effects of a policy choice.

In addition, the municipality of Texel and the municipality of Veere are aware that data can play a major role in making good policy choices. They have acted accordingly and have taken steps to collect more and better data. The municipality of Noordwijk indicates that an overarching tourism vision is desirable, also to gain more insights. No concrete steps have yet been taken to do this.

The municipality of Noordwijk is the only one of the case studies to focus on a new target group of tourists. By propagating on the spa status, they want a tourist who spends more money and comes for the quality of the spa status. The municipality of Veere and Texel already have a tourist-target group that matched the destination.

All municipalities deal with the trade-off between economy and quality of life differently. The municipality of Texel chooses most clearly to do more to improve the quality of life. Even though the

quality of life depends on the tourist economy, they admit that the economy is not everything. They are therefore clearly committed to curbing the capacity of tourism. The municipality of Veere is looking for more balance. For example, they want to limit private rental, but not ban it. A complete stop would benefit the quality of life but would be worse for the economic benefits that residents experience from tourist rental. Although they do mention the quality of life, the municipality of Noordwijk still opts for an economic approach. By focusing on tourists who spend more, they can absorb a quantitative contraction. But despite that, the tourist economy remains the starting point.

Looking at the policy responses of the municipalities investigated in the in-depth case studies, a few things can be concluded. First of all, gaining insight in the amount and impact of tourism is crucial for taking the right policy measures. So municipalities should start with analyzing the current situation. Thereby they should also focus on measuring the experience of residents, by for example a attitude survey. Because the impact of tourism is not only about the technical impact, but also about the experienced impact. Second, the analysis should be repeated throughout the upcoming years, to gain insight into the effectiveness of the set of policy measures they have taken. A third conclusion regarding the policy responses is that municipalities, who already have a higher chance of overtourism, should not actively promote tourism. This can cause an exponential growth in relation to the ongoing global trend of tourism. The last conclusion is that the most effective policy measure would be to manage the amount of tourist, but that is not doable for most municipalities. Texel can take these measures because of it is isolated as an island, while most of the other municipalities can't take measures going that far.

9. CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the findings are discussed and recommendations are made with the aim of better understanding the phenomenon of overtourism in the context of Dutch coastal municipalities. Case study research was used to answer the main question: *'Which policy responses do Dutch coastal municipalities apply to create a balance between a good living environment and tourism, in a situation of overtourism?'* and its corresponding sub-questions. Although large cities such as Venice, Barcelona, and Amsterdam are regularly associated with overtourism, there are more descriptions of Dutch coastal destinations and the negative consequences of tourism. First of all, the current overtourism situation has been mapped with data from relevant indicators. Subsequently, an inventory was made of the described impacts of overtourism and policy measures per municipality on the basis of policy documents. Finally, three cases were selected for an in-depth case study.

9.1 Conclusions

Tourism policy should focus on an optimal balance between tourist pressure and the carrying capacity of the living environment. Nevertheless, as has been argued in the scientific literature, there are indeed negative consequences of excessive tourist pressure. In the event of an imbalance, there is a negative experience between local residents and entrepreneurs with tourists, whereby too high numbers of visitors cause friction. Municipalities use a set of policy measures to manage this. This ideal set varies by destination and is highly dependent on context. In too many municipalities, tourism is only linked to economic policy. However, it can be concluded that tourism has an influence on several policy areas and must therefore be dealt with integrally.

Overview of the overtourism situation in coastal municipalities

This research shows that different destinations have a high risk of overtourism, with varying severity. With overtourism there is an imbalance between the number of tourists, the growth, and the carrying capacity of the destination. Overtourism occurs when one or more physical, ecological, social, economic, psychological, or political capacity is exceeded. However, with the methods already developed, it is not possible to determine whether there is overtourism. That is why the fifth percentile method was used to compare the 31 Dutch coastal municipalities and to indicate which municipalities have the highest risk of overtourism. With this method, it was impossible to assign a threshold value to detect actual overtourism. The heatmap (chapter 4.6) provides an overview of the risk of overtourism. Three geographical areas with a high risk of overtourism can be distinguished here.

Impacts of overtourism

This study shows six environmental impacts (eg congestion, overcrowding), five economic impacts (eg inflation, reduction of accessibility), and seven social effects (eg marginalization, safety) as a result of excessive tourist pressure. The effects that occur most frequently in the Dutch coastal municipalities are successive: investments in tourism-specific infrastructure; modification of events, activities, and architectural and historical sites; overcrowding or infrastructure; economic dependence on tourism. It can be concluded that some municipalities describe many impacts and others few. For example, there are municipalities that score high on the risk of overtourism, but do not describe much in policy documents. Negative impacts may not be experienced, identified, or described in policy documents. Although social impacts are often mentioned in cities and environmental impacts in rural areas, coastal municipalities experience all three types of impacts (environmental, economic, and social). The wide variety of impacts in these areas shows the complexity of the problem.

Policy responses to overtourism

Instruments of local authorities to manage a balance between the development of tourism have been inventoried for more information on this type of policy development. Although the literature has shown that the term overtourism is still relatively new, municipalities have had policies in place to steer tourism for decades. Traditionally, municipalities have focused on growth because of the economic benefits. However, not or to a lesser extent a strategy in which the best possible tourist product was developed. In the current policy plans, a large part of the municipalities focuses on qualitative tourism, remarkably often still stimulating growth in numbers. In addition, it was remarkable that only three of the policy documents studied discussed the term overtourism and its negative consequences. This may indicate the novelty of the phenomenon or its negative charge.

Most municipalities focus their policy on measures such as increasing capacity (infrastructure, parking) and spreading visitors (location, seasons). However, these measures do not solve the problem of too many tourists for the carrying capacity of a destination. With these measures, residents at the tourist hotspots still experience too many tourists. Season extension ensures that problems are not only experienced in the summer but also increasingly in the early and late seasons. Location spread means that tourists still want to visit hotspots, but have to travel for this, which increases infrastructural pressure even more. If a municipality wants to prevent overtourism, the number of incoming tourists should not increase.

In-depth policy analysis

The in-depth policy analysis shows better which policies are effective in balancing tourism and a good living environment. A first conclusion is that, before it can be determined whether policy is effective, insight into the current situation is crucial. If municipalities do not have insight into the current situation, it is not possible to determine the effect of a policy measure. As a result, a policy measure will be taken based on assumptions, without proper research being carried out. When gaining insight, municipalities should also focus on the experiences of residents. The impact of tourism is not only technical, but also an experienced impact. This analysis of insight into the current situation must be repeated in the years after a policy measure has been taken. This is the only way to measure the effect of a set of policy measures.

The most effective policy to keep the balance between tourism and a good living environment focuses on the number of tourists, and the capacity. However, this is not possible for most of the municipalities. Texel, as one of the Wadden Islands, is an exception to this. Due to the isolated location of the island, they can implement an effective policy on the number of tourists that come to Texel. This is not feasible for most other Dutch coastal municipalities, because of neighboring municipalities. As a result, in addition to the policy aimed at capacity for tourism, cooperation between municipalities is necessary. There are no political boundaries of municipalities for tourists. The research shows that there is competition and differences between municipalities, including between neighboring municipalities. Cooperation between Dutch (coastal) municipalities should therefore be better to implement effective policy to achieve the balance between tourism and a good living environment.

9.2 Recommendations

There are several points in this study where it would have been interesting to increase or decrease the scope of this study. Although researchers can use this to build on more scientific insights, there are also recommendations of a practical nature for municipalities. Finally, they determine the course of tourism for a particular territory. Therefore recommendations for practice and recommendations for research are made.

Recommendations for research

The availability and quality of data was a big challenge in defining the risk of overtourism. Data was not available, or could not be compared because different definitions were used.

It is recommended to develop an integrated method for measuring overtourism in a destination. At the moment, overtourism is still viewed too much from a technical perspective, while too little attention is paid to the social perspective. The lack of threshold values makes it difficult to determine the seriousness of overtourism. The perceived degree of overtourism is an important indicator that is currently too limited. In addition, there is no suitable method for measuring day-visitors, who have a large influence on the pressure experienced.

Day visitors and short stays (2-3 nights) place a greater burden on the living environment than longer stays. Tourist hotspots such as the beach or authentic destinations are visited by almost every tourist and cause peak loads. In addition to the hotspots, visitors who stay longer also visit other destinations within the region and are therefore less of a burden to residents in the vicinity of the hotspots.

Recommendations for praxis

The results suggest that policy formulation and its operationalization should receive much more attention from municipal authorities. In accordance with previous research, it appears that the political and policy focus is generally not in line with the great economic and social significance. In addition, the size of the tourism sector within a municipality is often not in proportion to the official capacity on this theme. For example, several municipalities do not have an integrated tourism vision, while it is one of the largest economic carriers of a municipality.

In addition, this research highlights the lack of monitoring and evaluation of policy goals. Only a few municipalities seem to have a complete picture of the significance of tourism, its impacts, and policy options. Monitoring the tourist pressure and carrying capacity of a destination helps to form a basis for strategic choices. Too often choices are made on the basis of a feeling or limited data. The results of the heatmap in chapter 4.6 can serve as a basis for an initial indication of overtourism. Further research into threshold values for the indicators is recommended. Nevertheless, overtourism comes depending on the experience of residents. They are directly affected by the situation in specific destinations and should therefore be more involved in determining policy choices. Although one person finds it pleasantly busy somewhere, another avoids a destination because it is too busy. These considerations can contribute to a better organized tourism policy.

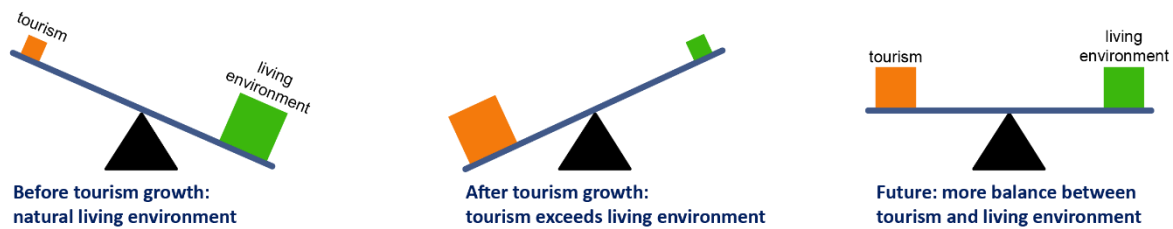
The growth of recent years and predicted growth for the future requires a more proactive policy from all coastal municipalities. Due to a lack of monitoring, municipalities do not seem to be able to identify the emergence of private rental via rental platforms in time. Private rental is, more often than professional rental, spread within village or city limits. As a result, the risk of nuisance between residents and tourists increases.

There is still too narrow a focus on social policy, as a result of which discontent among residents is alleviated. For example, municipalities do not describe exactly what the tourist tax is used for. It is advised to make this more transparent, in order to show the benefits of this, especially for those who are not directly involved in the tourism economy.

A final recommendation for practice is to provide insight into the 'perceived pressure' of tourism, besides only focusing on the 'technical pressure' of tourism. The pressure of tourism is not only a technical pressure, but also how this pressure is experienced by residents. This will differ per municipality. This insight also enables the municipality to make policy choices aimed at the pressure

experienced by tourism. The aim of these various recommendations is to restore a balance between the living environment and tourism (Figure 11).

Figure 11. Create a balance between tourism and the living environment.



Source: Elaboration by the author.

9.3 Limitations and discussion

Firstly, the fifth percentile method for determining the risk of overtourism is exploratory. The lack of data, for example the number of tourist overnight stays per municipality, made it difficult to work with exact data. In addition, due to the lack of threshold values, it has not been determined in which destinations there is overtourism.

Secondly, due to a lack of monitoring, it is not clear which policy measures are most effective. A set of policy measures are applied in all municipalities to steer tourism. Therefore, it cannot be determined which has the most effect.

Although in the in-depth case study, the municipality of Zandvoort might have provided more insight into policy choices regarding tourism management, the municipality of Noordwijk has shown that there are large differences in the types of policy implementation. The municipality of Noordwijk scores high on the risk of overtourism, but the interview and the policy documents show that the negative impacts of tourism are hardly present. Due to time, it has not been possible to determine whether the political and policy attention for overtourism in this municipality is possibly too limited.

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APPENDIX

I. INDICATOR MAPS

I.Map 1. Map of the Netherlands with the municipalities concerned.

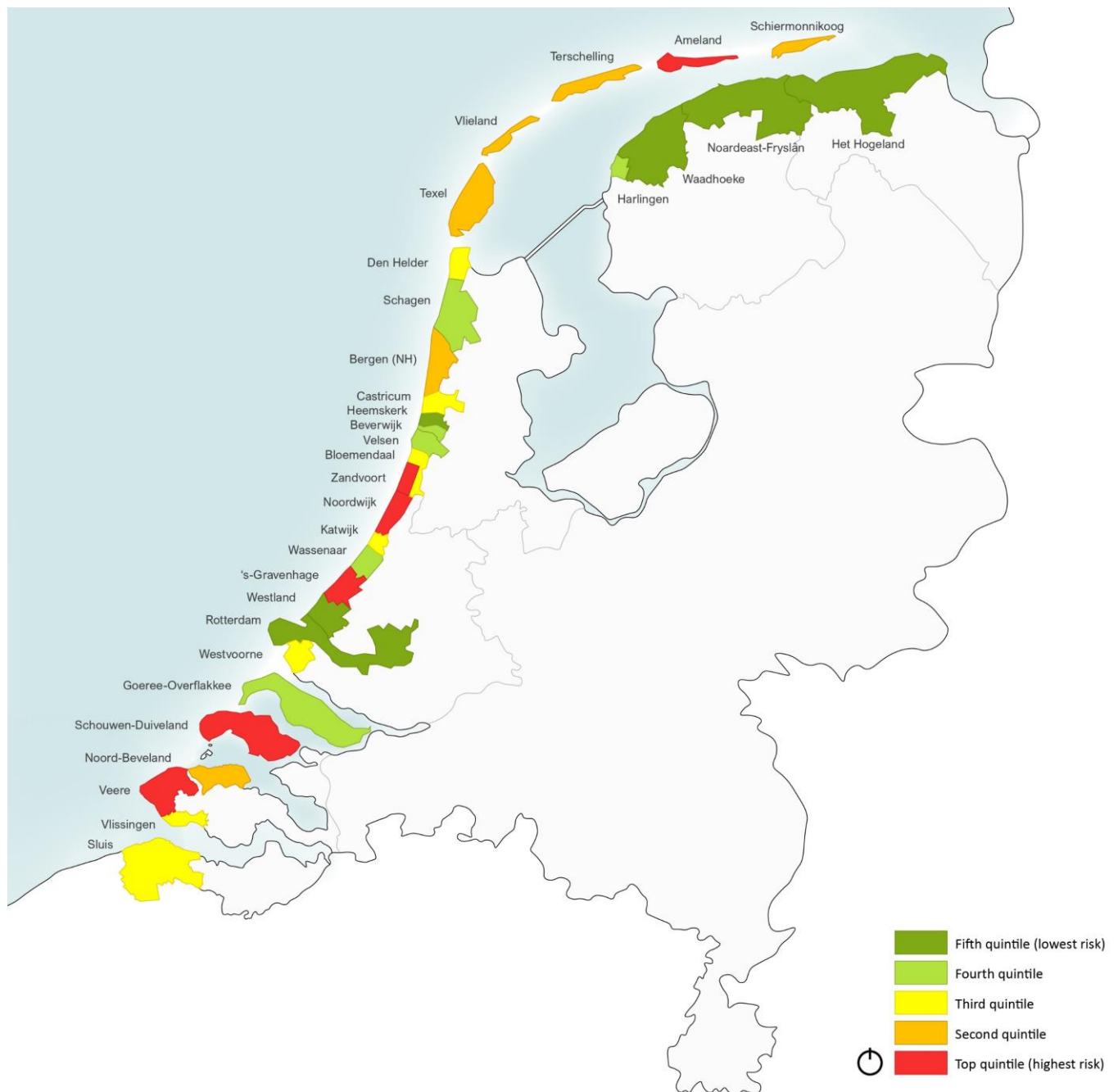
Map 1. Map of the Netherlands with the municipalities concerned.



Source: (Gemeenteatlas.nl, 2022) and elaboration by the author.

I.Map 2. Tourism density

Map 2. Tourism density (5th percentile ranks of overnight visitors/km²) (number/km²) (2017-2020).



Sources collected from: Population and total area of municipality (Eurostat, 2021); Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022).

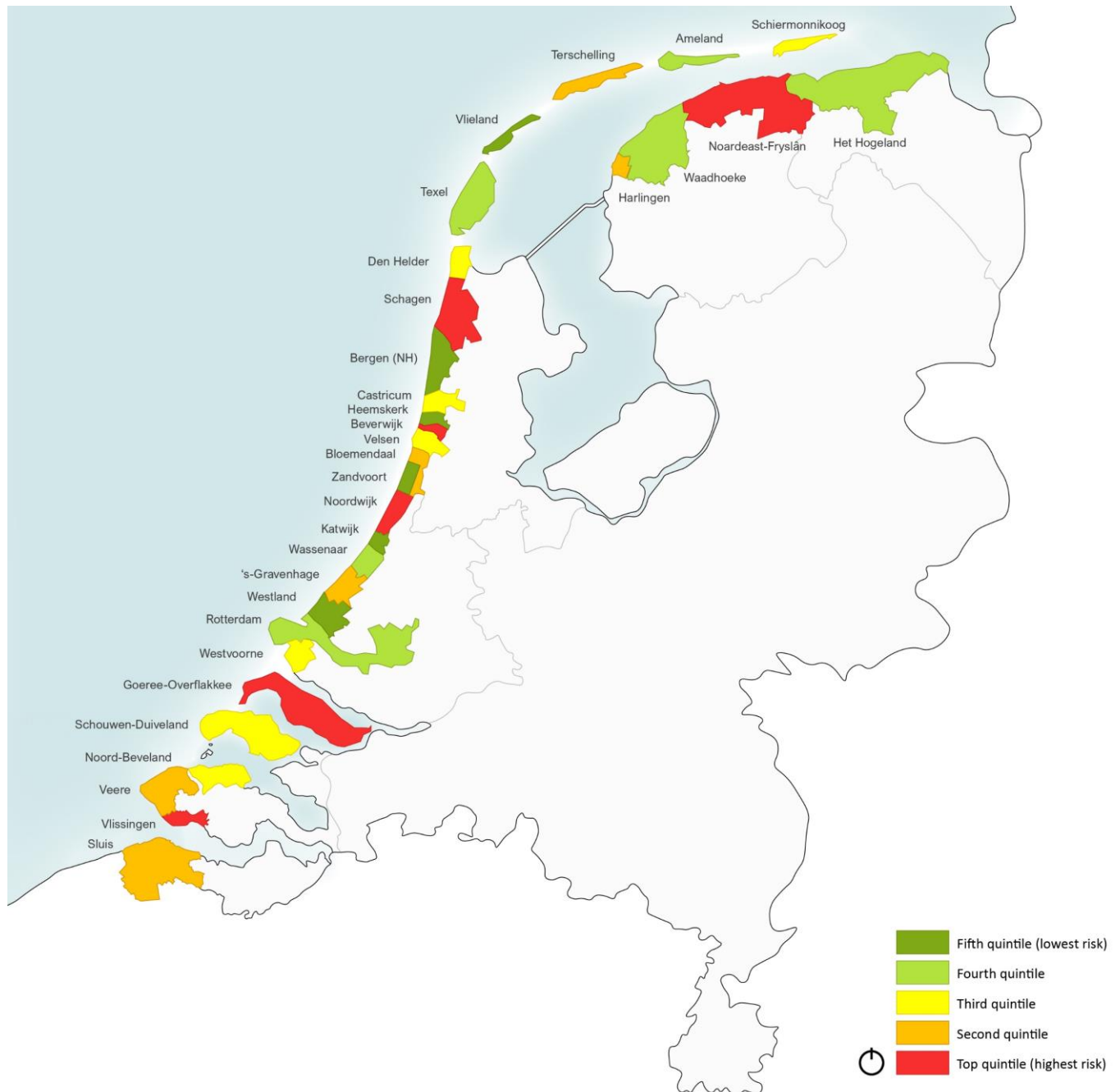
I.Map 3. Tourism intensity

Map 3. Tourism intensity (5th percentile ranks of overnight visitors/resident) (number/citizen) 2017-2020.



Sources collected from: Population and total area of municipality (Eurostat, 2021); Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022).

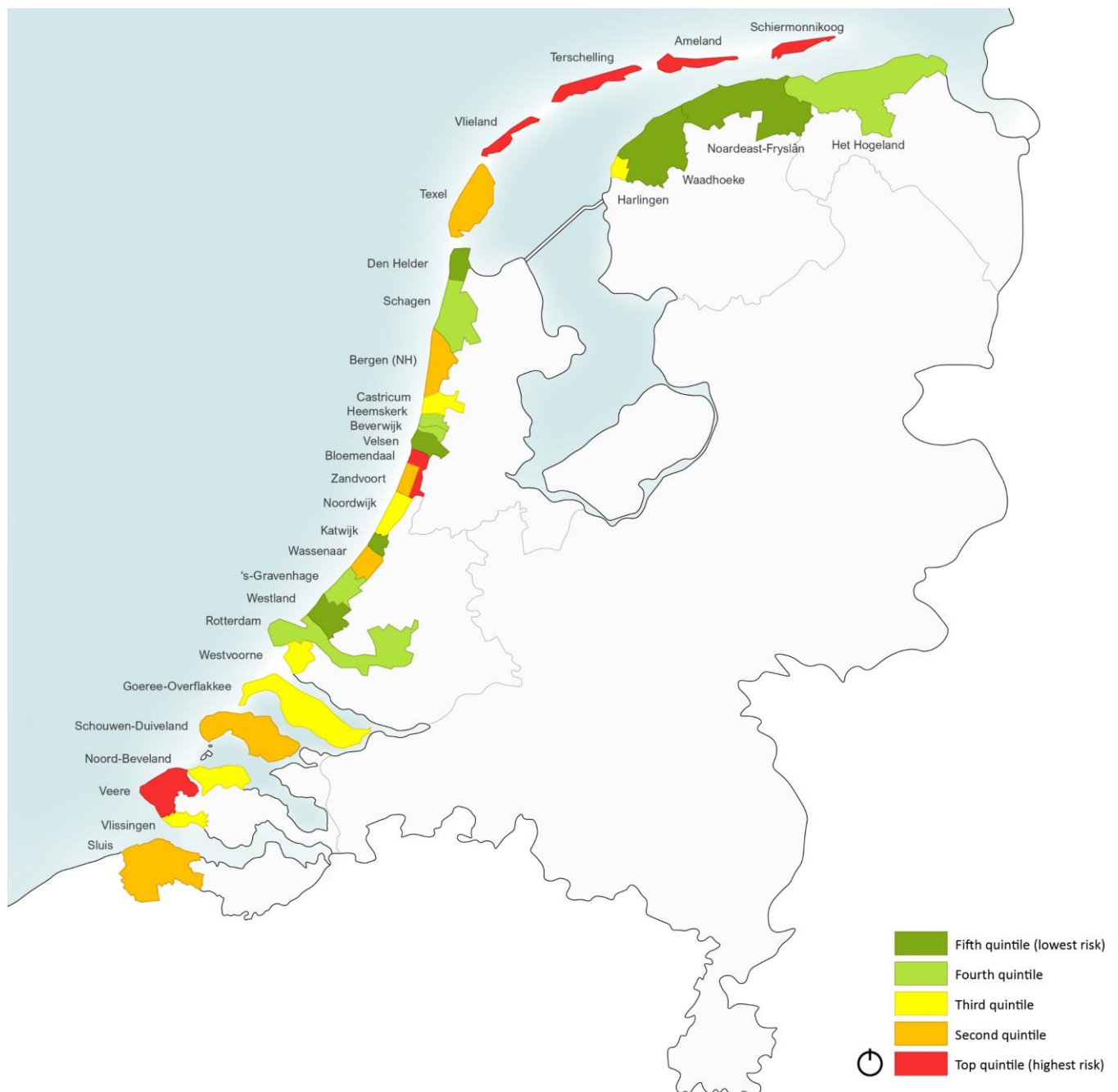
Map 4. Growth of bed-nights per year (2017-2019) (5th percentile ranks of growth percentage (%/CAGR)).



Sources collected from: Total tourist tax collected per year (waarstaatjegemeente.nl, 2017-2020); Tourist tax regulation per year per municipality via (officielebekendmakingen.nl, 2014-2022) or (COELO, 2014-2022).

I. Map 5. Share of recreation and tourism jobs in employment

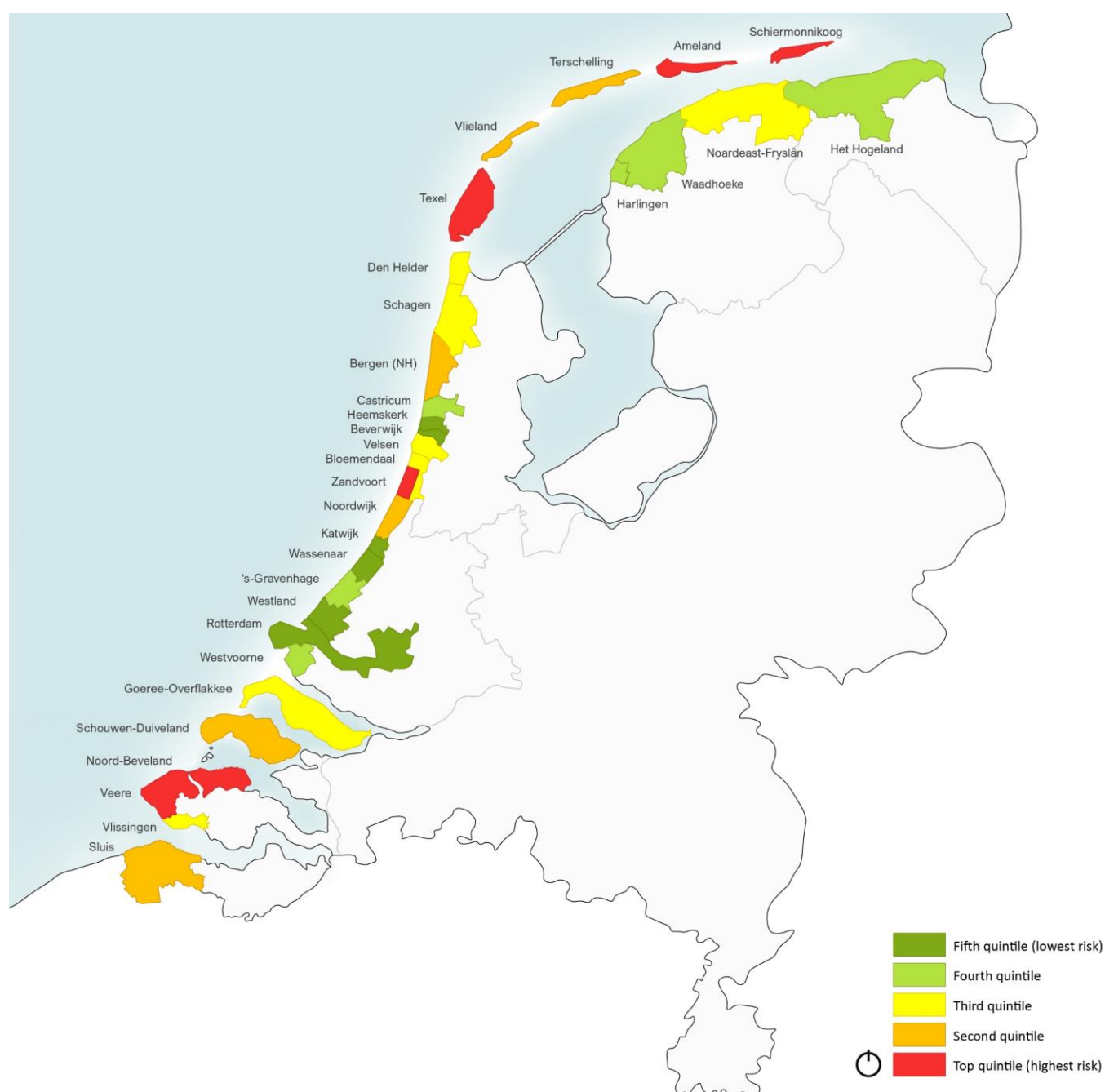
Map 5. Share of recreation and tourism jobs in employment (2016-2020) (5th percentile ranks).



Sources collected from: National Job Information System (LISAb, 2016-2020) (LISAA, 2016-2020)

I. Map 6. Airbnb nights intensity

Map 6. Airbnb nights intensity (nights / capita) (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

I.Map 7. Airbnb nights density

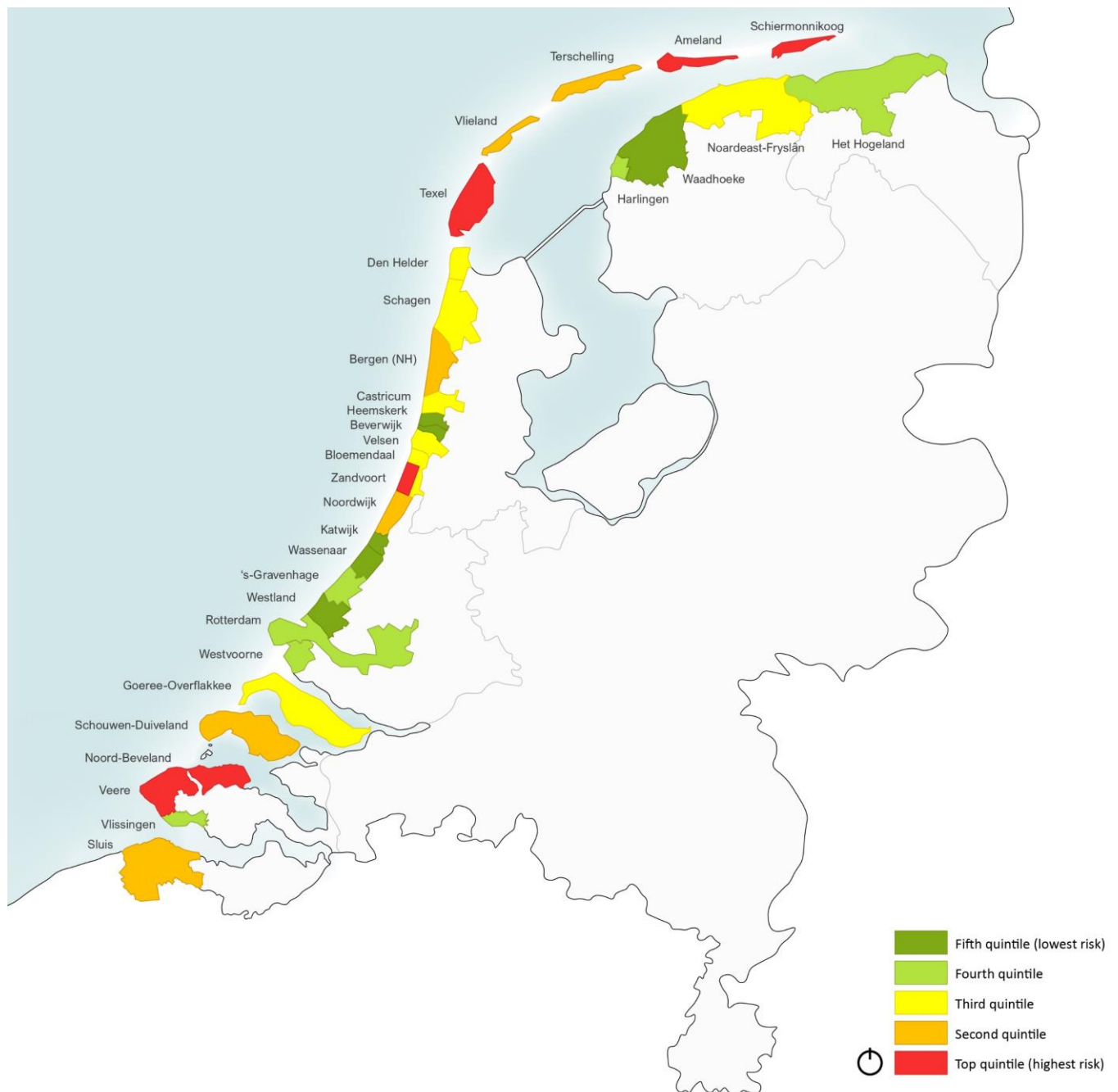
Map 7. Airbnb nights density (nights / km²) (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

I. Map 8. Airbnb accommodation intensity

Map 8. Airbnb accommodation intensity (Airbnb's / capita) (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

I. Map 9. Airbnb accommodation density

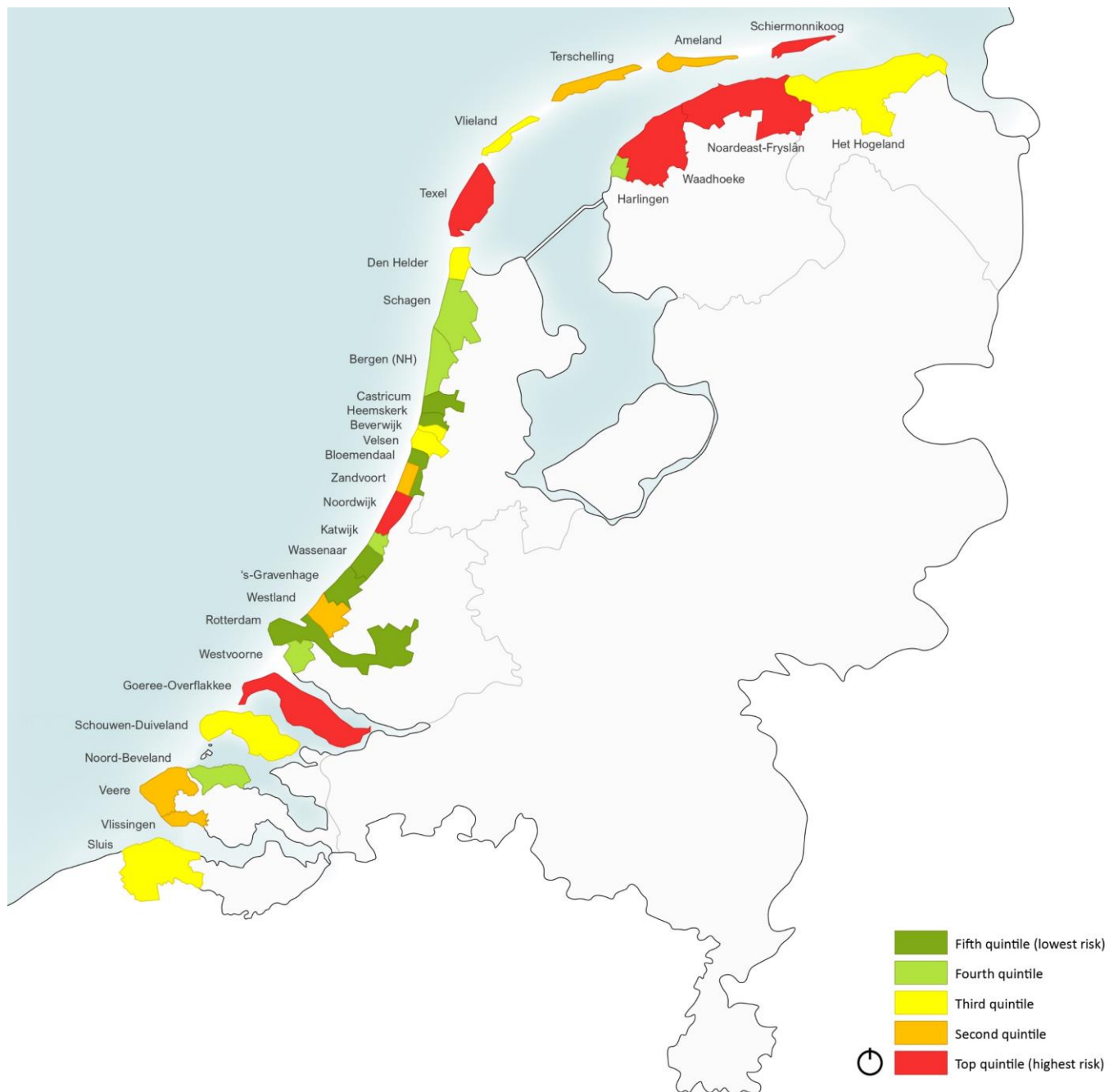
Map 9. Airbnb accommodation density (Airbnb's / km²) (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

I. Map 10. Airbnb overnight stays per active Airbnb

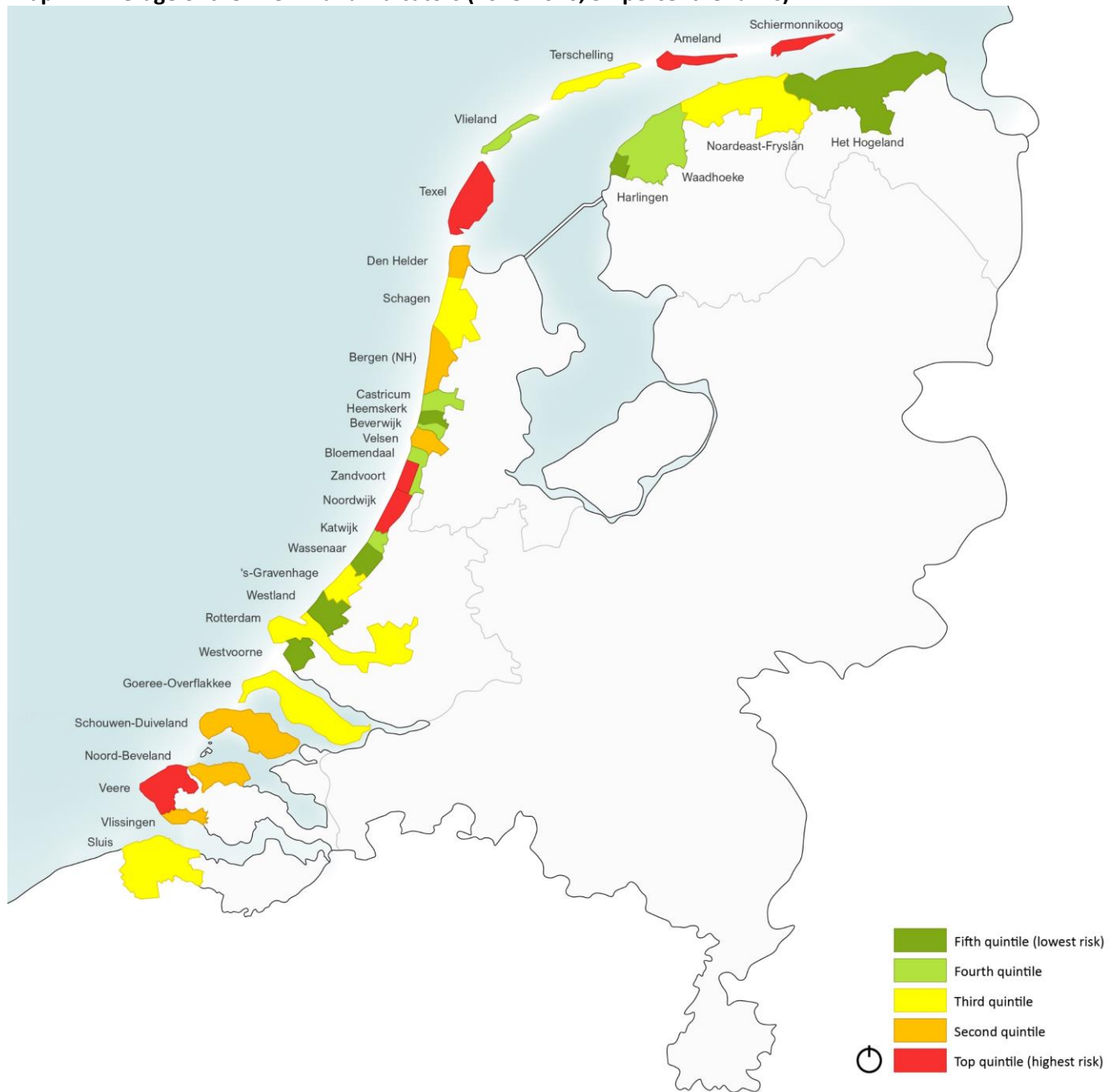
Map 10. Airbnb overnight stays per active Airbnb (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

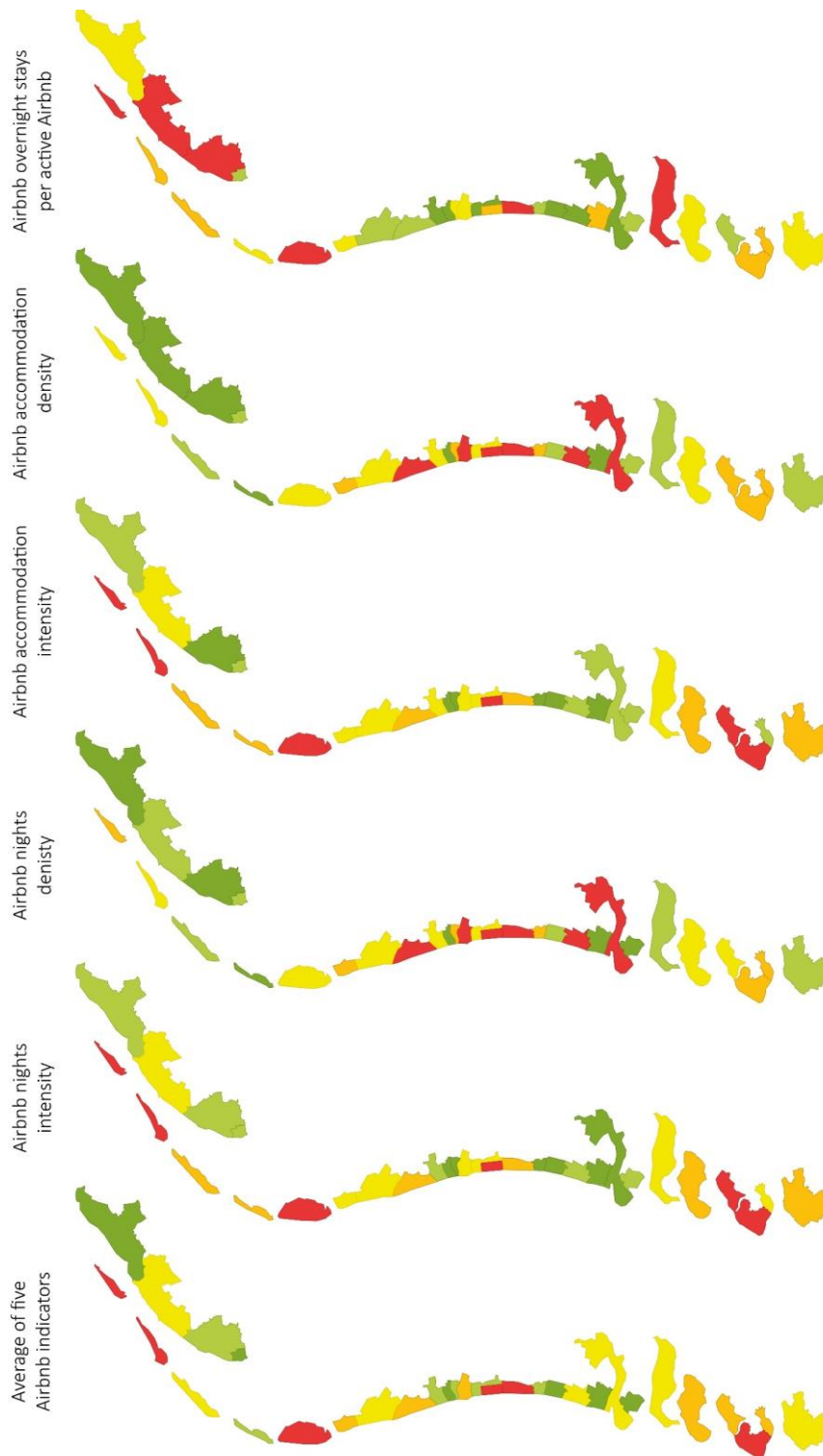
I.Map 11. Average of the five Airbnb indicators

Map 11. Average of the five Airbnb indicators (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

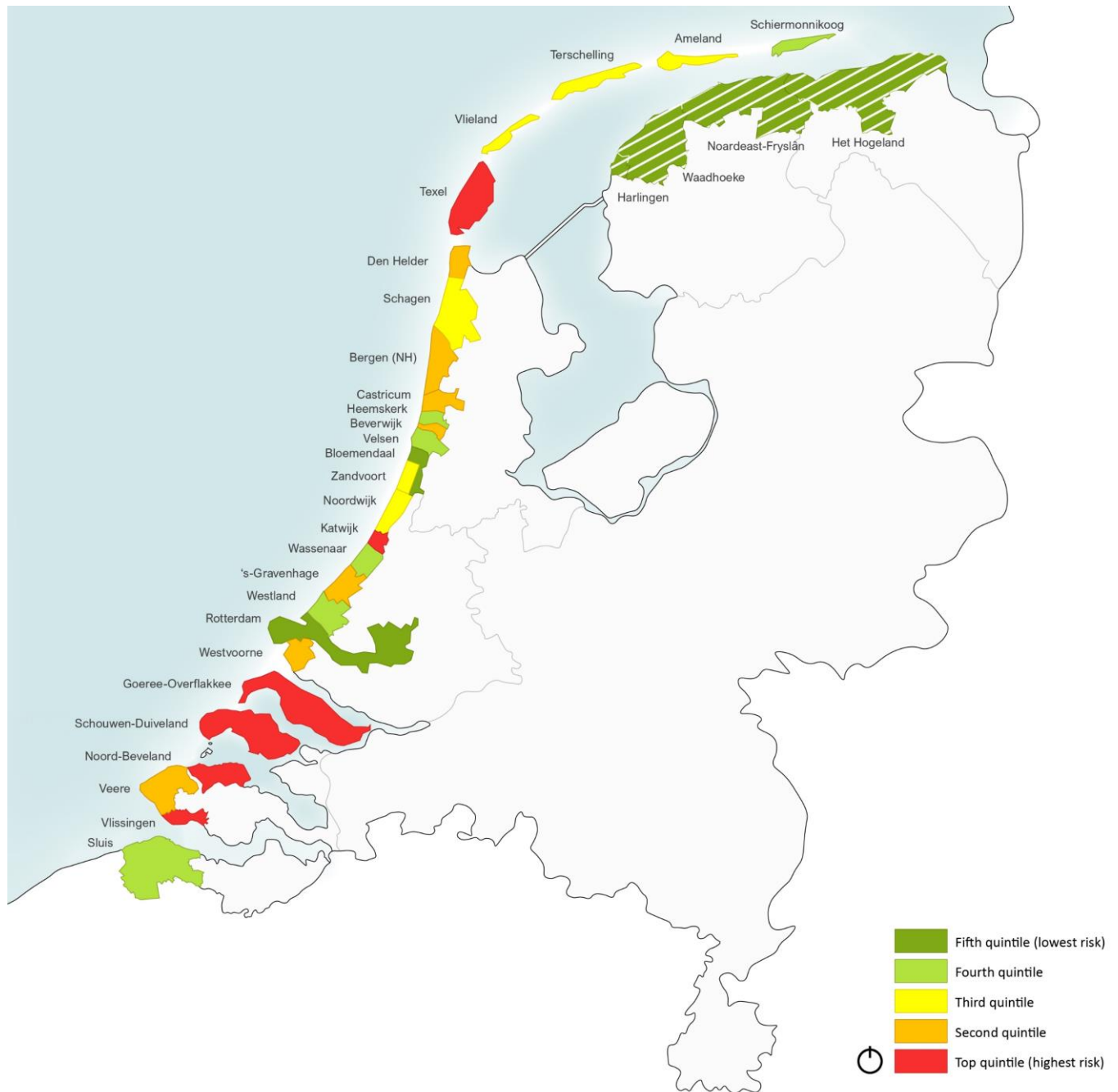
Map 12. Average of the five Airbnb indicators and the five Airbnb indicators (2018-2020, 5th percentile ranks).



Sources collected from: Airbnb data via AirDNA, analyzed by Utrecht University (Universiteit Utrecht, 2018-2020); Population and total area of municipalities (Eurostat, 2021).

I.Map 13. The average number of beach holidaymakers per kilometer of coastline

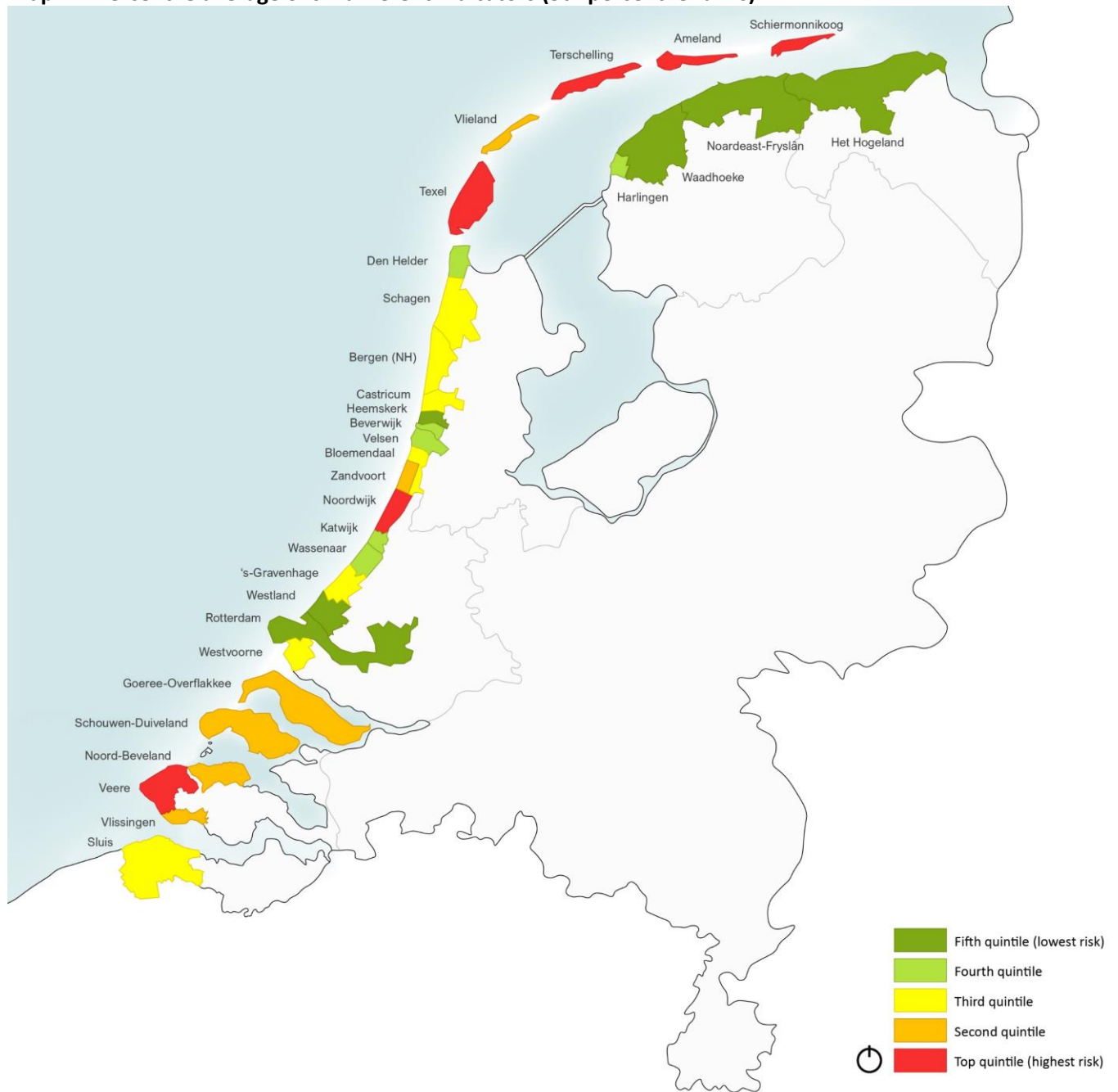
Map 13. The average number of beach holidaymakers (2004) per kilometer of coastline (number/km) (5th percentile ranks).



Sources collected from: Average number of beach holidaymakers per year (data from 2004) (Broer et al., 2011) en Coastviewer (Deltares & Rijkswaterstaat, 2017).

I. Map 14. Percentile average of six different indicators

Map 14. Percentile average of six different indicators (5th percentile ranks).



Source: elaboration of the author

II. POLICY MEASURES OVERVIEW

	Current EU policies		Literature						Case studies	Foresight study
Policy response/measure	(European Commission, 2010)	(European Commission, 2014)	(Koens & Postma, 2017)	(McKinsey et al., 2017)	(Weber et al., 2017)	(Postma et al., 2018)	(UNWTO, 2018)	(Jordan et al., 2018)	41 cases (Peeters et al., 2018)	Foresight study

Policy response/measure	A	B	C	D	E	F	G	H	I	J
I. Stimulate and assist NTOs/DMOs in the spreading of visitors around the destination and beyond										
1. Move events to less visited parts of the destination and neighbouring areas			X		X	X	X			
2. Develop and promote visitor attractions/facilities in less visited parts of the destination and neighbouring areas			X	X	X	X	X	X	2	
3. Improve capacity and time spent at visitor attractions			X		X	X	X			
4. Create joint identity of destination and neighbouring areas			X			X	X			
5. Implement travel card for unlimited local travel			X			X	X		2	
6. Market entire destination to stimulate visitation of less visited parts			X	X	X	X	X		2	
7. Limit access or close off certain parts of the destination for a period of time					X	X	X	X	1	
II. Facilitate and assist NTOs/DMOs in the implementation of time-based rerouting within and across destinations										
8. Promote shoulder months and low season to visitors	X		X	X	X	X	X		5	

Policy response/measure	A	B	C	D	E	F	G	H	I	J
9. Dynamic price differentiation (such as variable or tiered pricing) and encourage pre-booking			X	X	X	X	X	X	4	
10. Stimulate events in the shoulder months and low season	X		X	X	X	X	X	X	5	
11. Use timeslots for popular visitor attractions and/or events, possibly aided by real-time monitoring			X			X	X	X	12	
12. Use apps to create dynamic time-based rerouting			X			X	X		9	
13. Deploy reservations and ticketing systems				X					9	
III. Stimulate and assist NTOs/DMOs in the development of dynamic visitor itineraries within and across destinations										
14. Provide multilingual information and itineraries by means of unmanned portals (digital – internet and apps - and analogue) at entrances of and within the destination, and use technology to nudge visitors in real time		X	X		X	X	X		9	
15. Provide tourist information centres (static and roaming)			X			X	X			
16. Offer combined discounts for specific low-impact itineraries			X			X	X			
17. Provide destination guides & books and (guided) tours highlighting hidden treasures			X	X		X	X	X	2	
18. Create dynamic experiences and thematic itineraries or routes for niche visitors		X	X	X		X	X			
19. Stimulate development of guided tours through less-visited parts of destination			X	X		X	X		2	
20. Use chat bots to provide advice on alternative attractions and use virtual reality and augmented reality for visits to famous sights			X		X	X	X	X		
IV. Facilitate NTOs/DMOs/national governments in developing financial regulations to manage, control and prevent overtourism at the destination level										
21. Tax accommodation in sharing economy such as Airbnb			X	X		X	X	X	4	
22. Tax service providers that bring a large number of visitors to the area (cruises, coaches)			X	X		X	X	X	4	

Policy response/measure	A	B	C	D	E	F	G	H	I	J
23. Introduce eco taxes, such as CO2 emission tax	X			X	X			X	6	X
24. Use tourism revenues to create a fund to compensate for environmental degradation, pollution, heritage maintenance etc.				X		X				X
V. Facilitate NTOs/DMOs/national governments in developing (uniform) operational regulations at the destination level										
25. Adjust the opening times of visitor attractions			X	X	X	X	X	X	1	
26. Regulate visitor products and services that cause disturbance such as specific modes of transport or activities; increase fines and surveillance for non- compliance			X	X		X	X	X	7	
27. Limit accommodation in sharing economy through regulation			X	X	X	X	X	X	3	
28. Secure time for the rehabilitation of the destination e.g. restrict access for a short period of time									7,12	X
29. Create scarcity by capping capacity, such as the number of visitors, cruise ships, flights per day/week/month etc.				X	X				7,12	X
30. Apply regulations such as a moratorium on hotel construction to manage the growth of the accommodation sector				X	X	X			7	
31. Regulate the operations of accommodation providers, e.g. with regard to carrying capacity, operational standards, working conditions, permits, etc.				X	X	X		X	3,6,11	
32. Promote/oblige the use of sustainable resources (e.g. sun panels, no plastic policy, water usage, waste management etc.)		X			X	X			3,6	
33. Establish certification measures for sustainable businesses practices					X				6	
34. Increase the number of on the ground staff, such as supervisors for crowd management, public advisors,								X		
VI. Facilitate NTOs/DMOs/national governments in developing (uniform) traffic regulations at the destination level										
35. Regulate/limit access for large groups			X	X		X	X	X	12	

Policy response/measure	A	B	C	D	E	F	G	H	I	J
36. Regulate/limit traffic in busy parts of the destination			X	X		X	X	X	12	
37. Ensure car visitors use parking facilities at the edge of the destination			X			X	X		3	
38. Determine/communicate the physical carrying capacity of critical areas				X		X	X	X	3	
39. Create specific drop-off zones for coaches in suitable places			X			X	X		12	
40. Create pedestrian-only zones			X			X	X	X	3	
VII. Facilitate NTOs/DMOs/national governments in the stimulation of the business environment, specifically in the case of alternative businesses and businesses actively tackling the issue of overtourism within and across destinations										
41. Create creative incubators/labs for innovative businesses										X
42. Create an attractive business environment for innovative start-ups, such as funding and financial assistance programmes		x			X					X
43. Provide support and incentives for innovations in the business environment, such as funding, financial assistance programmes, ICT, development, crowd funding, matching grants, PPPs	X	X			X					X
44. Provide support and incentives for domestic businesses					X					X
45. Provide an online guide with an overview of main funding opportunities available for the sector		X								
46. Provide incentives for domestically owned hotel developments						X	X		8	
VIII. Stimulate NTOs/DMOs/national governments to develop a diversified economy that is not too dependent on tourism										
47. Ensure that the economy is based on multiple pillars										X
48. Focus on resource-based development		X								X
49. Develop/promote the circular economy locally										X
IX. Stimulate NTOs/DMOs/national governments to make use of the “ladder of sustainable development” for the spatial planning of tourism development at destination level										

Policy response/measure	A	B	C	D	E	F	G	H	I	J
50. Focus on adaptive-reuse e.g. assign new functions to public spaces and un-used buildings/areas, removing street furniture that hamper the movement of crowd		X						X		X
51. Prioritize brown-field developments										X
X. Stimulate NTOs/DMOs to apply visitor segmentation and target marketing that emphasise local sustainable values at destination level and across Destination Europe										
52. Target visitors with limited impact for the specific destination context	X	X	X		X	X	X		10	
53. Diversify the tourism product with an emphasis on e.g. sustainable, alternative or ecotourism products matching the DNA of the destination, and target visitors accordingly	X	X			X				10	X
54. Target repeat-visitors			X			X	X			
55. Target local residents and the local business community								X		
56. Discourage visitation of the destination of certain groups of visitors			X			X	X		13	
57. Align with neighbouring destinations to each target a specific market			X			X	X			
58. Develop joint marketing projects with surrounding destinations/areas	X					X				
59. Actively monitor, manage and evaluate the content of social media platforms		X				X			15	
60. Launch online campaigns to enhance online presence		X				X				
61. Run targeted campaigns to provide fresh perspectives on the destination						X				
62. Adjust branding and marketing strategies to differentiate the destination	X					X			10	
63. De-market the destination for hot spots and high season					X				4,13	X
64. Raise awareness of local culture by means of dedicated marketing techniques					X				14	
65. Employ sufficient security measures									3	
66. Favour responsible businesses in marketing					X					

Policy response/measure	A	B	C	D	E	F	G	H	I	J
XI. Stimulate NTOs/DMOs/national governments for cross-border cooperation and facilitate alliances between destinations within and outside Europe										
67. Conduct webinars, seminars, and workshops for knowledge sharing and co-creation between destinations (cities, regions, countries), for example to exchange best practices	X	X		X		X		X		
68. Develop trans-national and interregional (cross border) partnerships and develop joint promotion, incentives, discounts		X		X		X				
69. Participate in voluntary online information exchange mechanism to improve the coordination of school holidays in the EU member states	X	X								
70. Participate in a virtual tourism observatory to support and coordinate research activities by national research institutes and provide socioeconomic data on tourism at European level	X								16	
XII. Stimulate NTOs/DMOs/national governments to make residents benefit from the visitor economy at destination level										
71. Increase the level of employment in the visitor economy and strive to create permanent jobs			X			X	X			
72. Make positive impacts of tourism visible, create awareness and knowledge amongst residents			X			X	X	X		
73. Involve local residents in new tourism products			X		X	X	X			
74. Conduct an analysis of supply-demand potential of the local community			X			X	X		16	
75. Improve quality and frequency of public transport due to effective marketing to visitors			X			X	X			
76. Give residents free entry, reduced tariffs, special permits or access passes for example attractions, public transport or other facilities			X		X	X	X	X		
77. Stimulate development of impoverished neighbourhoods through visitor economy facilities			X			X	X			
XIII. Facilitate NTOs/DMOs in the creation of destination experiences that benefit both visitors and local residents at destination level										

Policy response/measure	A	B	C	D	E	F	G	H	I	J
78. Develop the destination in line with the residents' needs and desires (e.g. housing, shops, leisure facilities) and treat tourists as temporary residents (once needs and desires are similar tourists disappear into the local)			X			X	X		11	
79. Give residents the opportunity to become tourists in their own destination, e.g. by creating space for residents at events, markets and/or visitor attractions and integrate locally oriented products into tourist markets			X			X	X			
80. Integrate visitor facilities within local festivities and activities			X			X	X		11	
81. Involve local volunteers, for example as destination ambassadors for the enjoyment of residents			X		X	X	X		8	
82. Make use of temporary 'guerrilla art' to provide fresh perspectives on the destination			X			X	X			
83. Prolong opening times of visitor attractions and cafes			X			X	X			
XIV. Facilitate NTOs/DMOs/national governments in the coordination and development of a consistent destination infrastructure and facilities within and across destinations										
84. Create a destination-wide plan for a well- balanced, sustainable/green infrastructure and traffic management			X			X	X		3	
85. Improve and expand infrastructure facilities to ensure that major routes are suitable for extensive tourism activity and that secondary routes are available at peak times					X	X	X		3	
86. Improve the destination's cultural and museum infrastructure						X	X			
87. Improve directional signage, interpretation materials and notices e.g. to a wide variety of attractions			X		X	X	X			
88. Make public transport better suited for visitors (e.g. better and faster connections)			X			X	X		2	
89. Set up specific transport facilities for visitors during busy periods			X			X	X		2	

Policy response/measure	A	B	C	D	E	F	G	H	I	J
90. Foster the use of sustainable transportation for tourism purposes (e.g. tourist buses, sightseeing buses etc.)										
91. Provide adequate infrastructure for alternative vehicles such as hybrids, all-electric vehicles etc.					X					
92. Provide adequate public facilities, such as public toilets, Wi-Fi						X	X		3	
93. Create safe cycling routes and stimulate bicycle rent			X			X	X			
94. Set up specific safe and attractive walking routes			X			X	X			
95. Ensure that routes are suitable for the physically impaired or elderly visitors to avoid adverse impacts						X	X			
96. Guard the quality of cultural heritage and attractions			X			X	X			
97. Ensure cleaning services and regimes fit with visitor disturbance in public space and visitor facilities		X	X			X	X	X		
XV. Stimulate NTOs/DMOs and tourism businesses to communicate with and involve visitors at destination level										
98. Create awareness of issues of visitor pressure / overtourism amongst visitors, such as encouraging visitors to walk or to make use of public transport	X		X		X	X	X	X		
99. Educate visitors on local etiquette and code of conduct, such as in public facilities, public transport	X		X		X	X	X	X		
100. Provide adequate information about traffic restrictions, parking facilities, fees, shuttle bus services								X		
101. Unite disjointed communities (e.g. by setting up a local DMO)			X			X	X			
102. Create participation and co-creation opportunities for loyal guests					X			X		
XVI. Stimulate NTOs/DMOs and tourism businesses to communicate with and involve local stakeholders at destination level										
103. Ensure that a tourism management group (that includes all stakeholders, including residents) is regularly convened	X	X		X		X	X	X		

Policy response/measure	A	B	C	D	E	F	G	H	I	J
104. Ensure that the DMO takes the role of a consultant for decisions needing political support						X				
105. Enhance local organizational structure: organize professional development programmes for private-public partnerships, networking events, ICT development, etc.	X	X		X	X	X	X	X		
106. Organise local discussion platforms for residents			X	X	X	X	X	X		
107. Conduct research among residents and other local stakeholders, for example to investigate what they see as interesting attractions in potential new destinations or what they perceive as impacts of overtourism			X			X	X			
108. Encourage locals to share interesting content about their destination on social media		X				X	X			
109. Communicate with residents about their own behaviour			X		X	X	X			
XVII. Facilitate NTOs/DMOs in the coordination and development of responsive measures in organization and planning at destination level										
110. Provide an (adaptive) long-term future vision and tourism master plan, and make use of forecasting and alternative collaborative methods such as strategic foresight and scenario planning to prevent fragmentation of the sector and to be better prepared for the future		X		X	X			X		
111. Apply zoning to create dedicated development areas					X	X				
112. Establish an early warning system and appropriate KPIs	X			X				X		
113. Monitor seasonal fluctuations in arrival numbers and produce relevant data					X	X		X		
114. Consider the use of big data to monitor and track visitor flows, to identify crowded areas, to evaluate industry performance and its volatility, and to refine tourism strategies or to create smart specialisation strategies		X		X	X	X		X		
115. Apply methods such as "visitor journey mapping" to fully								X		

Policy response/measure	A	B	C	D	E	F	G	H	I	J
understand the characteristics and behaviour of visitors										
116. Integrate policy domains and make a shift from tourism as “goal” to tourism as “means”, provide guidelines		X			X					
117. Create contingency plans for peak periods						X	X			
118. Consider monitoring all operators (tour operators, guides, etc.) and focus on, for example, operational standards, permits, qualification requirements, awareness raising) in conjunction with an operator’s licence system		X			X	X	X			
119. Prepare a comprehensive operational management plan (including operational practices) to coordinate awareness, conservation, management and tourism activities		X			X	X	X			
120. Coordinate the tour schedule of operators/excursion organizers who regularly bring groups to the destination						X	X			
121. Ensure that event management plans are in place to manage large crowds						X	X			

Source: Research for TRAN Committee-Overtourism: impact and possible policy responses (Peeters et al., 2018).

III. CASE STUDY RESOURCES

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