



# CULTURE IN A CLIMATE CHANGE FUTURE

A case study of the Danish Wadden Island Fanø

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## Abstract

Climate change will affect our lives in many ways, but not all aspects are receiving attention. The impact of climate change on culture is still often overlooked and plans to manage the impact are rare. Culture is rooted in place, because it develops through contextual factors such as history, geography, weather, flora and fauna. It can be expected that changes to these factors will lead to changes to the culture. By focusing on this spatial dimension of culture, culture can be connected to climate change effects, which are inherently spatial themselves. This study explores possible consequences that climate change could have for culture. It is focused on a qualitative case study of the Danish Wadden island Fanø. Data was gathered through interviews with fourteen community members. The interviews were supported by visual elicitation. The research has revealed key aspects of Fanø culture: maintaining the seafaring heritage; nature, and the connection to the mainland. It was difficult for participants to imagine exactly how climate change could affect their culture, but it was clear that changes would be felt deeply. By exploring the possible cultural consequences of climate change now, communities can prepare for the future.

## Introduction

Climate change is one of the foremost challenges society is facing today. While climate change is a global phenomenon, its consequences are and will be felt locally. The local consequences of climate change require an approach to adaptation that accommodates for localised understanding of risks, adaptive options, and aspects of vulnerability and resilience. The importance of place-based adaptation is increasingly recognized in research on climate change adaptation policies (Döring & Ratter, 2018; Piggott-McKellar et al., 2019; Toimil et al., 2020). For adaptation to become place-based, it is necessary to gain a better understanding of the local consequences of climate change. While attention for local climate change is increasing, it often remains fixated on the physical consequences and ensuring the safety of residents in the future. The social and cultural consequences of localised climate change effects remain frequently overlooked (Adger et al. 2011, 2013; Döring & Ratter, 2017; Kim, 2011).

Climate change will affect multiple dimensions of life, including the cultural dimension (Adger et al., 2011; Carmichael et al., 2020; Kim, 2011; Sesana et al., 2018). Research on climate change risks for cultural heritage sites is slowly increasing (Adger et al., 2011; Carmichael et al., 2020; García, 2019; Kim, 2011; Sesana et al., 2018). Culture heritage sites across the world are at risk of destruction due to the vulnerability of materials to a variety of climate change consequences, such as flooding, temperature changes, and humidity changes (Carmichael, 2020; Sesana et al., 2018). These sites, including historic monuments, archaeological sites, and cultural landscapes, are an important part of community identity and cohesion in the present; and are often a basis for cultural activities (Carmichael, 2020).

However, the cultural consequences of climate change reach further than the effects on built heritage. Culture is partly shaped by the place in which it develops. The relationship between a community and the place in which they live affects their values, traditions, and the way people make sense of the land (Munshi et al., 2020; Richardson, 2015). The values and traditions that are rooted in place, affect the way climate change is felt in a community, for example a loss of identity, way of life, and changes in food security (García, 2019; Munshi et al., 2020). Changes to the environment, or place, will affect the culture that is rooted in it. In order to develop place-based and culturally appropriate adaptation policies, there first needs to be an understanding of what climate change means for culture (Kim, 2011; Munshi et al., 2020).

Islands can be seen as cultural laboratories with especially place-bound customs, due to their natural borders (Royle, 2014, pp. 67 & 77-101). In addition, coastal communities, particularly island communities, are often considered as vulnerable to the effects of climate change and provide early indicators of the progression of climate change (Fenech et al., 2017). These characteristics combined lead to the prevalence of the cultural risks of climate change in island communities (Sesana et al., 2018).

This paper contributes to a better understanding what climate change effects and adaptation could mean for island culture, in particular the culture of Fanø, one of the Danish Wadden Sea Islands. The paper is based on empirical research on Fanø, in which data was gathered through in-depth interviews using visual elicitation. The paper will first discuss the intersection of culture, place, and climate change which forms the basis of the empirical research. Then, it will explain the research approach and provide background on the study location. This will be followed by a discussion of the research findings and their implications.

## Theoretical framework

Culture is a complex concept that is characterized by openness, and is ever-evolving, which has made it difficult to define (Reeves-Ellington & Yammarino, 2010). Reeves-Ellington and Yammarino (2010) argued that a definition of culture requires permeable, yet identifiable boundaries. Furthermore, they stated that a cultural definition needs to support explanations that are meaningful to both researchers and those who participate in the researched culture. The definition Reeves-Ellington and Yammarino (2010) provided encompasses objects and symbols, and their ascribed meanings, as well as the norms, values, and beliefs which set the cultural boundaries recognized and constructed by the community. Culture shapes the way community-members respond to physical surroundings, to each other, and the cultural logic they share (Reeves-Ellington & Yammarino, 2010). Culture develops through contextual factors such as history, geography, weather, flora and fauna. Taking these factors into consideration provides depth to cultural analysis. Furthermore, considering the influence these factors have on culture, it is expected that changes to these factors will lead to changes to the culture (Modeen & Biggs, 2020). According to Modeen and Biggs (2020), who defined culture as the external world as shared with co-inhabitants, culture is internalised, i.e. it becomes part of who we are. By internalising external cultural elements, they give meaning to our lives and root us to the place in which our temporal existence is based (Modeen & Biggs, 2020).

It is the spatial dimension of culture that is at the core of this research. This dimension describes the way culture is nestled into space, and encompasses the contextual factors described above. The importance of the spatial context was emphasized by Richardson (2015), as it forms an intrinsic part of our daily lives. Because we are “situated” beings, the spatial context influences the meanings we ascribe to everything around us. Simultaneously, ‘place’ is created by our efforts to give meaning to our experiences in a space through language, art, and other activities (Bodenhamer, Harris & Corrigan, 2013; Modeen & Biggs, 2020; Richardson, 2015). While place has been defined in a variety of ways, here it is understood by the definition of Low (2017, p. 32): “the sense of a space that is inhabited and appropriated through the attribution of personal and group meanings, feelings, sensory perceptions and understandings”. Through interaction with a place and each other in that place, community or place identities are created. An important part of the process of identification with a place is the creation of material references to the past either through traditional activities or heritage sites (Tilley, 2006) In addition, our natural surroundings are part of the identification process (Clayton & Opatow, 2003; Linneweber, Hartmuth, & Fritsche, 2003). Community activities such as parades can create a link to the past and support a sense of belonging by providing a space in which community-members can express themselves to themselves and others (Tilley, 2006).

An important related concept to place identity, is place attachment, referring to the way and degree we feel bonded to a particular place. Place attachment is beneficial to people and their communities and motivates people to continue inhabiting and maintaining a certain place (Knez, 2005; Lewicka, 2011; Altman & Low, 1992; Shayk-Baygloo, 2020). There are several definitions available, generally agreeing that place attachment is a multifaceted concept (Knez, 2005; Lewicka, 2011; Altman & Low, 1992; Shaykh-Baygloo, 2020). I will follow the four-dimensional model of place attachment established by Shaykh-Baygloo (2020), which argues that place attachment consists of the interrelated concepts of place dependence, place identity, affective attachment, and social attachment. Place dependence refers to the functional attachment to a place, which is dependent on the ability of the place to fulfil needs and desires, and a preference of people for this place over any other (Shaykh-Baygloo, 2020). Place identity is seen as either a separate but related concept to place attachment, or, as Shaykh-Baygloo (2020) does, a facet of place attachment. Here place identity is understood as the potential of a place to strengthen and become part of an individual’s

and a community's identity. It is shaped by physical, social, and cultural characteristics of a place. The affective attachment dimension refers to the way people feel about a particular place, and how they relate negative or positive emotions to particular places. The fourth dimension is focused on the social characteristics of a place. Social attachment pertains to the manner in which a place facilitates the creation of social relationships through interaction between community-members and the place (Shayk-Baygloo, 2020).

Since our spatial context is intrinsic to who we are, changes to this context can signify changes or pose threats to our identity (Modeen & Biggs, 2020; Richardson, 2015). Low (2017) argued that the ethnographic study of place is crucial to understanding the everyday lived experience of people facing disruptions caused by conflicts, disasters, and climate change. In addition, 'spatializing culture' (Low, 2017) can support public engagement, because it provides people with the means to understand the place they exist in. Furthermore, spatializing culture provides opportunities to oppose interventions that threaten the cultural meanings of a place, such as climate change as well as mitigation and adaptation (Low, 2017).

In my study, the focus on the spatial dimension of culture facilitates the connection of culture to climate change effects, mitigation and adaptation processes, because these are inherently spatial themselves (Adger et al., 2011; McNeeley & Lazrus, 2014). This connection is further supported because focusing on the spatial dimension makes it possible to transcend the artificial divide between nature and culture (Blichfeldt & Liburd, 2021; Modeen & Biggs, 2020).

There is very little literature available on the topic of climate change and culture. However, several authors have discussed the need for more research on the topic. Sesana et al. (2018) and Jigyasu et al. (2013) expressed the necessity of adaptive or mitigative strategies to manage the effects of climate change on cultural heritage. While acknowledging that other aspects of cultural heritage are affected by climate change, the work of Sesana et al. (2018) is focused on tangible and immovable cultural heritage, such as buildings, monuments, and archaeological sites.

The need for research on adaptive strategies for cultural heritage sites was also discussed by Carmichael et al. (2020). Carmichael et al. (2020) discussed a risk analysis of rock art which was conducted by rangers in Arnhem Land, Australia. The rangers sought to prioritise sites and to ascertain possible adaptive strategies, but there was no existing methodology available on how to do so. Although Carmichael et al. (2020) focused on physical heritage sites, adaptive or protective strategies are also needed for other cultural elements, such as cultural activities or traditional food (Lynn et al., 2013).

McNeeley and Lazrus (2014) advised the use of ethnographic methods in community-based climate change research. Ethnographic methods can reveal the causes, impact, and possible adaptive strategies of climate change from the point of view of those affected (McNeeley & Lazrus, 2014). While not explicitly discussed by McNeeley and Lazrus (2014), the use of ethnographic methods can also provide opportunities to consider the cultural consequences of climate change and adaptation in the development of these adaptive strategies.

Munshi et al. (2020) argued for place-based climate change adaptation policies and practices. According to Munshi et al. (2020), adaptation strategies need to consider the local context to be successful, which is (in part) shaped by culture. The chances of success can be further increased by involving local people as they 'know their land best'. For this purpose deliberative procedures are needed to facilitate community involvement (Munshi et al., 2020). Munshi et al. (2020) noted that a culture-centred framework for adaptation requires understanding of the local context of values, place, power, and narratives, to inform adaptation strategies. This need was also expressed by

Shortall and Kharrazi (2017) in order to understand how a country's policies, governance systems, and transformation strategies are shaped. A thorough understanding of the cultural context can also improve the cultural suitability of adaptive strategies (Shortall & Kharrazi, 2017).

## Methodology

### Methods

The data in this research was gathered through in-depth interviews to gain data with a variety of contextualised meanings, experiences, and opinions (Dunn, 2016; Hennink & Hutter, 2020, pp. 116-119). In this research, the interviews were semi-structured in order to provide participants the opportunity to direct the conversation to what they consider significant, while the interviewer ensured the conversation remains on-topic (Dunn, 2016; Hennink & Hutter, 2020, pp. 116-119). The interviews were supported by (visual) elicitation techniques, in order to provoke thoughts on the reality of climate change and possible futures, and consequently gain information that might otherwise be overlooked (Prosser & Loxley, 2008; Winchester & Rofe, 2016). Visual elicitation is especially appropriate for the topics of climate change and culture, because both tend to remain very abstract concepts. The use of visual aids can make it easier for participants to imagine what climate change will mean for their life and culture in the future (Fenech et al., 2017; Prosser & Loxley, 2008; Winchester & Rofe, 2016). The elicitation took the form of news article clippings on climate change related incidents and the book 'Fanø Mosaik' with photographs of Fanø's culture and nature. This book was used to stimulate thoughts on what the culture of Fanø entails. However, to prevent leading questions, the participants were first asked to describe life, culture and traditions of Fanø without this aid. Afterwards the participants were asked to flip through the book and discuss which images held meaning to them and why. In addition, participants were asked to bring items that they think have a connection to Fanø, to further stimulate the conversation.

In total, fourteen people participated in this research. Eight individual interviews and one group interview were conducted. The group interview had seven participants, one of whom also participated in an individual interview. The interviews lasted for one hour to an hour and a half. The interviews were recorded and transcribed in preparation for analysis.

### Participant recruitment

Potential participants were identified through websites of local heritage organisations, as well as a list of community organisations on the municipality website. In addition, local Facebook groups were used to ask for participants. Finally, the snow-ball method was used as various people were asked for suggestions and to spread the research information around (Stratford & Bradshaw, 2016). One of these suggestions included a sustainability meeting organised by the municipality, which led to the participants of the group interview.

### Participants

The research participants were aged 25 to 75. Of the fourteen participants, nine were women, and five were men. While most participants were not born on the island, many had long histories on the island and owned holiday homes before relocating to the island permanently. It takes time for a person to develop place attachment and, in particular, place identity, therefore, residence length is commonly understood as determining factor (Shaykh-Baygloo, 2020). It could be expected that the participants who were not born on Fanø would have developed less place attachment or place identity, than the participants who were born on the island. However, there was no discernible differences in the responses given during the interviews, with some exceptions for the most recent



inhabitants who would suggest other inhabitants might feel differently about things. Furthermore, both Frank and Gitte, who were born on the island, moved away from the island in their early twenties, to return after starting their own families; while Henning, who moved to Fanø 20 years ago, spent part of his childhood on the island because his family owned a holiday home. While it cannot be ruled out that the results would be different had there been more participants who were born on the island, I do not expect that there would be a drastic change. All participants were given the choice between a pseudonym or their first name being used in this article. All participant have given consent to their first names being used. An overview of the participants is shown in the table below.

	Name	Gender	Age-group	Years on Fanø	Background
#1	Else-Marie	F	65+	14 years; before then holiday home for many years	School teacher; museum director
#2	Henning	M	65+	20 years; parents had holiday home	Culture chief 2006-2016; Local history FoF
#3	Tom	M	65+	3 years; before holiday home for many years	Biology teacher in Esbjerg; nature guide;
#4	Malene	F	25-30	3 years	Geographer / municipal planner
#5	Gitte	F	30-40	Born on Fanø; returned after studies	Marketing consultant; Festivals on Fanø
#6	Mille	F	30-40	3 years; Summer jobs in 20s	Council member municipality; Esbjerg University
#7	Ragnhild	F	65+	47 years with some exceptions	Tourist information; Club Fanø
#8	Frank	M	40-50	Born on Fanø; away for 20 years, moved back 5 years ago	Mayor
	<b>Group interview</b>				
#9.1	Line	F	30-40	36 years with some exceptions	Homemaker; farmer
#9.2	Charlotte	F	50-65	8 Years	Student
#9.3	Christina	F	30-40	4 Years	Biologist; engineer
#9.4	Pernille	F	50-65	10 Years	Municipality
#9.5	Steen	M	65+	30 years	Green grocer; farmer; gardener
#9.6	Kristen	M	65+	43 years	Pensioner
#9.7	Tom	M	See individual interview		

## Study location

The study was centred around a case study of Fanø, one of the Danish islands in the Wadden Sea. Fanø was selected because as an island it is expected to have a culture that is particularly place-



bound, while also being vulnerable to climate change effects (Fenech et al., 2017; Royle, 2014, pp. 67 & 77-101). The Wadden Sea islands are within easy reach of Groningen, and therefore a convenient choice. Ultimately, Fanø was chosen because it has a vibrant cultural life, which facilitates having a discussion of culture.

The Wadden Sea stretches from Blavands Huk in Southwestern Denmark, down to Den Helder in the Netherlands, past the German North Sea coast. The intertidal coastal landscape has been shaped by dyke building, land reclamation and drainage activities, as well as periodic flooding going back a thousand years. The Wadden Sea is characterised by its mud flats and is designated a UNESCO World Heritage site because of its unique and diverse ecosystem (CWSS, 2011; Walsh, 2018). The Wadden islands are low-lying, which makes them especially vulnerable to climate change effects, in particular to sea-level rise (Walsh, 2018).

Fanø is one of three inhabited islands in the Danish part of the Wadden Sea. The island consists of marshland on the east, a wide sandy beach on the west coast, a small forest in the middle of the island, and dunes everywhere else (Krageskov, 2005; Vollmer et al., 2001). Fanø has a surface area of 56 km<sup>2</sup>, the beach is approximately 25km long and up to 1km wide.

Fanø is an independent municipality with three towns. Nordby is the largest town and is connected to Esbjerg on the mainland by ferry. Sønderho is the second largest town located on the southern tip of the island and is known for its many heritage buildings. Rindby is located in-between the dunes in the middle of the island, just south of Fanøbad where most of the holiday houses are located. Fanø has approximately 3427 permanent residents (Statistics Denmark, 2022). During the summer months the population grows dramatically as it is a popular tourist destination. Fanø is connected to the mainland via a ferry between Nordby and Esbjerg. The brevity of the trip (fifteen minutes) and the high frequency of ferry departures have a profound influence on the community, as inhabitants of Fanø are able to work on the mainland (Krageskov, 2005).

Habitation can be traced back to the thirteenth century, however, there are indications of earlier human activity (Krageskov, 2005; Vollmer et al., 2001). The island blossomed after its citizens bought the island from the crown in an auction in 1741. The gained independence allowed citizens to profit from seafaring and ship-building on the island, which led to expansion, and for much of the 18<sup>th</sup> and 19<sup>th</sup> century Fanø had the second largest fleet of Denmark. The development of steamships brought an end to Fanø's shipping companies during the 19<sup>th</sup> century, but the seafaring history is still visible on the island. At the end of the 19<sup>th</sup> century the first tourists arrived, attracted by the sandy beach (Krageskov, 2005; Vollmer et al., 2001).

Fanø's residents take pride in the island's history and traditions. Many of the old houses are well-maintained and protected. The culture is celebrated in yearly festivals 'Fanø-day' and 'Sønderho-day'. Many women wear traditional costumes at these festivals, as well as at other events during the year. Other traditions such as the traditional dance 'Sønderhoning' and the traditional fiddle music are practiced throughout the year (Krageskov, 2005; Vollmer et al., 2001).

## Findings

The aim of this research was to gain a better understanding of what the consequences of climate change effects could mean for the culture and way of life of Fanø. In the next section, I will present the principal findings of the case study. Before discussing the relationship between Fanø culture

and climate change, it is important to note another important finding of this research: the difficulty of discussing the topic of climate change and culture. Although I was expecting difficulties in this regard in preparation of my fieldwork, I had underestimated the challenge. In the search of research participants I was repeatedly referred to people who were considered to have 'more expertise', even though I was looking for local experiences and expectations for the future, rather than professional opinions. In my experience, both culture and climate change are topics that often remain abstract, and are not commonly talked about separately, let alone in combination. The people I approached to participate, had not given much thought about the consequences of climate change for culture before, which made it uncomfortable for them to share their opinions. This led to one of the most frequent responses to my interview questions: "I don't know". I was able to find fourteen people who were willing to explore the possibilities, and in most cases "I don't know" was followed up by "but I think". In the following sections, I will first discuss cultural identity and heritage of Fanø, before discussing four key cultural elements and how these may be affected by climate change in more detail.

During the interviews, the participants were asked to describe the identity of Fanø. There are two aspects that were mentioned by every participant: the seafaring history and the island being "full of nature" (Malene, female, ~27). The nature and cultural heritage of Fanø are reasons why the participants chose to live on the island. By fulfilling the needs and preferences of the participants, both nature and culture contribute to building place dependence and affective attachment (See also: Shaykh-Baygloo, 2020). Both nature and cultural heritage are also important factors in attracting tourists to the island. Tourism is currently the primary economy on Fanø and an important part of life on Fanø.

The cultural heritage of the seafaring past plays an important role in everyday culture of the present. The participants talked about ways in which the seafaring history has shaped the community, and how traces of this history are still visible in cultural activities and buildings. The community takes great pride in the island's history, which has resulted in a vibrant cultural sector that maintains the seafaring heritage and incorporates it into everyday life. Activities that maintain cultural identity are not only valued by those who have grown up on the island, but also by more recent residents such as Mille (female, ~35):

The island has these traditions, it's very much become part of the identity that you keep these traditions, I think. And I think it's fun to listen to the older people, and also those who are born here, talk about all the things, food, clothes, dancing parties. It's nice to live in a place with a long history.

As previously discussed, the seafaring industry on Fanø was at its' peak during the 18<sup>th</sup> and 19<sup>th</sup> centuries. This period is considered Fanø's golden age, as ship building and international trade brought wealth to the island, which allowed it to develop. The international contacts influenced Fanø in many ways, such as architectural styles and folk music (Krageskov, 2005; Vollmer et al., 2001). Malene (female, ~27) suggested that these international contacts of the past, have led to the welcoming character of the current community:

Because of it being an old sailor society, people have been used to having visitors from everywhere in the world. And that's what I feel. People are still very good at just being open to whatever comes. Maybe that's why they're so good at welcoming new people.

For participants such as Malene (female, ~27), who moved to Fanø three years ago, the welcoming character of the community has facilitated the transition. I will now discuss in more detail four

aspects of Fanø culture, namely: built heritage, cultural activities, nature, and the mainland connection.

### Built heritage

Built heritage on Fanø is part of what keeps the history of the island alive. In both Nordby and Sønderho, there is “a rich history in the museums and the houses (...) from the 17<sup>th</sup> or 18<sup>th</sup> century (...) which are very beautiful and very well maintained” (Frank, male, ~45). Especially Sønderho is well known for its historical centre, full of monumental houses. Else-Marie (Female, 65+) called it a “fairy tale city”. Frank explained the cultural significance by stating that the historic town centres date back to Fanø’s golden age in the 18<sup>th</sup> century, and their development was facilitated by the success and wealth of the seafaring industry. According to Frank (male, ~45), the influences of the international trading relations can still be seen in the roofs and decorations:

Because they had the money to make it look nice and also because a lot of seamen travelled to Amsterdam and saw how they build houses in Amsterdam, they said ‘oh this was very nice and modern we will do the same thing here’.

The historic houses form an important link to the seafaring history of the island, and support the preservation of the cultural identity of Fanø as a seafaring island. Participants Frank (male, ~45) and Malene (female, ~27) put into words what a tremendous loss it would be if the houses were damaged as the result of climate change effects:

It takes away some of our culture, if these houses that we are so proud of cannot stand any longer what do we have to be proud of then? We don't have the ships anymore so we only have it in pictures. But if we also lose the houses it's another battle that we would lose. (Frank, male, ~45)

I also had some friends over who mentioned that they felt like they were walking around in a museum, but it's not a museum. It's where people live. So of course, if these houses were affected, I don't know. Then that would be a big, big problem. (Malene, female, ~27)

Built heritage is commonly understood to be vulnerable to climate change effects, such as flooding, and humidity and temperature changes. This is due to age and the type of materials that were used. In addition, because of the cultural meaning attached to built heritage, it holds irreplaceable value for the community (Carmichael, 2020; Sesana et al., 2018). However, because the historic houses on Fanø are considered well-maintained and strong, all participants deemed it unlikely that climate change would have a significant affect. The strength of the houses can be ascribed to the way they were built, which was, as Henning (male, 65+) and Malene (female, ~27) explain, with the wind and the weather in mind:

The houses are placed in an east to west direction, so that it follows the wind. Because if they were placed north south, the wind would hit it directly on the other side. So they have placed that east west to let the winds go around the house. And then in the western side of the house, they placed the animals (...) in the windy side. And then the people lived towards the east of the house. So they were protected from the wind. (Malene, female, ~27)

Furthermore, the participants repeatedly mentioned that in 300 years the houses have been flooded multiple times and have managed to outlive many newer buildings:

No, they will survive. Because you know, they have the dikes here in Nordby. And there was a really big storm in 1981 and high tide, so the water was in the towns and the houses are still there and I know that many of the old houses in Sønderho have been underwater many

times but they're still there. (...) I'm absolutely sure they will be standing. Because when the storms are coming, damage to houses is more in the new houses. The old houses are very strong so I'm convinced they will be staying there. (Ragnhild, female, 65+)

Many of the participants expressed the hope that the community continues to maintain the houses and that they will last far into the future. This dream for the future could eventually require adaptation of the buildings, which is difficult to balance with the desire to maintain them as cultural heritage. There are currently strong restrictions on renovations of these monumental houses, which already complicates their liveability. As is visible in figure 3, the ceilings and doors are very low and a person of average height could easily hit their heads. Malene (female, ~27) explained that there are rules against raising the roofs of monumental buildings, as an alternative in some houses the floor has been lowered. However, this adjustment could potentially increase the risk of flooding. In this paragraph I have focused on the built heritage, in the next paragraph I will discuss various cultural activities.

*Figure 1*  
*An example of a monumental house: the Sønnerho Kro. Picture from the author.*



## Cultural activities

Every year the cultural heritage of Fanø is celebrated during the cultural festivals 'Fanniker Days' and 'Sønnerho Day'. During these festivals all traditions are combined to celebrate the past and maintain the cultural identity of Fanø. As such, the festivals affect the way Fanø is perceived by inhabitants and how they connect to the island and each other (See also: Low, 2017; Tilley, 2006). This is illustrated by Ragnhild (female, 65+), who believes the Fanniker Days festival "means a lot to us (the Fanø community), it connects us, it puts us together. Because we are very proud of it." The cultural festivals are also considered unique to the island: "somebody told me that actually, Fanø is the only place in Denmark, who has this tradition, it is the only place where we care so much about keeping it alive." (Ragnhild, female, 65+) The cultural activities that are part of the festivities are not limited to the festival days. Tom (male, 65+) expressed: "the cultural heritage is part of daily life, that's what I find very exciting by living here". Several participants mentioned weekly evenings where people play folk music and dance. Some women wear traditional clothing at several events throughout the year, such as weddings, funerals, and cultural activities.

It is not only the festival days themselves which support the development of place attachment, the festival preparations and cultural activities during the rest of the year also play an important role. Through repeated actions at regular intervals, relationships between people and place are established and reaffirmed (Tilley, 2006). As noted, the festivals consist of many elements that all contribute to the cultural heritage and identity of Fanø. Climate change will have varying consequences for these cultural elements. It is difficult to project how the effects on the components will affect the greater whole of the celebrations. I will now discuss in more detail what the festivals entail and explore the possible consequences of climate change.

Sønnerho Day is organised every year on the 3<sup>rd</sup> Sunday of July by the Foundation for Old Sønnerho. The festival has been held every year since 1928 when the foundation was established. The day consists of a bridal procession to Møllebanken and a performance of the 'Sønnerhoning' as a traditional couples dance. During the event people wear the traditional folk costumes, which can

be leased from the foundation. In addition, there are several side events such as a lottery and a competition for the most beautifully tied headdress (Fonden Gamle Sønderho, n.d.).

Fanniker Days is organised for three days in July in Nordby. The festival was first organised in 1953, when only a few people would still wear the traditional clothing. The festival was inspired by Sønderho Day which was considered a success in preserving the identity as a “Sailing Ship Island” (Fannikerdagen, n.d.a). Any profits from the Fanniker Days festival go to the museum ‘Fanø Skibsfarts- & Dragtsamling, which serves to protect the sailor heritage and folk-costumes, and educate visitors on local history. Fanniker Days consists of a wide variety of activities: there are food-stalls which sell local foods; a festive procession to the harbour in which people wear folklore costumes (Available on loan from the museum); fiddle-music; dance performances; workshops; children’s games; sea-shanties; and people perform a traditional returning of the sailors, with a wedding, and a wedding procession through town (Fannikerdagen, n.d.b.).

The traditional clothing, especially the female costumes, play a significant role in the community, which extends beyond the festival days. To illustrate intricacies of the folklore costume, Gitte (female, ~35) used the doll shown in figure 2. As Ragnhild explains in the quote below, women work through the winter to create their own dresses. This creation becomes a social activity in itself, as they work together and chat while sowing, thereby forming social attachments (Shaykh-Baygloo, 2020).

And sometimes women, they just put on the dress because they think oh, I need to put it on. (...) And it's the best is of course to have your own. So it's very popular to make your own costume during winter. So there are groups here in Nordby, and in Sønderho, where people meet, and they sow by hand. It has to be made by hand. And it takes a really long time. And it's actually a quite expensive one, but it's, I don't know, it's a very special feeling you have to put it on. (...) I think it's nice because it makes us who we are now. Because of course we go with that dress on and we have our cell phones and et cetera, but it also reminds us about how it used to be and about how life was before. Especially the women on Fanø I think they were very strong, very independent, because during the sailing period, the men were on sea maybe for two years. And then it was a woman who was in charge of everything at home. (Ragnhild, female, 65+)

*Figure 2  
Doll wearing folklore costume.  
Brought to interview by Gitte.*



Almost any time the dresses were mentioned, so was the strength of the women of Fanø’s seafaring days. As Ragnhild explained above, the sailors were away for most of the year, if not more, leaving the women to take care of everything at home, from farming, raising children, to maintaining the houses and managing the budget. When women in the present choose to wear the traditional dresses, it is not only a celebration of the sailor past, but in admiration of the strength of the women from that time. Wearing the costumes fills women with pride and allows them to connect to and incorporate the identity of ‘the strong Fanø woman’.

Another element of the cultural festivals that play an important social role throughout the year, is the traditional music and dance of Fanø. Playing fiddle music and dancing the ‘Sønderhoning’, a couple-dance, is a popular pastime for the Fanø community. The combination of folk music and dance was mentioned by all research participants when asked to describe the culture of Fanø:

Did anyone mentioned the rich music life? Especially (...) all the Fiddler's or the folk music. It is very special folk music in especially Sønderho, but in both towns. (Steen, male, 65+)

The fiddle music is another part of Fanø culture in which the seafaring history is present. It was the sailors who brought the violins to the island, and “the music is also very special because it's a mix; the men they went abroad and came home with a little mix from music from there and from there.” (Ragnhild, female, 65+)

The community organises weekly evenings in the community houses in Sønderho and Nordby where local musicians play fiddle music, while others dance the Sønderhoning. By facilitating social interactions, these evenings contribute to the social aspect of place attachment and community cohesion (See also: Low, 2017; Shaykh-Baygloo, 2020; Tilley, 2006). The importance of the music and dance to place attachment on Fanø is clear in Line's (female, ~35) hopes for the future: “the spirit will be here and hopefully the music will be too”. This is not limited to the adult population of Fanø, as all participants remarked, the youth partecate actively as well. This participation of the youth is considered very special by the participants:

One thing that it is quite unique for Fanø in particular is that the folk music is also passed on to the youth. There's quite a huge number of young people who fiddles and dance and are very passionate about it. (Christina, female, ~35)

In other parts of Denmark the young pupils they don't want to dance in this way, but here they do. Here it is cool. My eldest grandson he says the best trick to get a hold of a girl is to dance. (Else-Marie, female, 65+)

There does not appear to be a direct connection between folk costumes, folk dance and music, and climate change effects, and the participants could not imagine how these traditions could be affected. However, there could still be indirect consequences. The community houses are important locations where the dance evenings are held, if those buildings were damaged it would affect the community's ability to continue the tradition. The tradition of the folk costumes can only continue if there are activities where women can wear the costumes. The old costumes would remain on display in the museums, but the skill of making the dresses and the social aspect of it, would be lost. Furthermore, it will affect the community's ability to maintain the identity of the 'strong Fanø woman'.

Both the cultural festivals, and the many other festivals that Fanø hosts, are primarily organised outside, which makes them quite vulnerable to weather conditions. Whether it is extreme heatwaves, increased storms, floods; climate change effects will have consequences for the island's ability to organise these festivals, in fact, there have already been consequences. The municipality had developed a spot close to the harbour as a festival terrain, but it is prone to flooding:

Once when there was this knitting festival in September, some years ago, it was completely full of water. So they were so stressed and had to move things around. And there is really several 1000 people visiting the islands during that knitting festival. So yeah, of course it affects that some places are not suitable, which you thought maybe would be suitable, but are not. (Mille, female, ~35)

As a result the knitting festival was cancelled, and will now be organised inside to adapt to unpredictable weather. This is, however, not an option for the other festivals, at least not entirely. Some of the events of the cultural festivals may be moved indoors, however, events such as the bridal processions cannot. It is also the question how the celebratory character would be affected by moving the activities indoors. Even though participants were not able to say concretely how



climate change could affect the festival, it is clear that adaptive measures would have an effect on the meaning and value these cultural celebrations have for the community. In turn, this will affect the community's ability to maintain the identity of the sailor island. In addition, the cultural festivals attract many tourists each year, which, as noted earlier, supports the island's ability to maintain these traditions. If the festivals would be cancelled because of extreme weather or floods, it could decrease tourism income, which would affect the community's continued ability to organise the festivals. Adapting the festivals to changing circumstances, could also mean they lose the appeal to tourists. Climate change effects can affect the community make-up, for example it could lead to a decrease in tourism, causing those who work in tourism to move away. Any changes to the community make-up could have consequences for the activities where the community comes together.

## Nature

After discussing the built heritage and cultural activities, I will now turn to nature, which is another important part of Fanø culture. Nature is the first association many people have with Fanø, which is considered "stunning" (Gitte, female, ~35) and "very special" (Else-Marie, female, 65+). Most of the participants mentioned that the combination of nature and culture is the reason they choose to live on Fanø. Ragnhild (female, 65+) considers the nature to be an important part of Fanø: "I think that to most of us, nature really means a lot. Maybe we do not use it every day. But it's important it's there. And that it's taken care of". Frank (male, ~45) noted how important the Wadden Sea is for a wide variety of animals. Almost all participants explicitly mentioned how much they value the variation in the landscape on Fanø, including the beach, marshland, heathland, mudflats (inhabited by seals), and hills. Nature is such an important part of life on the island, that it can be considered part of Fanø's identity, which is illustrated by the object in figure 3 that Malene (female, ~27) shared as a symbol for Fanø:

It's the bird life on Fanø (...) and it symbolised the Wadden Sea, like the beach and the sea, and (...) all the space and the blue sky. (...) I was really like wow, I need this cup. Because this is essential to what we are here.

Considering the role of nature in the identity of Fanø and the importance it has for the tourist economy, it can be expected that deterioration due to climate change (as well as other factors) would have a significant impact for the community. However, the participants found it very difficult to imagine what it would mean for the community if nature on the island changes or declines. The general expectation was that the community would get used to changes:

I feel like the people in Fanø have always adapted to however the weather changes, because there is this big respect for that the nature is harsh here. And you should respect the tides and all that. So I don't think that will change the community a lot, they will just adapt to the new way of living. (Malene, female, ~27)

This sentiment was shared by the participants of the group interview, who expected that nature will change, but not disappear. Furthermore, the group suggested that change does not have to be negative, as nature always changes. As suggested by Malene, the expected capacity for adaptation builds upon the cultural heritage narrative of sailors and strong women who lived with the tides and the harsh nature. Whether it is the changing tides, incoming storms, or the return of sailors after

*Figure 3*  
*Coffee cup symbolizing Fanø. Created by Mette Hübschmann Pettit, after a design by her father.*





months or years at sea, life on Fanø has always been dynamic and subject to change, therefore, the community will continue to adapt.

However, there are limits to what changes would be acceptable to the participants. When considering the possibility of a strong decline in nature or biodiversity, the participants expect it will affect the community, even if it remains difficult to imagine what the consequences will be. Furthermore, it is expected that the island would become less attractive for tourists, and a decline in tourism would in turn have significant consequences for the community:

I don't know. Because it's not like we live from fishing, or that we have this kind of life that that we cannot get an income anymore because of some things change, like you see somewhere else. But I think of course, if we have these garbage polluted beaches, we can't attract tourists. Also, I think a lot of people come here on Fanø to experience nature, the animal life, the beaches, bird life. So if that changes a lot in a negative way, that would affect tourism, and that could affect income would affect all of us. (...) I think it will also be very negative for us living here, because I think a lot of people choose to move to Fanø or move back to Fanø, because of the special nature we have. So if it's destroyed or decreases, it will also have a very negative effect for us living here. (Mille, female, ~35)

Climate change is already having consequences for nature on (and around) the island, in particular through the rising temperatures of the sea. While there is no commercial fishery on the island, according to Henning (male, 65+) those who fish privately have shared with the community that the availability and species are changing. Both Frank (male, ~45) and Christina (female, ~35) remarked how important the Wadden Sea is for migratory birds who feed before travelling south or north, or make their nests on the islands. The rising water temperatures also affect their food supply. The consequences of the decreased food supply became clearly visible in February 2022, when 200 seabirds washed ashore on Fanø. Their deaths have been contributed to a combination of malnutrition and storms (Ritzau, 2022). Mille (female, ~35) expressed hope “that people become more aware of climate change, when they see something this specific”, and consequently change their way of life.

Due to the high value of Fanø's nature, there is protective legislation in place, both locally and internationally. Malene (female, ~27) believes that Fanø is “the municipality with the most protected nature, (...) like more than half of our land is protected.” While she considers these regulations “a really good thing”, it can also be a limitation as “you're not allowed to do anything”. Malene (female, ~27) wondered if it could also be a complicating factor when it comes to climate change mitigation measures:

Can we extend the dikes? (...) Just north of Nordby, we could be able to extend the dike more, but then that extension would go out into a protected nature area. And that means that you have to get a lot of approvals from our national state or by the EU. (...) The dilemma is, should we protect the nature? Or should we also protect the humans and who are more important?

### The connection to Esbjerg and the mainland

Much has changed on the island since the hightide of the sailing industry. When the tourist economy started to grow on the island a stable mainland connection became more important. Having a frequent ferry connection has also made it possible to work on the mainland while living on Fanø. This has attracted new residents to the island, affecting the community make-up and present-day culture. According to Henning (male, 65+) and Frank (male, ~45) an estimated 700/800 Fanø

residents take the ferry to Esbjerg to work on the mainland. The 12 minute, 3 times an hour, ferry connection sets Fanø apart from “the other islands in Denmark (and the Wadden), where it takes like an hour, or one and a half hour with a ferry (...), you feel much more isolated, and that's a lifestyle choice.” (Malene, female, ~27) Furthermore, the ferry ride home provides an opportunity to “reset the brain” (Gitte, female, ~35), contributing to the peaceful character of Fanø. The “zen travel” as Malene (female, ~27) called the ferry ride, allows travellers to “go up front and just let the air blow all their problems away.” (Christina, female, ~35)

So far the ferry is considered very “sturdy” (Malene, female, ~27), but when a big storm hits the island, the ferry cannot sail. These occasions will likely increase in the future, with climate change leading to more extreme weather events. This possibility is met with mixed response, on one hand it is “the consequence of living on an island with a ferry is that sometimes it will cancel” (Malene, female, ~27), and it is only “for a few hours (...) so that's not a big impact” (Steen, male, 65+). Ragnhild (female, 65+) suggested that “humans should learn to accept that we cannot decide over everything that sometimes you have to say ‘okay, I give in Mother Nature, you are stronger, so I have to sit here and wait’”. In a way, a cancelled ferry contributes to community cohesion as it brings out the helpful character of Fanø residents:

But people just say ‘okay, we can manage we'll help each other, you can have some food or whatever, I have some leftovers some people will help each other and we found a way, because people are used to the weather as some player that you cannot win this battle. (Frank, male, ~45)

This illustrates the adaptive capacity that community developed through generations of living with island dynamics. On the other hand Malene (female, ~27) could imagine it would mean a lot for the community, because they take great pride in the frequency and trustworthiness of the ferry, and as discussed many community-members commute on a daily basis for work. Furthermore, Mille (female, ~35) is concerned what an unstable connection could mean for attracting both new residents and tourists to the island:

I worry that it would make people not choose to move here because I think also a big part of why you choose to live here is the easy transportation with the ferry. (...) And I think it's the same with the guests coming here. If we don't have a ferry that is reliable, because the weather is changing and the water is changing, then I think it will also be more difficult to attract guests for these festivals.

In addition, Frank (male, ~45) expressed concern for keeping the current inhabitants in the future:

Of course, in the long run, if it happens more and more often it would affect people because at least 800 people every day are dependent on the ferry to go to work and if they found out that they cannot go to work on a regular basis they would have to move away.

If it comes to this, it will have far reaching consequences for the remaining population. There would be less people available to organise the many cultural activities and maintain traditions. This will in turn affect the community cohesion and place attachment to which these activities currently contribute. It could also decrease the amount of tourism on the island, which will lead to more people moving away and less funding for the activities.

## Conclusion

This study set out to gain a better understanding of how climate change effects can affect culture, particularly culture on the Danish island of Fanø. The research for this paper illustrated that culture and climate change are not easy topics for interviewing. Participants were hesitant because they did not believe themselves to be knowledgeable enough. Yet, the research showed that participants held more information than they thought, albeit sometimes implicitly.

The empirical findings in this study provide an improved understanding of the importance culture has for the Fanø community, and what changes in culture would mean for them. The seafaring history of Fanø is highly valued, and is seen as integral to the community's identity. The link to the past is kept alive by maintaining the built heritage, cultural celebrations, and dancing and fiddle music. Furthermore, by sewing and wearing folklore costumes, women are paying tribute to the strong women of the past, while incorporating this strength as part of their identity. The community would consider it a great loss, if climate change effects impact their ability to practise such cultural activities and preserve the built heritage. It would affect the link to the past and ultimately the cultural identity that the community embodies.

Although various aspects comprising community identity were analytically separated, it is important to note the interconnectedness of different aspects of life on Fanø. The findings have illustrated that in addition to the seafaring heritage, nature and (tourism) economy are a part of Fanø's identity and culture. Culture and nature on Fanø are important reasons for tourists to visit the island. Tourism generates income to the island, which in turn enables the community to maintain their heritage objects and practices. The ferry connection to the mainland facilitates the arrival of tourists and provides community members with more work opportunities. In addition, it increases access to facilities off island which, in fact, allows community members to continue living on the island, participating actively in everyday practices of heritage conservation. Therefore, climate change effects that impact nature, as well as the local economy will eventually bear upon liveability of the island and, in turn, cultural activities.

Finally, by exploring the intersection of culture and climate change, it might also be possible to learn from the past. As discussed in the findings, the participants consider the historic houses to be very strong, which they contribute to the way they were built with the weather in mind. The historic houses are considered less vulnerable than modern houses. Reviving the old style of building could support mitigation and adaptation processes. Perhaps further research would find more opportunities to learn from the past for mitigation and adaptation.

While this is a specific case study of a small island in Northern Europe, similar connections between climate change and culture can be made elsewhere. Further research is needed to fully understand the implications of these cultural consequences of climate change, as well as the effect mitigation and adaptation processes will have on culture. An improved understanding of the relationship between culture and climate change is necessary in order to find ways of managing the relationship, and to include culture in mitigation and adaptation processes. I believe that normalising culture and climate change as a conversation topic is a first step in preparing for changes that are coming in the future. By discussing the topic now, both in academia and society, we can choose how to adapt or protect cultural elements.

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## Reflections

### Research choices

#### Topic choice

I do not exactly remember when I came up with the topic of culture and climate change. I have always had interdisciplinary interests, which is what drew me to spatial sciences, a field that is inherently interdisciplinary. My interests have been split for a long time between culture and climate change related issues. My interest in culture led me to my bachelor in cultural anthropology, while my interest in climate change brought me to a minor in sustainable development. I attempted to combine my interest in my first master in human ecology, in a program called 'Culture, Power, and Sustainability'. When I was looking for a second master degree, it was the specialty track in islands and sustainability that drew me to the research master. At the start of this program I did not have specific topics in mind that I wanted to pursue, but 'my' topic started to develop quickly. I wrote about it after the first semester in my essay for Scientific Reading, Debating, and Reflecting, and since then I have wanted to pursue it further. My thesis topic is the result of interests that I have had for most of my life. I have been concerned about climate change for a very long time, and while I am glad to see progress being made for mitigation and adaptation, I do not see that same progress being made for the socio-cultural side of the issue. I firmly believe that the intersection of culture and climate change deserves more attention than it is receiving. An increased understanding of this intersection, will allow us to work towards a desirable future for our society and our culture. This is ultimately what I want to work toward: a future in which living is not only safe, but enjoyable and meaningful. Journals that I have looked at for potential publication of my work are: the *Island Studies Journal* and the *International Journal of Heritage Studies*.

#### Choice of theory and literature

In my search for literature I initially separated my topic in several segments: culture theory; climate change effects, particularly on (Wadden Sea) islands; and the intersection of climate change and

culture. In the segment of culture theory I had already started focusing on the spatial dimension of culture when I was working on the research proposal. I think focusing on the spatial dimension is a way of making culture less abstract, and it facilitates the connection to climate change effects that affect the physical space. I added the concepts of place attachment and place identity when I was working on the analysis after discussion with Bettina. This is probably something that I should have thought about earlier, but I think my brain was too preoccupied. I also should have looked into the concept of everyday cultures, which came up in the final stages, when I did not have enough time left to give it enough attention. During analysis it became clear that many cultural aspects are related to the seafaring heritage of Fanø. I had not considered to look into the role of heritage in the spatial dimension of culture, which in hindsight seems like a very obvious aspect.

For the segments of climate change and particularly the intersection of climate change and culture, there are serious limitations to the available literature. Literature on climate change is usually not very concrete on the effects. As far as I could find there has not been a thorough review of possible climate change trajectories in the Wadden Sea area. Although I expect that some scenarios must have been developed, I just do not know how to find them.

### Method choices

My initial plan was to use a combination of interviews and participatory deep mapping in focus group settings, with a focus on the latter. Both would be supported by visual elicitation on climate change, to make climate change less abstract and to provoke participants to think a bit further. I learned about deep mapping in the Advanced Research Skills course and though it was a very interesting method. In my experience, both culture and climate change are very abstract topics, which makes it a difficult topic of conversation. In my choice of methods I wanted to try and make the topic more concrete. Deep mapping is a creative process, which I believe helps open up the mind for new ideas. I would have used it to have participants create a visual representation of what they consider to be their culture, building it up from small concrete elements such as traditional recipes, objects with cultural meaning, and photographs. This would have been used as an elicitation tool to have a thorough discussion of what their culture is and how it is connected to the place they inhabit. I would have used the same visual elicitation on climate change effects that I have used for the interviews. This consisted of news article clippings of climate change related incidents, such as storm surges, sea level rise, heatwaves. This made climate change a bit more 'real' for participants, focusing on specific climate change effects helped the conversation.

When I started the fieldwork I was fully prepared to use the deep mapping, and it was also part of my communication with potential participants. Unfortunately, I could not find enough participants to fill a focus group within the timeframe that I had available, I had hoped for 6-8. Eventually I had to accept that there was not enough time left, and I contacted the few people that had expressed interest in participating to schedule individual interviews instead. I considered other ways to still use deep mapping, but ultimately decided it would not have added enough to the data gathered in the interviews. The participatory deep mapping sessions would have taken more time than individual interviews, I expected about 2.5 hours. I tried to market it as a fun community activity, but I think people thought it was too much of a time investment. In my preparation I had decided not to schedule specific times for the deep mapping sessions, but to base the times on availability of participants. In hindsight I wonder if it would have been easier to find participants if I had asked people to participate at a certain date and time.



## Result choices

Initially I wrote out more findings than made it into the final article. There was a lack of focus, so I had to make choices on what to use. I started with a description of life on Fanø and a summary of the participants climate change concerns. I paid more attention to the role of nature in the community and to traditional recipes on Fanø. It was easier to connect these aspects of the cultural life to climate change effects, but ultimately it was less interesting than the more complex dynamics. After a discussion with Bettina I decided to rewrite the findings with a stronger focus on the seafaring heritage of the island. There are still many points that could have supported better with appropriate literature, but it was difficult to find the right sources this late in the process.

## Ethical issues

The main ethical issue in this research were the challenges to anonymity and confidentiality. Fanø is a rather small community, and by providing any contextual information on participants, it could be possible to trace it to a specific individual. The planned focus group setting would have posed additional challenges to confidentiality. I was prepared to set out rules for participation at the start of the meetings, for example to keep contributions confidential and to treat each other with respect.

The participants have been informed about these issues and other ethical considerations in an information letter (attached in Appendix B). The letter includes information on the aim of the study, what it means to participate, and their rights as participants for example the right of participants to refuse to participate or withdraw their participation at any time before the data is analysed. All participants have filled out and signed an informed consent form (attached in Appendix C) before participating, and the form was reviewed at the start of the interview. The participants were given the choice for a pseudonym or their real first name to be used. All participants chose to give permission for their first name to be used.

## Reflection on research process

- a reflection on the research process, your own role, and the role of your supervisor; and any other important reflections or discussion;

The research process was challenging to say the least. Even though I had some idea of what I wanted to do for the thesis in the months leading up to it, I was very indecisive in the beginning, and because of that I had a very slow start. It was difficult to schedule the fieldwork, because I had already committed to participating in the TriWadWalk from May 30<sup>th</sup> until the 4<sup>th</sup> of June. Waiting until after the event to do the fieldwork would have been too late, but scheduling the fieldwork before then left less time to prepare. I think working on the analysis would have gone smoother with more preparation and a more advanced theoretical framework. I think I would also have been able to get more out of the fieldwork with better preparation, now, everything felt quite rushed. From February to April I also spend a lot of time writing research proposals for PhD positions, which was very distracting, but could not be avoided. Most of my challenges during the fieldwork have already been discussed. It was really difficult to find participants, which was frustrating. People felt like they did not know enough about the topic. I had to adjust my methods, which was very disappointing. A week after returning from fieldwork, I left with the TriWadWalk, so I did not have much time to digest. I wish I would have worked in a more structured way on the analysis, I think the writing could have gone a lot smoother, but instead I tried to work on everything simultaneously. I think I was quite overwhelmed and this brought up my ADD, and I was extremely chaotic. Writing the actual thesis article was a struggle to the end. I did not manage to get into the flow of writing. I do not really have much to say in this regard. I am still invested in the topic and I wish I would have been able to do it more justice, but I am exhausted and my brain is not cooperating. Communication with Bettina could have been better, I did not always keep her up to date as much as I should, and I missed a few

deadlines because I was struggling. However, Bettina's advice was really helpful, and she was supportive, understanding and enthusiastic. This has helped keeping my stress levels manageable and I look forward to having her as a supervisor during my PhD, which will hopefully be a lot more structured.

## Appendix A: Logbook

Month	Week	Activity
January		On the 24 <sup>th</sup> I send an email to Bettina to ask if she would consider being my supervisor. I attached the research proposal that I worked on for the proposal writing course, but this was designed as a PhD proposal, so it would have to be brought down to thesis size. We had our first meeting on the 28 <sup>th</sup> . We discussed possible research questions and study locations. Bettina made some recommendations on authors to look up. We also discussed my way of working and my ADD.
February	6	Reading up on possible case study sites: wadden islands, Iceland.
	7	This week I've been working on the research question and trying to choose a case study location. Currently my research question is: <i>How will island culture be affected by climate change and adaptation?</i> The location will likely be Fanø in Denmark; I asked Janne Liburd, professor at Southern Denmark University for advice.
	8	Working with research question: What does a changing climate mean for culture on Fanø island? Not enough time to do GIS visualisations, but would still like to do deep mapping Reading up on deep mapping
March	9	Trying to determine practicalities of case study; figuring out budget and timing; looking for accommodation; looking for ways to connect to TriWadWalk
	10	Discussed thesis with Frans. Recommended looking for ways to connect to TriWadWalk; considering a comparative study of wadden islands, instead of a single case study. Focussing on participatory deep mapping, doing one or two sessions on multiple islands. More regional perspective, less depth, would need to find participants before arrival. More flexible, possibly easier to find literature.  Meeting online with Bettina to discuss possibilities. Decide on 1 case study on Fanø Send an email to Imogen to ask for advice on Deep Mapping
	11	Had covid; Meeting online with Bettina to discuss phd and thesis; discussed theoretical framework; deep mapping approach reading articles for theoretical framework.
	12	Meeting(s) with Hinke and Bettina; discussed progress and fieldwork preparation; set deadlines to send interview guides / data gathering plan. Booked accommodation and train tickets. Made contact with local museums for possible collaboration.
	13	Applied for thesis budget support; Looked for possible locations deep mapping; museums unable to help

		<p>Contacted municipality; are willing to help with location and translation of recruitment text.</p> <p>Reading articles for culture theory;</p> <p>Looking for literature</p>
April	14	<p>Reading culture theory; island culture;</p> <p>Reading about Fanø</p> <p>Reading about culture and climate change</p> <p>Writing introduction</p> <p>Send introduction draft to Bettina; meeting with Bettina, discussed theoretical framework and what needs to be in data gathering plan</p> <p>Organising literature notes</p> <p>Looking for additional literature</p> <p>Working on interview guide</p> <p>Working on deep mapping plan</p> <p>Writing literature review</p>
	15	<p>Looking for recording equipment; ordering memo-recorder</p> <p>Writing out data gathering plan and interview guide and send to Bettina;</p> <p>Meeting to discuss fieldwork preparations.</p> <p>Working on interview guide</p> <p>Writing information letter and preparing elicitation materials.</p>
	16	<p>Send recruitment message, information letter, and informed consent form to Bettina.</p> <p>Had recruitment message translated, and shared in several facebook groups.</p> <p>Final preparations for fieldwork</p>
	17	<p>Started fieldwork;</p> <p>Explored island;</p> <p>visited museums;</p> <p>approached people at museums and shops for participation.</p>
May	18	<p>Looked for participants; send emails to local organisations;</p> <p>Found two interested in participating in focus group; no one confirmed yet;</p> <p>Contacted school principle to ask if I could organise a focus group with the pupils, at the recommendation of another potential participant;</p> <p>Visited jamsession on the recommendation of another participant; but was not able to make contact.</p>
	19	<p>Prepared and conducted interviews with Tom and Henning.</p> <p>Attended a meeting of a sustainability working group and asked for participants; found a few interested people.</p> <p>Decided to let go of focus groups, because I can't find enough participants, and there's too little time left;</p> <p>Looking for other ways to still use Deep Mapping, e.g. online format using Jamboard, open to more participants; or creating deep map myself with my own pictures and pictures I take of objects brought to the interviews by participants.</p>
	20	<p>Final week of field work</p> <p>Prepared and conducted interviews with Else-Marie, Malene, Gitte, Frank, and Ragnhild</p> <p>Joined a meeting of a sub group formed at the sustainability event; conducted an unexpected group interview at the meeting.</p>
	21	<p>Worked on transcriptions using transcription software</p>

		Wrote draft of study location Conducted online interview with Mille Meeting with Bettina to discuss fieldwork and set new deadlines. signed up for Graduate Research Day
June	22	Participating in TriWadWalk
	23	Send methodology and theoretical framework to Bettina Meeting to discuss feedback, and analysis Worked on transcriptions
	24	Missed deadline, not feeling well. Worked on coding. Prepared GRD powerpoint and submitted.
	25	Worked on coding and analysis Prepared GRD presentation Send first part of findings, bullet points for the rest; meeting with Bettina
	26	Worked on findings Short break
July	27	Reading additional literature on place attachment Worked on findings; Send new version of first part findings
	28	Went back to coding; Reading additional literature
	29	Break
	30	Worked on theoretical framework
August	31	Additional reading Writing findings
	32	Organising literature notes Writing findings
	33	Working on other parts
	34	Send draft of thesis, minus abstract, conclusions and reflections.
September	35	Attending summer school
	36	Send updated draft, except for findings; meeting with Bettina to discuss the focus of the findings. Send new structure of findings in bullet points, and cut parts out of findings.
	37	Restructuring and rewriting findings
	38	Send rewritten findings; meeting with Bettina to discuss progress. Applying feedback. Writing conclusion.
	39	Send final draft with conclusion to Bettina. Write abstract and reflections. Send finished thesis to Bettina and Erik.

## Appendix B: information letter

Dear...,

Thank you for your interest in participating in my research. I am conducting this research as part of research master degree in spatial sciences, with a specialisation in islands and sustainability. In my research I am exploring what climate change could mean for the culture of

Fanø. There is no need for any particular knowledge about culture and/ or climate change, you only need to be willing to share your experiences and to discuss the topic.

If you choose to participate, I would like you to bring one or more items that have some sort of cultural meaning for you, or connect to your life on the island. This can be photographs or videos of cultural events, traditions, or important sites; local recipes or food; music; objects that you use or value; anything you can think of with a connection to Fanø. These items will support the discussion by making culture less abstract. At the end of the discussion you can take the items home.

You can participate in the research in two ways:

1. An individual interview; this could take approximately 1 hour.
2. A group discussion in which you will collectively create a representation of the Fanø culture by using the items that participants bring; this could take approximately 2.5 hours

You can choose in which way you want to participate, or participate in both ways.

To participate in this research you need to be:

- 18 years or older; or have the permission of a guardian
- A permanent resident of Fanø

Before participating I request that you sign a consent form. It is important you understand the following:

- The interviews will be audio-recorded and notes will be taken during the interview.
- The group discussions will be audio and video-recorded and notes will be taken during the interview.
- These recordings will not be shared with anyone and will only be reviewed by the researcher and her supervisor for analysis.
- You have the right to ask to have the recording turned off whenever you decide and you may also end the interview at any time.
- With your permission, photographs will be taken of the items you are requested to bring. These may be used in any publications of the research results, without any information on your identity, unless specifically requested otherwise.
- If you wish so, you will be sent a copy of the interview notes, and you will have the opportunity to make corrections or request the erasure of any materials you do not wish to be used.
- The information you provide will be kept confidentially in a password protected file on my computer up to five years upon completion of my research.
- The main use of the information you provide will help me towards my master thesis which upon completion may become publicly available.
- The data may also be used for articles, book chapters, published and unpublished work and presentations.
- Unless you have given explicit permission to do so, personal names or any other information which would serve to identify you as an informant will not be included in this research or in any future publication or reports resulting from this project.

As a participant you have the right to:

- decline to participate;
- decline to answer any particular question;
- ask for the audio-recorder to be turned off at any time;
- end the interview at any time
- withdraw from the study up until analysis (June 7<sup>th</sup>, 2022);
- ask any questions about the study at any time during participation;
- and ask for the erasure of any materials you do not wish to be used in any reports of this study.

Once again I thank you for taking the time to find out more about my research. I am at your disposal for any questions you might have. You can also contact my supervisor at the address below.

Sincerely,

Ilse van Dijk

E-mail: [i.c.van.dijk@student.rug.nl](mailto:i.c.van.dijk@student.rug.nl)

Telephone: +31644012438

Supervisor:

Dr. Bettina van Hoven

E-mail: [b.van.hoven@rug.nl](mailto:b.van.hoven@rug.nl)

Telephone: +31503633512

## Appendix C: Informed consent form

Working title of study: *Culture and Climate Change on Fanø*

I understand the research project procedures and my role in them. I agree to participate in the study on the understanding that:

- I have read and I understand the information sheet of this present research project.
- I have had the opportunity to discuss this study. I am satisfied with the answers I have been given.
- I understand that taking part in this study is voluntary and that I have the right to decline to answer any individual questions in the study, and to withdraw fully from the study at any time prior to analysis (June 7<sup>th</sup>, 2022)
- I understand that my participation in this study is confidential. Without my prior consent, no material, which could identify me will be used in any reports generated from this study.

- I understand that this data may also be used in articles, book chapters, published and unpublished work and presentations.
- All files related to the interview or group discussion, including the recording, transcript and notes, will solely be stored in a password protected folder on the researcher's password protected laptop.

Please circle YES or NO to each of the following:

I consent to my interview or participation in group discussion being audio-recorded YES / NO

I wish to remain anonymous for this research YES / NO

**If** **YES**  
My first name can be used for this research YES / NO

**OR**

A pseudonym of my own choosing can be used in this research YES / NO

I would like to review notes from my interview YES / NO

I would like to receive a copy of the research report YES / NO

**"I agree to participate in this individual interview and acknowledge receipt of a copy of this consent form and the research project information sheet."**

Name and preferred pronouns: \_\_\_\_\_

Signature of participant: \_\_\_\_\_ Date: \_\_\_\_\_

**"I agree to abide by the conditions set out in the information sheet and I ensure no harm will be done to any participant during this research."**

Signature of researcher: \_\_\_\_\_ Date: \_\_\_\_\_



Please fill in the following information. It will only be used in case you want to be sent a copy of interview notes so that you have the opportunity to make corrections.

Address:

Email: