

How do **we** understand Climate Change ?

A TECHNO-ANTHROPOLOGICAL RESEARCH
OF
PERSPECTIVES FROM LEMVIG AND THYBORØN

10TH SEMESTER MASTER THESIS

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How do we approach climate change?
– *A techno-anthropological research of perspectives from Lemvig and Thyborøn*

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Abstract

This techno-anthropological thesis is based on ethnographic research and explores the social formations created by the people in Lemvig and Thyborøn by analyzing the ways in which they speak of ‘we’. The need to adapt to change is further viewed through sub-politics, responsibility and trust. Conclusion: The people of Lemvig and Thyborøn place themselves collectively in a multitude of social formations by “we’ing”, that can stretch geographically, temporally, and in relation to particular landscapes, which shape them. They perceive many sub-political aspects to be an inherent part of the conversation of climate change. The social formations must be reproduced in order to persevere in the face of change and this change is entrusted to be influenced by political involvement in the change of practices both on a local and a global scale.

01 Initiating problem

In a small town in mid-western Denmark, something new, ambitious and visionary is well underway to become a reality. This is where the climate adaptation project called Klimatorium is being built.

This techno-anthropological thesis is the outcome of an over 4-month long project during the spring of 2019 that has aimed to delve into researching climate change from the perspectives of the population in Lemvig and Thyborøn.

The focus of the research behind this thesis project has been chosen based on my observations and involvement, first in the regional Climate Change Adaptation project Coast to Coast Climate Challenge (C2C CC), a six year project that runs from 2017 to 2022 and spans 24 sub-projects dispersed through the Central Denmark Region, and later in the specific sub-project, C21: Klimatorium, which from this point on will simply be referred to as ‘Klimatorium’.

My involvement started in February of 2018 as I was in the second semester of my master’s program and my study group and I had chosen to follow a different sub-project of C2C CC, the C16: Randers Climate Ribbon. Through our work on this project we were introduced to the C2C CC and later chose to continue the focus on Climate Change Adaptation in the Central Denmark Region. I later became a student intern at Klimatorium and continued to do research and write about the collaborative efforts to create and realize projects related to climate. This is all to say that although the time frame for the research behind this thesis is relatively short, the work behind it runs through a total of three semesters’ involvement in this subject area.

The official visions for Klimatorium are declared in the project description. Under the headline “C21: Klimatorium, an innovative showroom for climate development and climate tourism”, the descriptions of Klimatorium is the following:

“The Climatorium is pivotal in the establishment of a Climate Change Adaption Cluster on coastal environment in the region.

The purpose of the Climatorium is to gather knowledge, business and tourism on CCA aspects within an innovation house.

The objective is to increase innovation through day-to-day interaction and planned in house seminars.

A list of local climate change measures and landscape characteristics will be part of a showroom. This action is primarily linked to innovation within sea & fjords and rivers.”
(Coast to Coast Climate Challenge website¹)

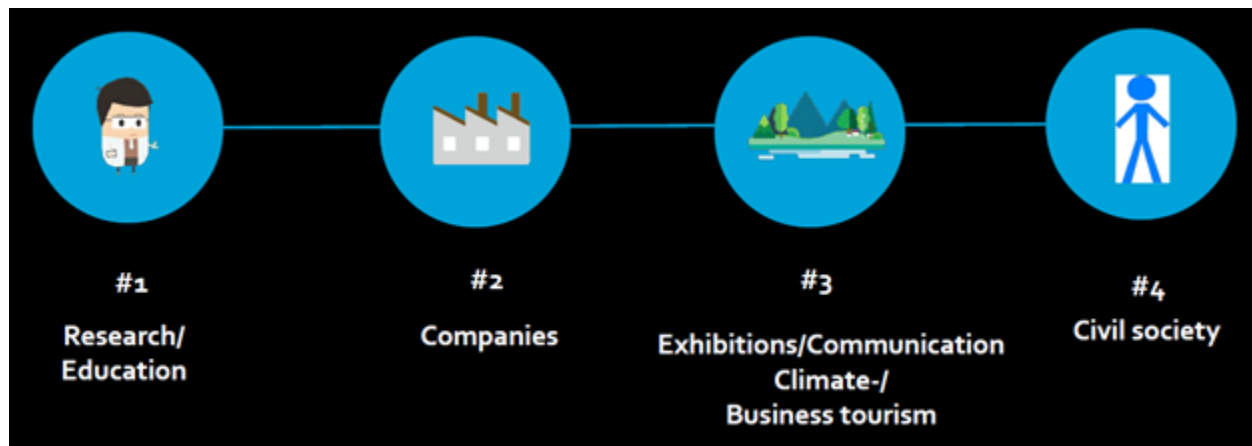
So, what is it? A showroom? A sub-project? Well, all of the above but Klimatorium is perhaps best described in two ways: it is a building and it is an idea; it has a physical and a conceptual dimension. The building itself is not yet standing but is underway and planned to be completed in the summer of 2020.



(Architectural visualization of Klimatorium by 3XN)

The idea behind Klimatorium is to gather different stakeholders to work towards solutions to problems that are related to climate. During my time at Klimatorium I often heard versions of presentations on what Klimatorium is. This always included an explanation of their organizational vision for how collaboration across sectors are believed to hold the key for innovation within Climate Change Adaptation. Their structure is referred to as a quadruple helix and looks like this:

¹ <http://www.c2ccc.eu/english/subprojects/c21-climatorium/>



(Visualisation: quadruple helix, Klimatorium. Taken from Klimatorium's own presentation)

The first strand of the model, Research and Education, is broadly referring to both academic research where universities are collaborators in research projects and knowledge production and where school children can be encouraged to learn about climate change through field trips and school projects. The second strand, Companies, is referring to businesses and companies that become collaborative partners in Klimatorium in various ways. They can collaborate with other partners of Klimatorium to solve problems related to climate, whether that be the management of water, wind, plastics, etc. The third strand, Exhibitions, refers to both in-house exhibitions and climate tourism. Here Klimatorium wishes to facilitate that both the public and businesses can interact with Climate Change Adaptation by experiencing exhibitions and tours to other projects. Whether that is ongoing research experiments that attempt to eliminate micro plastics from rain water or other sub-projects of C2C CC. In short, the first three strands of the helix are well thought out and are underway and while this model is the result of conscious choices and forms a basis for the vision of Klimatorium as a project, I have experienced that there is a lack of plan when it comes to execution of the fourth strand of the helix: civil society. What does this refer to? Who are they and how are they included? Who is included in this category? What can they contribute with to the process of innovating on Climate Change Adaptation Solutions?

Perhaps a reason for the lack of strategy for this group could be a symptom of the development of the organizational strategy. In the early phases of the project development, when it was an idea at the project's primary beneficiary, the utility company Lemvig Vand & Spildevand, the now quadruple helix was a triple helix not including civil society. When the secondary beneficiary of the project, Lemvig Municipality, joined the project, the helix was expanded with a fourth strand.

The inclusion of civil society at the time of inclusion of a second beneficiary provokes another set of questions: how do each of the beneficiaries view and categorize *civil society*? How do they talk about them and what is their relationship to this group of people?

As I observed while in the field, they use different terminologies for this group of people depending on which organization is mentioning it. The municipality call them *citizens*, the utility company call them *customers* and when in the context of Klimatorium they are called *civil society*. This indicated that the relationship they have with this group of people is different depending on the context. The municipality is of service to its citizens, the utility company have a clear trading relationship where resources and money are exchanged and the relationship between Klimatorium and civil society seems to be a third but somewhat undefined type.

In order to define this and form a plan for the fourth strand of the quadruple helix another line of questions appear. If the idea behind Klimatorium is for all of the strands of the quadruple helix to add knowledge in a collaborative effort to find solutions to problems related to climate change, how are civil society involved in this? How do they view climate change? How do they imagine that problems relation to climate change should be solved?

This led me to choose to focus on the civil society's aspect on climate change. Focusing on their experiences should hopefully illuminate their perceptions of the changes in their environment. The aim is to gain insights that help answer how these people can be included in the vision of Klimatorium - in the sense that there are efforts to be made, to go from a purely technological approach to climate change adaptation, to a holistic approach, focusing on more than quantifiable parameters. This focus could be on questions like mine: how do communities change with and because of climate change? How can Climate Change Adaptation projects use this insight?

Specifically, I chose to focus my research on two questions: **How do the people of Lemvig and Thyborøn view themselves collectively and how do they approach climate change?**

02 Context

In order for this research to be fully understood, I find it necessary to describe the context that surrounds the topics discussed, the context which the informants are speaking from or into. I will do this in both a temporal sense, with the historic context of Lemvig and Thyborøn and the current geographic context of what challenges this area faces as consequences of climate change. Then I will outline the context of these challenges on an international scale, which will also include the current state of general political attitudes towards how humankind should approach climate change.

History of Lemvig and Thyborøn



(Image: Lemvig Muserum website²)

The first mention of a town called Lemvig dates back to 1234. While this does not mark the founding of the town it does place the place Lemvig temporally, at a time when the fjord was closed to the west by one long isthmus³.

² <http://www.lemvigmuseum.dk/udstlemhist.htm>

³ <http://www.lemvigmuseum.dk/udstlemhist.htm>



(Image: Google Maps⁴)

As time has passed the isthmus has gradually separated into two: Harboøre Isthmus being on the southern side, and Agger Isthmus being on the northern side of the Thyborøn Channel that now connects the fjord to the sea.

The ‘break’ in the isthmus happened for the first time (since the town emerged) in 1825 and marked a change, from the town being centered on trade on a small scale and the surrounding landscape being cultivated by farmers, to now allowing for the merchants from Lemvig to purchase ships that could sail to England and Hamburg which expanded the geographic radius of their trade and brought wealth to Lemvig.

First in the initial decades of the 1900’s there was a significant rise in sea fishing activity from Lemvig. Fishing, as a local profession, almost died out in this area from 1917 until the end of the 1940’s where it came back. Today there is almost no commercial fishing in Lemvig⁵.

The landscape surrounding the towns of the area have historically been and are still being farmed, meaning that there is a large farming tradition there that must not be neglected while describing the community. In many ways, farming has shaped the area as much as trade and fishing has.

Located on the northern end of Harboøre Isthmus, the town of Thyborøn is a lot younger than Lemvig. On this location there was a collection of nine houses in 1879. While the fishing trade grew from Harboøre, sailing to the Thyborøn channel to fish, it wasn’t until the trains ran from Lemvig to Thyborøn from 1899 and the construction of a harbor in Thyborøn during the years of 1915-1918 that the town had the infrastructure that lead to it blooming in the 1930’s. Thyborøn

⁴ <https://www.google.com/maps/@56.6773428,8.2850513,10z>

⁵ <http://www.lemvigmuseum.dk/udstlemhist.htm>

harbor is now one of Denmark's five big commercial fishing harbors⁶. Thyborøn was formerly the main town in Thyborøn-Harboøre municipality but is now a part of Lemvig municipality where it is the second largest town based on population with 2069 inhabitants in 2017. Lemvig is the largest town in the municipality with 6936 inhabitants registered in 2017⁷.

Challenges of climate change

The challenges that Thyborøn and Lemvig are faced with are very different, even though they are in such a close geographic proximity to one another. As established, Thyborøn lies on a flat isthmus. This means that it is surrounded by water, with the sea to the west, the fjord to the east and the channel connecting the two bodies of water, to the north of the town. Furthermore, changes in climate have led to an increase in storms and subsequently storm surges that push the water in from the west. This would not itself pose a large threat to a coastal town that has lived by and with the sea for all of its existence. However, storm surges push water into the fjord through the channel, and when the sea levels subside again, this water rushes towards Thyborøn from the east, causing flooding. Ground subsidence, rising ground water and an increase in precipitation all mean that Thyborøn is threatened by water from all sides.

Lemvig is situated within quite a different landscape. The close proximity to the fjord does also cause problems here, when storm surges cause the water level to rise within the fjord. In an effort to keep the water out of the town center, a wall was built along the harbor in 2012.

⁶ <https://historiskatlas.dk/@56.7009350,8.2183080,16z>

⁷

http://denstoredanske.dk/Danmarks_geografi_og_historie/Danmarks_geografi/Danmarks_kommuner/Lemvig_Kommune



(Image: Mads Krabbe⁸)

Aside from the water from the fjord, the problems that Lemvig face in regards to consequences of climate change are flooding from the increased amounts of rainfall.

The challenges, that this area face, are in some ways similar to many of the challenges that the rest of Denmark face due the effects of climate change, where flooding and storm surges put pressure on the municipalities to improve the infrastructure and seek to minimize water damage. However, there are also challenges to be found here that are specific to this particular area, namely given the unique way that Thyborøn is situated.

To shine a light on the current international context, I will explore some of the more prevalent recent instances where climate change adaptation has been a part of the public conversation. This further highlights the climate related challenges that are facing all humans. However, it is important to note that these ‘global’ references are presented from a western perspective. To have a true global perspective on this subject would be ideal, but is too large of a subject to delve into for this context paragraph. I do not, however, undermine the importance of a truly representative global perspective on this topic, but the subject is simply large enough that it could be a master’s thesis or a Ph.D. project in and of itself. For this thesis, what is relevant to know is the context that

⁸ <https://ing.dk/artikel/lemvig-bygger-endnu-mur-mod-havet-195588>

the informants are aware of and later speak to. This context does, undeniably, come from a western perspective.

The United Nations' body for assessing the science related to climate change, the Intergovernmental Panel on Climate Change (IPCC), released a special report: "*An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*" (IPCC 2018). This report points to the problems that will be caused by failure to adapt or to mitigate the emissions and letting the global temperature rise compared to pre-industrial levels by 2 degrees Celsius. Reports like this from the IPCC are meant to assemble knowledge on climate change and present this information in order for decisionmakers to be well-informed about the risks that humankind face collectively if current practices do not change. However, despite the scientific implications and estimations of the development of climate change in the near future, there is not global agreement on the validity of this information nor on whether or how people and political systems should approach this.

The current president of the United States of America, Donald Trump, has denied climate change by referring to it as a hoax. His administration has discontinued environmental protections and pulled the U.S. out of the Paris Agreement, which was the first agreement to bring all nations together in the common cause to combat climate change and adapt to its effects in a "*new global climate effort*"⁹. Even before he was elected president, he publicly stated his view on climate change, or global warming, when he posted to Twitter that global warming was made up by 'the Chinese'¹⁰.

In doing so, he accuses the Chinese government of constructing a lie of climate change to enhance their own political agenda. This begs the question: what political agenda lies behind denial of climate change?

Despite (or perhaps because of) of this denial and a perceived insufficient political commitment to change the public are voicing their opinions through demonstrations and climate activism in

⁹ <https://unfccc.int/process-and-meetings/the-paris-agreement/d2hhdC1pcy>

¹⁰ <https://twitter.com/realDonaldTrump/status/265895292191248385>

attempts to influence change in climate policies and to get climate change on the forefront of the political agenda. An example of this is the activities of the Swedish teenage environmental activist, Greta Thunberg, who started to protest the lacking political attention towards climate change by going on a school strike and has since spoken at the UN COP24 summit in Poland in December 2018¹¹. She was nominated for the Nobel peace prize for her work in climate activism by Norwegian politician Freddy André Øvstegård¹².

Another example is from the United Kingdom where public demonstrations caused politicians to declare a state of emergency on behalf of the climate¹³. This declaration was symbolic and carried no legal obligation for political action, but was a political answer to the pressure from the public. These examples go to show the engagement of civil society and their efforts to push politicians to take action and make decisions that reflect the wishes of the population. Furthermore, they show that the topic of climate change often is also a political discussion of how humankind should respond to changes in the climate. This is a prevalent part of the public conversation about climate change that is seen through media and that shapes the context of this research.

¹¹ https://www.fridaysforfuture.org/greta-speeches#greta_speech_dec12_2018

¹² <https://www.theguardian.com/world/2019/mar/14/greta-thunberg-nominated-nobel-peace-prize>

¹³ <https://www.eco-business.com/news/uk-is-first-country-to-declare-state-of-climate-emergency/>

03 Methods

During this following chapter I will present my approaches for answering the questions set at the end of chapter 01. The methodological basis from which to answer the questions posed in this thesis report is in ethnographic field work and data collection. I have chosen an ethnographically based phenomenological approach that is inductive and iterative. The reason for choosing a qualitative method rather than a quantitative one was that a qualitative approach had the opportunity to ask follow-up question and dig for nuances in the answers, rather than generalize and risk over-simplifying the informant's statements. The limitation of this approach is that the findings are not generalizable in the sense that one could conclude that all citizens share these opinions. The sample size for that to be the case is simply much too small.

Data collection and data treatment

As stated, the data collection for this thesis has been focused on ethnographic research of the local citizen's experiences of climate change. The core of the data comes from six semi-structured interviews held with seven informants living within Lemvig municipality. In preparation for these interviews I wrote an interview guide that I divided into four subjects: *identity*, *climate change*, *solutions* and *other* (see appendix). I chose these subjects to make sure to touch upon the most central aspects of what I wished to find answers to, while I still left the conversation during the interviews open to tangents and follow-up questions based on what the informant touched upon in their answers. By 'tangents' I don't mean to suggest that if the informants strayed from the topics of my questions they were speaking of less relevant subjects. On the contrary, I purposefully wished to allow for related topics to emerge, that I may not have thought of asking about. For instance, one informant spent a large portion of the interview talking about a town hall meeting that was held in Thyborøn back in 2016, discussing climate adaptation in the area. While I wouldn't have asked about this meeting directly, it was, for him, an important part of the story of citizens engaging in matters of climate change.

All interviews were conducted at various locations within Lemvig municipality during the months of April and May 2019. With permission from each informant, I made an audio recording of those interviews. These were made as a tool for me to record all answers while not having to take

constant notes and thus allowing me to be present in the conversation without fear of losing the important points of the interview. In addition to the audio recording I occasionally took a few notes on observations I would have along the way.

Subsequently, all interviews were transcribed and translated from Danish to English. This ensured that the data analysis would be easier by having all answers in writing.

These transcriptions were then read through and color coded to find subject patterns within the answers. While it would have made the data process easier for me to hang these up on a wall and gain an overview of the colored patterns, I did not do so due to ethical considerations. My workplace was, as mentioned, within LVS and all materials visible to other colleagues. Although the transcriptions included no details on the informants' identity, some of the informants would be obvious to my colleagues due to the nature of the questions asked and answers given. All transcriptions were therefore kept in folders when not in use, to be out of sight to anyone at the office of Lemvig Vand & Spildevand.

In addition to the six interviews, the data collected consists of pictures and of field notes taken during the more than 100 days in the field. The activities I participated in during these days vary from participation in meetings at LVS to observations on organizational dynamics and observations of the surroundings during an interview.

Choosing informants

When selecting informants for the interviews, the only criteria for inclusion that I had were for participants to be residents of Lemvig municipality and willing to speak to me. At least that's the simple version and the answer I would give anyone who would ask. Although this turned out to be harder than expected. For instance, it was suggested to me to contact those who may be involved in the farming community through the National Council of Rural Affairs (NCRA) (in Danish: Landdistrikternes Fællesråd). The reason why I chose not to do this was that the head of the board of the NCRA is simultaneously the head of board of Lemvig Vand & Spildevand and a board member of Klimatorium. While I wouldn't call this a bad thing, all of these positions seemed to unequivocally exclude him from being eligible for an informant that would represent civil society. Which (once again) brings into question: who is *civil society*?

In this selection of informants, I became aware that I had an implicit understanding of the term that would ideally not include those who have a professional relation to the decision-making

process within Klimatorium. This was not due to any external forces shaping my choices but my own understanding of who these people would be. I did this of an immediate and subconscious interpretation of the term ‘civil society’. Reflecting on it later, the reasoning was that this would be a group of people from the local area that were not a part of the public sector, or who would in other ways speak from a professional point of view. I wanted to speak to ‘common’ people at hear their personal thoughts and experiences on the matter. With the exception of one informant who works in the water supply industry, I manage to ‘accomplish’ that (rather arbitrary) set of inclusion criteria.

Informants

In this section I will outline a few descriptors of each informants. This is to avoid that they are all compiled into one voice of the community, but rather keep their own distinct points of view. For some of them there are also information that helps the reader understand what context their experience comes from, i.e. what profession they hold. All informants will be referred to by a fictitious pseudonym. They are all current residents in Lemvig municipality and are between the ages of 40 and 71.

Scott is in his late 60’s, he lives in Thyborøn where he was born and raises, and has many years of experience with the fishing community there. Heather is in her 40’s, she lives in Harboøre and has children that go to school there. Carl is in his 50’s, he works in Lemvig and lives in Thyborøn, where he was born and raised. Ben has lived in Lemvig since the 1990’s and currently also works in the town. Sam is a pensioner who is originally from Lemvig, who later lived in other cities in Denmark but returned and who has lived in Lemvig with his wife for many years, at the time of the interview. His wife also joined the conversation. Phil lives in Thyborøn and has been a fisherman there for almost 30 years.

Anonymization and considerations

All informants that participated in interviews have been anonymized. I have chosen to do this since I presumed that the likelihood of gaining informants that would be willing to talk freely about their opinions and views on these matters would be higher under this condition. However, as Scott pointed out to me during our interview “nothing is anonymous here”, meaning that people know each other in this small community and that engaging in something like this rarely goes unnoticed.

This is quite descriptive of his view of the dynamics within the community and of how fast and easily he perceives information to travel here.

Thus, I must admit that the concept of anonymization may be arbitrary in this local setting. However, I continue to limit the amount of information given on each informant as I have assessed that the findings of this analysis would not be enhanced by knowing the identity of the participating informants.

Ethnographic writing

The natural task that follows data collection and treatment is analysis and subsequently reaching the findings of the research after which comes the task of conveying this to you, the reader. This thesis is of course exactly that. In approaching this there are several considerations to be had. While some are conscious choices, some are dynamically occurring throughout the process. In any case, the approach I have taken to the ethnographic writing is a reflexive one. In the book *Organizational Ethnography*, author and professor of sociology, Daniel Neyland describes this approach as such:

“Unlike realist ethnography (where the world is assumed to exist as a knowable entity, from which an ethnography can abstract observational material, which can then be judged according to how accurately it represents the world out there), reflexive ethnography engages in a thorough and detailed analysis of the ethnographer’s attempts to make sense of the world while those being studied are making sense of the world.” (Neyland 2008:56).

While the informants are making sense of the world and expressing their views through the interviews I, as the ethnographer, will try to make sense of the world alongside them. This is however hard to convey through my writing. I do this by asking questions along the way and letting the answers from the data form new questions in an iterative process. In this process I have also felt the agony of omitting. While I have at times felt like I had enough data for several thesis projects, I had to choose what to focus on during this project, thus omitting data in the process. This is the challenge of any ethnographer and I have approached it by applying a systematic methodological approach to my data treatment.

Thinking back to the conversations I had within the organization of Lemvig Vand & Spildevand when planning this research (as will later be described under 04 Roles and Positioning), there were questions posed that formed the initial phases of the research. These questions can be seen as being of a *positivist* ontology (“*the world exists to be analyzed and that predictive, scientific laws can be developed*” (Ibid, p.42)), the research and the approach that I have taken has been quite different to that. While a *positivist* or *realist* ontology may shine through in a wish to create a model for how to plan holistic Climate Change Adaptation projects the approach that shines through in my research is that of a *interpretivist* (“*the world is open to multiple claims as to what is going on*” (Ibid, p.42)) and *constructivist* ontology (“*that any version of a local aspect of the world is a local accomplishment, including the ethnography itself*” (Ibid. p. 42)). These are in some sense opposites but are not to be judged as right or wrong, but rather objective differences in approaches. Understanding the differences in approaches and ontologies can help the reader understand why there are discrepancies between the initial research questions and the problem statement and subsequent research. Additionally, identifying this difference highlights the importance of communicating the findings back to the organization at a later point. If the findings are received through the understanding of a rigorous, *realist* thinking it may harm the usefulness of the results of this research. However, this is a consideration for a later time when the findings are to be handed over to the organization. While this thesis is intended for the academic reader, I will simply state the approach that I have chosen and not attempt to translate the findings into other ways of thinking.

04 Roles and positioning

This thesis is the product of the work and research I have conducted throughout my 9th and 10th semesters. As a student at the Master's degree program of Techno-Anthropology at Aalborg University (AAU), my primary goal has been to delve into the field in Lemvig and research Climate Change Adaptation in this area.

My involvement in this started in August 2018 when I started my student internship at Lemvig Vand & Spildevand, an internship that was the center of my 9th semester and which ended in December 2018. During the internship I was working with two fellow students and classmates, who were attending internship in Randers municipality and AquaGlobe, respectively. Together, we researched the collaboration within Coast to Coast Climate Challenge, that connected these three organizations, the results of which were documented in our semester report (Jessen, et al. 2018).

The 10th semester, focused on the Master's thesis, is where I changed the focus towards the public and the local community. However, I continued to work with (and often physically at) Lemvig Vand & Spildevand, as their close involvement to Klimatorium provided a unique opportunity and access to the field.

Throughout the time I have been involved in working in this field, my role within Lemvig Vand & Spildevand has changed from being an intern during the fall of 2018 and being a thesis student and part time student worker in the spring of 2019. This change has caused a need to explicitly talk about roles and mutual expectations, as this change was not naturally occurring but the result of necessity on my part, in order to be able to focus on the goals of my education.

The role that I have had throughout this project has been a double role. While I have mainly been a student and always focused on learning about all that concerns and affects Climate Change Adaptation in the area, I have also been a student worker at Lemvig Vand & Spildevand and therefore closely tied to both them and Klimatorium. This has largely been a benefit to the project as the institution and its employees have worked as gatekeepers to the field. It has also been the cause of many considerations that have shaped the project along the way (as was explained in the section *Data collection*).

Within ethnographic work there is a distinction of ethnography *of* or ethnography *for* an organization. “*The former relates to scholarly studies of an organization, the latter refers to research carried out for (on behalf of) an organization.*” (Neyland, 2008:9). Thus, while ethnography of an organization allows the researcher to investigate the organization itself, ethnography of an organization is focused on what an organization wishes for the researcher to investigate on their behalf. In the case of this report, the focus is not 100% on either of these two distinctions. However, it is important to mention that these two foci both have come into play during the shaping of the project and therefore its subsequent report.

Since Lemvig Vand & Spildevand are the primary beneficiary of Klimatorium, the work I have done to understand Klimatorium has by its nature included ethnography of the organization to understand its development. Furthermore, the planning of the thesis has been influenced by the previous semesters project and knowledge that I have gained from that process. The questions that are posed within this project and report are therefore mainly formed by that knowledge and by topics that have come up in discussions with employees of Lemvig Vand & Spildevand. The latter influence means that the project is also informed by questions that they would wish answered and is therefore also partially an ethnography *for* the organization.

While this research was inspired by and can hopefully be useful to Klimatorium, it is not in and of itself research *into* Klimatorium. Still, while discussing the direction of the project with the CEO of Klimatorium and possible interesting angles to approach Climate Change Adaptation in Lemvig it was posed that it would be interesting and helpful if this thesis could present a model for planning Climate Change Adaptation that would ensure a holistic approach. This must be seen in the light of coming from someone who is from an engineering background and this wish is therefore phrased in a manner that reflects an interest in seeing systematic or measurable outcomes and approaches to planning future Climate Change Adaptation projects. This, however, may not be possible. If the conclusion is that such a model would negate the purpose of a holistic approach by quantifying the unquantifiable, this would also be considered a finding of this research. This example is included to illustrate where the questions of this thesis come from and why they were asked.

Furthermore, the aspect of positioning is included to illustrate my role within the field. This role is not of someone who is a complete outside observer, but rather someone who is continuously

having ethnographic conversations and conducting participatory observations along the way. The research conducted is formed by this role and the involvement within the organization. I say this both as a disclaimer for possible biases that this involvement has formed as I I have taken great care not to let the research be biased, however, as I have taken an inductive and iterative approach to the process, the questions have, by nature, been influenced by the observations made here. This is not to be considered a failure in objectivity but rather, the long time spent within the field should be seen as a strength of this research. I believe that being a participating observer in the field for a combined 10 months has ensured a high level of validity and usability of the findings of this thesis.

05 Analysis

The topics that emerged from the interviews I conducted were many and they are entangled. However, I have made the choice to focus on two topics, which I will unfold in the following two analysis chapters.

The scaling of 'we'

In this initial chapter of the analysis, I will dive into the instances from my field work where members of the community place themselves in different collective formations by speaking of very different instances of 'we'. The different formations of 'we' or community point to a complexity behind the category of 'civil society'. By focusing on the language the interviewed informants use to describe themselves in various groupings and situate these in relation to nature and to climate change, I wish to understand how this social landscape is expressed in order to find an answer to who 'civil society' is and to lead to suggestions for Klimatorium as to how they may include these people in their climate change adaptation projects.

I drove from Lemvig to Thyborøn several times during my fieldwork, either for interviews or for observation. Driving from a small town with a bustling town center, placed in the middle of hills that open up to the harbor. Right there, where the lush, grassy hillsides spill over the edges and meet the dark blue bay below is this town full of traffic, shops, houses even a museum of religious art and, of course, people. As I left Lemvig, I drove up the winding road along the hillside that took me from the harbor, through the trees, under the railroad bridge and out to where the views opened up again, where I met the city limit and followed the signs to turn right towards Thyborøn. Passing open fields and small towns, a car mechanic and a pet shop, I soon turned again and headed further north. Fields of grains and canola as far as the eye could see, with the occasional church and a string of white wind turbines on the horizon, I was headed towards Harboøre isthmus. The GPS in my car showed how the land mass was narrowing, that the fjord on the right and the ocean on the left seemed to be closing in as I drove further. However, looking out the windshield of my car, my view on the left was now obscured by a dike, on top of which a set of train tracks were barely visible. As I came over another hill, the last one, the landscape opened up to reveal the view of the city below. There, on a completely flat area, surrounded by water, lay

Thyborøn. An even smaller city, with less traffic, less shops, less people. It somehow looked both windswept and robust, even then, on a sunny, spring day.

Driving past the ferry to Agger isthmus, on the other side of the channel, and further on into the town, turning right towards the harbor, I found myself driving on a street where the buildings' facades were filled with signs that referred to fishing. Signs saying "Trawler consulting", "Thyborøn's Boat builder" and "Thyborøn's Ships and carpentry services" testified to the history of the town where fishing is deeply ingrained into the community that reside within it.

(excerpt from my field notes, taken on April 2nd, 2019)



Looking at the world through the lens of an ethnographer, keen to observe and understand the surroundings from the people inhabiting the area's point of view, both weary of drawing conclusions and staying open towards new aspects that you haven't yet uncovered while also searching for patterns within the observations, I slowly came to understand that to portray what I had observed in the field, it was important to be able to portray the characteristics of the landscape as well as the people of this area. As it is visible from my field notes above, this landscape has been continuously shaped by people living here. The rail road bridge, the roads, the wind turbines, the cultivated fields, the dikes, the ferry and many more examples could be named as evidence and daily reminder that this landscape has formed how people live in it and people living in it have formed the landscape.

As I go in, I will unfold this further by using excerpts of my data, to which I would like to add an important observation of the linguistics. When describing the natural areas surrounding them, the informants (and I) will speak of 'the nature'. While this term does perhaps not accurately portray the meaning of what we are discussing, I am using it to stay true to the data which was translated from Danish. In Danish the singular of 'nature' is common and used if reference to what is in English perhaps best described as 'the landscape'.

When I designed my interview guide, I deliberately asked the informants to describe the characteristics of the landscape in the hope that I would learn of such characteristics through their eyes. What follows are excerpts from the interviews I conducted along with field notes which all revolve around the characteristics of the local area, the nature and the people.

“Q: What is special about the nature in this area?”

A: Well there is the sea and the fjord, so ... now, we live in Thyborøn which is on Harboøre isthmus and that's salt and sand and wind and things like that, but the couple of years that we lived here in Lemvig town it is like, it's not that far from the coast, but still it's a completely different nature here than in Thyborøn. When the kids were little, we would go to Klosterheden a lot, and it's not further away than ... but it's a completely different nature. It's a matter of - what do you call it? - diversity in the nature, you know?”

(Excerpt from interview with Phil, Thyborøn, May 6th 2019, translated from Danish)

“Q: What characterizes this area?”

A: Characterizes... Well, you are far to the west, it's very windy, very windy. I have lived in Copenhagen and in Aarhus for periods of time and it is very different there. Even though it's a small country, we can see that.”

(Excerpt from interview with Sam, Lemvig, April 15th 2019, translated from Danish)

“Q: What characterizes the area around here?”

A: Well, what characterizes it is our immediate proximity to coast and fjord, fishing. And tourism is a new thing in this area. Lemvig has always been a trading town, there have also been a lot of fishing boats in Lemvig. But it depends where you were born. If you ask a farmer, they would characterize it differently. I have been connected to fishing here all my life, I have been a beach guard in my younger days, I have been here all my life. I know how the sea can act. We took care of the beach and monitored if there was a breach in the dikes or a ship came to close to shore, things like that.”

(Excerpt from interview with Scott, Thyborøn, April 2nd 2019, translated from Danish.)

Scott's story of guarding the beaches when he was a young man, telling this when he is close to 70 years old, opens up a historic aspect of the area. I am invited to not only hear and see what the community and nature is like now but to understand what the relationship between the two has been in the past and how this shapes the character of this area and – especially – Scott's relation to this area.

“Q: Can you describe what defines this area of Lemvig and Thyborøn?”

A: It's a scenic area. Tourist city. Not enough business. That's one of the big challenges in Lemvig Municipality. And the young people move away from the city because you leave to study and then you almost never move back again. That's one of the big challenges in Lemvig Municipality.

Q: You mentioned that it's scenic. What characterizes the nature here?

A: Water. Forest. The sea. We have everything.

Q: What about the population? What is special about the population here?

A: They are stubborn people and you're not sick if you have pain somewhere, then you go to work instead of staying home like you would if you came from a place farther east. People are a bit proud to be from here. The population gets older here because the younger people move.”

(Excerpt from interview with Ben, Lemvig, April 5th 2019, translated from Danish)

While Ben speaks about the stubbornness of the people, he has a touch of pride in his voice and a hint of a smile on his face. He says it calmly and without boasting but I get the clear sense that it is a dignified attribute for the people to be as robust as the nature that surrounds them.

“Q: Can you describe what defines the citizens in this area?”

A: It is... a bit of a tough population, I would say.

...

Q: What is defining of the nature in this area?

A: It is the tough western wind. It is the environment we live in and the business we have. Now, I'm mostly talking about Thyborøn/Harboøre, they are fishing communities and there you learn to live ... it's from our great great grandmothers and great great grandfathers

and so on. I think it is something that we carried with us that we are used to the climate - in comparison to other places. You never hear about it if we have had a storm in Thyborøn, Harboøre or Lemvig Municipality in comparison to on Zealand (Sjælland). It's not something we talk loudly about but we adapt to the climate that is and we do a lot ourselves.

Q: Is that what defines the population's relationship with nature, that it is something that is integrated in them?

A: I think it is. It is something that is in us. We don't try to ... we would like to tame it, but it is very hard to tame. But we can adapt and that is what we do."

(Excerpts from interview with Carl, Thyborøn, April 3rd 2019, translated from Danish.)

"A: ... it's a lovely nature. I bike a lot. We walk. But we are not so good at utilizing the sea. I don't know why. Some people travel far to come here and spend a lot of money on summer cottages to be near the sea and we live so close, but it's not like we use it that much. It's mostly our daughter-in-laws that want to go there when they are here, to see it, to go for a walk.

Q: Do you think that is typical for people here, that they don't use the sea a lot?

A: Yes, I think so. Because when you grow up near it and don't necessarily go there and take a walk, you might as well do that elsewhere. It may also be connected to the amount of winds here too. Maybe people would rather go to the forest and walk there, I think it can be wonderful there, since there is a bit more shelter from the wind."

(Excerpt from interview with Sam, Lemvig, April 15th 2019, translated from Danish.)

"Q: Can you describe what defines this area?

A: Closeness. Close social network. I think we care about each other. And then I think we have a wonderful nature that we can use as we please, almost, and it does get used in many different ways, and there is room for that. There are not so many rules.

Q: How is it used?

A: It's used for hunting and fishing, if that's what you like. And then it's used for leisure activities, for example. I'm the leader of a scout's troop, we also use it a lot. And there's a possibility to ... I also gather mushrooms. So, there are plenty of possibilities to use nature, and we do. It's not just something that I do but the people I meet with, I can hear that they

do as well. Some of what we use surprisingly little, maybe, is the possibility to go to the water (sea) because it's always there. And then I also think it defines the area that you have to be passionate about something to get it through. Nothing comes on its own. You have to want it and there has to be some passionate people to drive it. And I think there are many passionate people.

...

Q: What is special and defining of the landscape around here?

A: It's very flat. Not Lemvig itself, but otherwise it's very flat. And its open stretches, the vegetation is more monotonous here than further inland, where things are more protected. What can grow here, grows here. And it's tough. Just the fact that you have to redo the facade of your house because the sea 'eats' it.

Q: How do you think the population view nature?

A: I would like to answer something else than I'm about to say now. I think that many people think that it is something that is unlimited. That it can't be used up. I think we are very tough on nature and that we think about what nature can give us. And not so much about what we can give back to nature. We use it and we also protect it in many ways because we are dependent on it, but not as much as we could. And, of course, I wish it was different."

(Excerpt from interview with Heather, Harboøre, April 2nd 2019, translated from Danish.)

What shines through these people's descriptions of the nature is that it varies in type throughout the area, but that it is an important character of this place. Nature here is both valued and not valued highly enough. It is something to be used and something to be protected. It nourishes the population with the likes of fish and mushrooms and it erodes the house facades and breaks through dikes. It is something to be protected from and something to adapt to.

The people are, like nature, are robust and stubborn, strong and passionate. Furthermore, what was becoming clear to be at this point was how important an understanding of the relationship between the people and nature could become in striving to understand how they may adapt to it changing. The excerpts show that adaptation is an activity that takes place over time and through generations of people and that that it is specific to the type of landscape you are in, which is here defined by western winds, the sea, the fjord, etc. Heather speaks of 'we' as all people or perhaps all local

people, in relation to how they treat nature. This further underlines the connection of people and nature but it also underlines that this relation is not simply sentimental or emotional, it is not just about appreciating nature. It is also physical and functional where each of the two can harm the other. The relation is special and developed through this slow adaptation.

Therefore, I decided to look further into this relation, starting by looking into who the people are.

As outlined in the initiating problem, my entrance into this topic came through the organizational structure of Klimatorium, namely their inclusion of *civil society* as a strand of their quadruple helix model, and my questions regarding what this means. First and foremost: who is civil society? While the term itself would indicate some implicit understandings that I am conscious about having influenced my selection of informants, this understanding does not suffice as an answer to the question. What does, however, become apparent by the differing terms used by Klimatorium, Lemvig Vand & Spildevand and Lemvig Municipality, in reference to a generalized notion of the local people, is that the answer to the question may vary depending on who is left to define it. Therefore, I will not search for an answer that is generalizable and that all would agree to as an unchangeable and static definition nor will I seek to define these people through views of those who don't identify as being one of them. I will analyze how the informants construct their reality and describe their social settings (which are also natural or shaped by nature) by exploring how people position themselves collectively.

In the following, I start by paying attention to how they people in Lemvig and Thyborøn talk about themselves as a part of an 'us' and 'we' - the instances of expressing situations where they are not solely individual.

"A: ...I think there are many passionate people here.

Q: Is that something that defines the population here especially?

A: I think it does. Because we are not used to be given things. I don't know if that's the case in more densely populated areas, but there they have more offers. We are used to fight for it, both to establish something and to keep it going."

(excerpt from interview with Heather, Harboøre, April 2nd 2019, translated from Danish)

Within this answer, Heather is defining the characteristics of a collective we. The characteristic being the very thing (although not the *only* thing) that they share in common, that defines a shared trait.

She is of course expressing this in response to my phrasing of the question in which I ask her to define the local population. However, the scope of what is local can also be up to interpretation. Is it the people living in Lemvig municipality that constitute a collective *we*?

“We can hardly make a garden here - is it the view that you want to prioritize or is it the garden? If we start to put up a hedge or large trees, first of all the neighbors would complain but we also think that it is a beautiful view.”

(excerpt from interview with Sam, Lemvig, April 15th 2019, translated from Danish)

In the instance of framing ‘we’ here, Sam is also talking of a local collective we, albeit a smaller one. This ‘we’ is presumably in reference to him and his wife, although it could be extended to those who live on his lane, with the same housing and weather conditions and view to be settled with the wish for what he may perceive as a more traditional approach to gardening.

“Q: Who would you say has responsibility for climate change?

A: Well, it’s the world’s population. It’s too easy just to say that it is the politicians, that they need to find a solution. It’s all of us. We have to be pulling together.”

(excerpt from interview with Phil, Thyborøn, May 6th 2019, translated from Danish)

In the final sentence of Phil’s answer there is also the appearance of this word: we. Here in reference to a global perspective. In reference to all of mankind. The construction of the collective through small words like we seem to bind us together and connect people by the things those within the we have in common and in spite of what they may not. The ‘we’ is ostensibly scalable in the widest possible sense: from two people to all of humankind.

What becomes clear is that the informant’s use of these collective terms is that they are not necessarily used to define their collective selves in specific determinations, i.e. “we are this”,

rather, they are used in framing both what we are, what we do, etc. in a manner that is highly contextual and where the definition of that the ‘we’ refers to in each case is often implicit.

In the book *Beyond Capital* by sociology professor, David Hakken (2016), sociologist and now associate professor at Aalborg University, Maurizio Teli and senior researcher of social practices at the University of Indiana, Barbara Andrews, describe the term social formation as follows:

“This term, which denotes the fundamental unit of sociality, has come into analytical use as an alternative to “society”. The term “society” carries the essentialist implication of being a social totality, and similar to the current notion of “nation”. Thus, to use “society” for the basic social unit is to presume that nations are normal and that social formations, unlike nations, are abnormal. “Social formation” is a broader term, applicable to both the vast (like the global political economy) to the small (like a network of friends). A society is thus one of many types of social formations.” (Hakken, et al, 2016:18).

This term and the definition given encompasses the findings seen by looking at the use of ‘we’ from the interviewed informant. It also includes the possibility of a multitude of social formations that seem to be prevalent within the way that the informants situate themselves in particular social (and natural) contexts. These social formations are situational, that is, the ‘we’ can shift according to different groups that the people are part of. This ‘we’ can stretch geographically, temporally, and in relation to particular landscapes, which in turn shape the formation. In paying close attention to how the informants define what ‘we’ are, the definition did in fact not seem to be explicit in most of the instances where this use of a collective term was utilized, as seen in the example below.

“Q: Do you worry about climate change?

Yes, I do, actually. I must admit. I can think “it will be fine in my time” but we have four kids and at some point, we will probably also have grandkids, so it continues. And I think it’s too easy to say “it will be alright if it takes 500 years for something to happen”, but there will be some consequences and that is worrying. What we see in our part of the world, I think we have a pretty good grip on it. For instance, something such as plastics in the

sea, there is a lot of pollution in the sea and plastics. We, as fishermen, bring back all waste, like old nets.”

(Excerpt from interview with Phil, Thyborøn, May 6th 2019, translated from Danish)

As the interview excerpt above shows, the ‘we’ or the social formations that the individual is a part of overlap, even within the answer to one question. The first two mentions of ‘we’ refers to him and his wife while the next ‘we’ refers to those who live in the same part of the world as him and, finally, the last mention of ‘we’ refers to a group of fishermen, united through a profession. The individual citizen is not confined to identifying themselves as a part of one social formation, but is consequently a part of a multitude of social formations at once.

There are three social formations at play at the same time, in one response. This is not to say that this is problematic. The social formations exist simultaneously and without conflict or threat to each other. However, it does underline the necessity of understanding the differing contexts of ‘we’ in order to distinguish between the social formations that are being referred to implicitly.

Up until this point the majority of the examples used in reference to the definitions of ‘we’, have been seen in the context of what is seen as shared within the collective. What we have in common. However, some constructions of ‘we’ seem to be easier to define by what we are not, than what we are. By defining the other, it speaks to the view of the ‘we’.

“Q: How is the relationship between citizens here and nature?

A: I think we are very good towards our nature. I think we are good at protecting it. Because we know that if we don’t take care of it then something is going to happen to it. Then it will just disappear.

Q: What do people do to take care of it?

A: Well, we have good paths in the forest to walk on and ... well that must be the Nature Agency that are good at taking care of that with shelters and forest playgrounds and so on. We are also good at taking care of it in the sense that we don’t just litter like you would if you were in Copenhagen where you would just throw things in the streets instead.”

(Excerpt from interview with Ben, Lemvig, April 5th 2019, translated from Danish).

In referring to the local citizens, a social formation which he is a part of, Ben separates their behavior from what he presumes is done in another part of the country. He doesn't seem to notice the sweeping generalization of the behaviors of others, as the statement makes a point about how he views his own social formation in contrast to this.

"A: Now, we have just traveled in Amsterdam, and you can see that people perhaps have a different approach, where people from the big cities, I think they have a different approach to nature because they live in a big city where that is yours and this is mine, where each person takes care of their own. I don't know if it's true but us from the country seem better at taking care of nature, but maybe not."

(Excerpt from interview with Phil, Thyborøn, May 6th 2019, translated from Danish)

In this quote, the social formation is not only defined by who is in it but also why who is not in it. Another formation, perhaps, who's defining, combining characteristics differ from those of your own social formation. Here, *people from the big cities* are set into opposition with *us from the country*.

Q: So, you are catching less garbage now?

A: We are catching less garbage now, yes. It's not a big change, but it seems to be less now. The small particles we can't see, of course, we don't get those in our nets. But then when you see in the news what is going on in India or Bangladesh then you think "wow, we are actually doing well in our part of the world", and then you can worry a bit if what we are doing - not only with garbage but wind energy and so on - is it not just a drop (in the sea)? Of course, we should do it, but if they don't follow suit in Asia or in South America, does it make sense then? Of course, it makes sense but there was to be a worldwide focus.

(Excerpt from interview with Phil, Thyborøn, May 6th 2019, translated from Danish)

Here, the 'we' refers to those in Denmark or perhaps those in the western world as seen in reference to those in India or Bangladesh. This puts the scaling of these groupings into a global perspective.

In the description of what we are is perhaps just as telling to say what we are not or how we are different from others. This differentiating of us versus them or the self versus the other has been a well-studied aspect of culture within the field of anthropology.

In her 1991 work *Writing Against Culture* American anthropologist, Lila Abu-Lughod, unfolds ‘othering’ through the separations made by positioning of the self and the other (L. Abu-Lughod, 1991). While this phenomenon has been problematic throughout the history of anthropology as the western, white man would typically research the indigenous, non-western other, which holds numerous racist implications of what is normal and what is strange, the active positioning of the anthropologist has also been used as a fundamental tool for ethnographic research as the keeping of a strangeness factor between the anthropologist and those being researched, has allowed the anthropologist, as a researcher, to restrict assumptions and keep questioning what is being observed with the aim to reach new understandings.

Associate professor of anthropology and linguistics at the University of Cape Town, Lesley Green, defines ‘othering’ in her 2012 article *Beyond South Africa’s ‘indigenous knowledge – science’ wars* as: “*framing groups of people as the opposite of the characteristics associated with groups to whom the speaker’s ‘self’ belongs*” (L. Green, 2012:3). While I use her definition of the term, my ethnographic data shows that the process of ‘othering’ constantly takes place in modern society and that it isn’t only something that exists between ethnic groups.

Furthermore, I argue that there is, in addition to othering, a prevalent phenomenon of *we’ing*. This is to be understood as the construction of a social formation by inclusion. While the informants are expressing their views on climate change, they are repeatedly using the word ‘we’ without offering explanations as to who this constitutes, but to which the differing meanings are implicit by the context in which the word is used.

“Q: The people out here, how is their relationship with nature?”

A: I think people have a good relationship with it because they work closely to it daily. Whether it is a fisherman or a farmer or even if you work within the towns, people have a good relationship with nature. They take care of it, I have no doubt about that. I don't know where you're from. Are you from Thy or?

Q(a): I live in Thy now but I come from Vejle.

A: So, you're a "jutlander"

Q(a): Yes, I am.

A: ...but people have a really good relationship with the nature. And..."

(Excerpt from interview with Phil, Thyborøn, May 6th 2019, translated from Danish)

Inclusion in a social formation may perhaps also extend to the ethnographer, as seen in the example above. While answering the question Phil seems to be looking for a shared frame of reference, which he seems to be satisfied with once he is assured that I know Jutland well, as he then continues his answer. The natural question to this would be to ask why he does this. By assuring that there is a social formation in which both informant and ethnographer is included, this is perhaps a way for the informant to test or strengthen the trust in this relation. Is it a matter of "if we are alike in this way, you are more likely to understand me and relate to me"?

Aside from begging the question of why he does this, this example shows that I, as the ethnographer in this situation, am in no way an invisible observer. I am a part of the field whether I mean to be or not. This is important to recognize as I am shaping the conversation with the questions that I ask as well as how I phrase them slightly differently at times. This shapes the answers. While I do not wish to steer the conversation towards specific answers thus skewing the findings, I do have an aim for the research that is always at the back of my mind when asking questions. This is not to say that my approach is wrong but that I acknowledge that I am also a part of social formations and in this case, I am a part of the 'we' that are having these conversations during the interviews.

Expanding upon the notion of social formation, Hakken (2016) also underlines the necessity of change.

"Social formations, no matter their type, must be reproduced (Hakken 1987). This is because what social formations share is the condition of being 'extra-somatic'. While they are carried by (human) life forms, they are not extended from one moment to the next by biology. Instead, social formations must be actively reproduced to persist. Although this reproduction might occasionally look like mere reproduction, to be perpetuated by something analogous to 'momentum', this is not the case. They must be extended, not merely replicated. Social formations typically face

reproducing themselves under conditions that have changed, both from when they originally came into existence and from the recent past. A social formation is at risk if it cannot extend its practices to cope with the changes.” (Hakken, et al. 2016:18).

What Hakken and his colleagues highlight here is the necessity for the social formations to change in accordance to the changes that surround them. This is true in the smaller social formations. The social formation of commercial fishermen must, as Phil describes it, change their fishing practices in accordance to changes around them. His grandfather’s generation of fishermen threw garbage into the sea thinking that it would disappear while Phil’s own generation is fishing the garbage out of the sea and bringing it inland. They now have an awareness of protecting nature by limiting the damage that we cause. This is, however, also true for the encompassing social formation of humankind that must change and adapt their practices to cope with the changes and persist.

So, how do we approach this change? This will be explored further in the following analysis chapter.

Inadvertently political

In this chapter of the analysis I will analyze the contexts in which change in human behavior is spoken during the interviews. I will start by unfolding the many facets political topics that the informants perceive to be a part of the topic of climate change. Then I will unfold how matters of will, trust and mistrust play into these political dimensions of climate change.

Even though my interests within studying climate change in the area of Lemvig and Thyborøn weren’t within political aspects of climate change and my interview guide has no hints of politically charged words, every interview I conducted contained politics within the answers. All informants ended up talking about political aspects of climate change - especially when talking about responsibility and how to find solutions to problems caused by climate change.

Early on in the interview process it was made clear to me that a political conversation quickly emerges when climate change and climate change adaptation is discussed. This first came up during the initiating questions of my first interview:

“Q: what characterizes the population here?”

A: that it doesn't pay to get involved. Or that they say they will take care of it, it's not something we need to solve. There are these two points of view. It's a special case that I get involved but it's because I want to know what they will do with all the toxic waste out there.

Q: So, there is a bit of a divide?

A: there is a divide. Think about the fact that 83% of people out here vote Venstre. There's also politics in this. You shouldn't be blind to that either. But 83% in Thyborøn. It's said that 'one does what one is told' here.”

(Excerpt from interview with Scott, Thyborøn, April 2nd 2019, translated from Danish)

In this excerpt of the first interview the political aspect that he is referring to is first vocalized by speaking of a general ‘them’ or ‘they’ as being other than ‘people out here’. It then becomes directly associated to traditional party politics that carry its own connotations. In this case there are implicit connotations of ‘people out here’ being conservative liberals followed by an explicit connotation of ‘one does what one is told here’. This says a lot about his experience of being one of few, if not feeling like the only one, who challenges politicians, while people around him follow authority. He tells me, or perhaps warns me, that there is politics in this, that I shouldn't be blind to. What does this mean? Is this a way of saying that solving problems related to climate change is not just about ideal ways in which you adapt to changing weather patterns, but is also about money and power? In this case he brings it up while answering questions regarding how he would describe the population, suggesting that political matters don't stay on the other side of a divided ‘us’ and ‘them’, the ‘them’ being politicians, but that it infiltrates the community and perhaps also is the cause of the divide within it that he describes.

His statement about politics being a part of discussing climate change turned out to ring true as the interviews went on, as the majority of the interviews resulted in answers that explicitly mentioned politics, politicians and legislation. This often happened as responses to questions regarding responsibility - both in relation to who has responsibility for climate change happening and for solving problems arising as a consequence of climate change.

“Q: Who has responsibility for climate change?”

A: Everyone has, in my opinion. You know, many small creeks make a big stream (Danish proverb). I think that our political system has a big responsibility! The cooperation between countries has a big responsibility to set some guidelines and some rules for what we want. Should we allow fossil fuels and so on, what about traffic? They need to make it possible, and then I am responsible for taking those into accordance and live by it. But I think that we all have a responsibility and we can all contribute and that’s what’s good about it. We are not just dependent on the politicians to do something. We can also do something ourselves - but of course it counts more when they do it. If they can do something internationally that will count for a lot more than whether I use a roll of plastic bags less than I usually do.”

(Excerpt from interview with Heather, Harboøre, April 2nd 2019, translated from Danish)

Here, Heather also speaks of politics but not in relation to traditional party politics. She speaks of a political system in general that can have a bigger influence on change than a single person. This general political system is perhaps a social formation of its own or perhaps there are a range of political social formations from municipal politics to national politics and even international politics. Here ‘politics’ being in reference to political systems. Heather calls for the international political system, a collective of national political systems, to legislate on the matters of fossil fuels and traffic in ways that are in accordance to the necessary changes that all people can make, not just to adapt to climate change but to mitigate climate change on a scale that will have a great impact.

Although politics came up in relation to responsibility several times, this political relevance was not framed in the same way each time. While some brought it up in reference to politicians having responsibility, some brought it up to make the exact opposite point: in relation to *not* putting all responsibility upon politicians.

“Q: Who would you say has responsibility for climate change?”

A: Well, it’s the world’s population. It’s too easy just to say that it is the politicians, that they need to find a solution. It’s all of us. We have to be pulling together. I believe I just

heard on the radio that there will be a report soon from the United Nations that due to climate changes many animal species won't exist in 50 years, then they will be gone. And that is a joint responsibility that we all have, humanity. So it's too easy to push the ball over the the politicians and say "you have to figure that one out" or governments, when they have those big climate ... what are they called... COP. It is a joint responsibility. But some areas of the world are very unstable politically so it may take a long time, it is of course a challenge to get them on board."

(Excerpt from interview with Phil, Thyborøn, May 6th 2019, translated from Danish)

Even though Phil recognizes the relevance of political involvement into mitigating climate change and solving problems that arise as consequences of climate change his answer also points towards responsibility not being an objective thing that one person or one social formation holds. It can be placed onto them by others. Here, he says that this is too easy, perhaps suggesting that placing responsibility on politicians is simultaneously an act of pushing responsibility away from oneself or from the collective 'all' of humankind.

Some informants seemed to pose both positions on whether responsibility should be placed on politicians or not, which underlines the complexity of responsibility. Note here that the answer is nuanced depending on whether the matter of responsibility is connected to who has responsibility for climate change and who has responsibility for solutions.

"Q: Who has responsibility for climate change?

A: We all do. It's both you and I and ... you can't say that it is people who decide in parliament that have to make sure that our climate change is managed it's something that we are all responsible for. You have to. You can't just say that it will be okay...

Q: So, you can't just leave it to decision makers to do something?

A: No, I don't think you can. Because it is everyone's responsibility to solve this. But how we solve it I don't know. Then I probably wouldn't just be sitting here."

[Later in interview]

"Q: Earlier we talked about who is responsible for climate changes, who is responsible for the solutions?

A: I don't really know. Some people have been set in place to decide that but if they are good enough at that I don't know. If I had the solution, I probably would have given it to them.

Q: Of course, but your first response is to think of politicians?

A: Yes, it is. I think it is their task along with some scientists that can say how."

(Excerpts from interview with Ben, Lemvig, April 5th 2019, translated from Danish)

While most answers to the questions of responsibility were centered around whether responsibility was collectively shared within all of humanity or should be placed on the shoulders of decision makers, one also brought divinity into the conversation as he believed that this was also a nuance to people's opinions on the topic.

"Q: In relation to climate change and the problems that follow. Who has responsibility to do something?

A: Well, politicians do, but in reality, we all do. But they set the agenda. They need to know the extent of the problem, so they have time to react. It can be discussed if we think they do that but there are also those who think that climate change was caused by the Lord and that He should be left to take care of this. There are a lot of differing opinions on this.

Q: What is your opinion?

A: Mine is that we shouldn't panic but we have to act on the knowledge that we have. We have to relate to that."

(Excerpt from interview with Scott, Thyborøn, April 2nd 2019, translated from Danish)

While it is clear that there are various ways in which the informants use and view, the matter of politics it becomes clear that all the political aspects used here are relevant to understanding how they view a course of action moving forward. After having established an understanding of what climate change is and that it causes problematic consequences of these changes, the matters of 'doing something', of taking responsibility for cause and solutions, is the next logical step in the conversation.

However, there is a need to define what is meant by ‘political’. As shown, there are a variety of political aspects within these interviews, each of them with a different meaning but in order to discuss the matter further in this thesis I wish to state two things. Firstly, when referring to the political from here on out, I am speaking of public affairs in a governance system where elected officials have the power to decide, whether it be on a municipal, national or international level. Secondly, this definition does not extend to instances where the informants use the term, as their individual uses of the term may have other meanings and contexts. However, there is also a need for a term that encompasses these ‘political aspects’ of climate change. For this I will use Gerard de Vries’ definition of the term ‘sub-politics’ as being “*politics outside the established state-related institutions*” (de Vries, 2007:787).

Sub-politics continuously appeared during the interviews in relation to questions of responsibility and the answers that were related to finding solutions to problems following as effects or consequences of climate change.

“Q: I heard that they got a new hybrid ferry in Thyborøn to sail between Thyborøn and Agger. Are there also hybrid options in fishing vessels?”

A: Some vessels, yes. But it’s not so common yet. I think it’s because of the price. Fishermen are very flexible and there is always new thinking within fishing but it is always easier to say “let the neighbor try it first. If it works for him, we’ll jump aboard”. So, in that sense we are perhaps still too conservative. And that is perhaps where some governmental involvement is needed. Saying that you can get grants for electric or hybrid options and if you buy a diesel engine you don’t get a grant, but if you buy a hybrid one you do. Maybe that’s the direction we have to move in to do something.

Q: So, there is also a need for some sort of political play here?

A: Definitely, definitely. Yes. That has to be there too.”

(Excerpt from interview with Phil, Thyborøn, May 6th 2019, translated from Danish)

The perception of possible solutions and politics are here connected through legislation, grants and the setting of political guidelines for the public and for industries to adhere to were continuously mentioned as ways to mitigate climate change and brought up as solutions to climate change

related problems through political measures that can change public attitudes towards climate change, influence their behavior and the choices made by the public.

“A: ...And I also think that municipalities and government should set some guidelines that can move things a bit but that are also easy to follow. You shouldn’t make it too big so that people think “oh no, I can’t do that”, but starting with little things.

...

For instance, my New Year’s resolution this year was that I want to use less plastics this year. And that’s really something that I’m trying to follow - and if it’s small things like that... and then we need the politicians to do the big things. And to set the guidelines for us. It’s hard as a single person to move things significantly. We can raise awareness about what we want and we can protest but it is the big (political) agreements that really count. ... And when something comes up that is really a benefit for the environment, that’s when the parliament comes into the picture, they can make it profitable if they want, that’s something that they decide, with taxes (afgifter) or no taxes.

Q: So, besides there being a need for attitudes to change within the public, this is also very political?

A: It is. I think it is. It’s also infectious. If we can see that climate is talked about and actions are taken, if there are guidelines set out, then I think... I mean I also want to be good towards the climate, but I’m sure that I must do things that are bad for the climate without knowing it. Where do my clothes come from? Is it better if I buy clothes here instead of there? - and so on. So, we need some guidance from someone who has control over that and have an overview. When we can see that others act, then we will also want to act. We should strive to make it a good trend to protect the climate. And we can do that! ...

...

And if you have the will then it is possible to prohibit something from one day to the other, then there is always someone who gets caught in the middle but it can... I mean it’s a matter of will to move something. And that will is not always there. It is, after all, within the political system that the big changes must happen, some changes are dependent on agriculture some are dependent on another, third or fourth thing.

(Excerpt from interview with Heather, Harboøre, April 2nd 2019, translated from Danish)

When Heather speaks of solutions to climate change, she refers to efforts or changes that can be made to mitigate the damaging effects humans have on the climate, such as carbon emissions, consumption of plastics, etc. She divides solutions into what individuals can do and what must be done by political systems. In this case, this is not a matter of distancing oneself from responsibility by placing it onto politicians but it does, however, seem to be her answer to solving these problems when it feels hopeless to only act as one individual. *“It’s hard as a single person to move things significantly.”* So, while she doesn’t place responsibility on politicians due to a want to separate herself from it, it is perhaps to share the weight of this responsibility with those who have political power to make bigger changes.

Asking for guidelines is perhaps another way of expressing what Scott said in the first interview: *‘one does what one is told here’*. However, this is not in opposition to challenging politicians. The lack of directions does not mean that she does nothing. She set a new year’s resolution to consume less plastics out of her own will and concern for the climate. It is an invitation for politicians to guide her actions in a direction which can benefit the climate moving forward. She is placing trust in the political system to guide her actions towards what is right to do. As Gerard de Vries phrases it: *“We discuss - or choose representatives to discuss - these aims to find a consensus or a majority view that guides a common course of action.”* (de Vries, 2007:789). This is exactly what Heather is relying on: that the chosen representatives will guide a common course of action that will matter more than her single-handed attempts to lessen her negative impact on the environment. This further highlights the relevance of discussing political aspects of climate change: if one does what one is told, it is of the utmost importance that what you are told is true and if in your best interest (also in a long-term sense).

Not all informants share her sense of trust in the political system and are not speaking of sub-politics in contexts of hope. Some spoke of it with a pronounced sense of skepticism, even talking of politicians as people who keep many hidden agendas from the public.

During my first interview, Scott slowed down his pace slightly, leaned in over the table and told me the following:

“But let me tell you something. This is nothing new. I received a phone call about 4 or 5 years ago from someone I know in Copenhagen. That there was some discussions about climate adaptation. He called me and said that we were pretty vulnerable here in Thyborøn, He told me to sit down, that he had something to tell me. [Informant is interrupted by phone call]

[second recording file] Where were we? He said that I should know that he had seen documents from a commission on future (framtidskommissionen). They were of course sworn to secrecy but now I’m telling you because you don’t know who he is. But he said that Harboøre isthmus was abandoned. They had assessed the lowest areas and seen that it didn’t pay to save them so you just need them to ‘float’ for a while. I asked where he had that from, I have to have some documentation before I can say this anywhere. But he said that I couldn’t get that because it was so secret. But he could see the sense in it, and I can too, it could ruin the country to save it (the isthmus). I can see it now, I couldn’t then, but now I can see the sense in this. We have the information but we don’t have any documentation.

Q: So, this means that there is an awareness that there is a limit to how far you can go to save an area and when you have to surrender to nature, that it is us that have to adapt?

A: It will be us. Nature doesn’t do it. It’s hard to receive that information but it gives a realistic perspective in this that it is very serious.

Q: Do you think there are a lot of politics involved in not wanting to say this out loud, because it would be unpopular?

A: Think about if they said that Thyborøn should be cleared in 100 years, then no-one would want to invest here. “

(Excerpt from interview with Scott, Thyborøn, April 2nd 2019, translated from Danish)

He told me this anecdote in a lowered voice as if he was confiding a secret. Conveying that he and his friend have uncovered something that they weren’t meant to know. While the story goes on it turns out that he doesn’t disagree with the political decision made. Nor is he lacking understanding of why this would be best kept out of public discussion. But the story itself still seems to serve as an example of why the political system must be approached with apprehension and skepticism. That it is not something to trust without question.

What becomes clear when approaching the sub-politics of climate change is that it is not solely a discussion of what is feasible for a governing institution to enforce throughout society but is something that is limited by more than probability.

“Q: Is perhaps a limit to how preventative we can be?

A: Not that you can be but that you are willing to be.”

(Excerpt from interview with Heather, Harboøre, April 2nd 2019, translated from Danish)

The subject turns to political will and political agenda.

While there can be political ability to enable solutions to problems relation to climate change it was also abundantly clear that it was perceived that politicians are choosing to do less than is possible.

“Q: What is being done?

A: Nothing. They watch, register and write down so that other countries can use this, the information. What issues come first, is it that the sewer can't get rid of it's water or what?

Q: So, mostly you experience that Thyborøn is being observed as a form of living experiment?

A: Yes.

Q: And that it is not necessarily for Thyborøn's sake?

A: Nothing is being done for Thyborøn. Nothing. The company that was up there (during a town meeting in 2016) was even so bold as to ask if we had any ideas for paddling pools in the streets in the future then to come with them. You don't have to be very intelligent to figure out what she means by that. I think she did it of a good heart, but I don't think she realized that she was asking us to deal with the town's death sentence. So, if the predictions hold, then something will happen in the future, and we can't do anything about that for Harboøre isthmus.”

(Excerpt from interview with Scott, Thyborøn April 2nd 2019, translated from Danish)

“A: ...And in regards to the politicians, I think they are also very focused on if it is financially profitable. I think there is a tendency that one is more willing to invest in climate

but not at any price and that is because we are not pressured enough yet. At some point in time we will be willing to invest at any price because we will have to but right now we are not willing to. And politicians aren't either."

(Excerpt from interview with Heather, Harboøre, April 2nd 2019, translated from Danish)

In these examples there is again a focus on political will, which was not only discussed by the informants to be of matters on a municipal level, but a global concern.

"A: (Pause) And there is a long haul to change attitudes out in the world. As long as Trump, for instance, doesn't think that there is such a thing as climate change then it is hard to reach such a large population that are heavy consumers of everything that mess up the environment, it is hard to get such a population on board. So, there is a need for role models - there is a need for someone to lead and say "look at what we can do together. And if we do this and that and invest here, then we will get this gain". That has to be someone that we look up to. That can't just be some environmental activist, it has to be politicians, those who we normally have trust in and lean on. They can really move things in the big picture.

...

Q: When we talk about the likes of Trump, we are talking about the global, political top. What about the local, political top in Lemvig - what can be done here that is not already being done?

A: (long pause) I really want to come up with something that makes a difference, but that's hard (laughs). Locally? Locally, we can make adjustments to reduce our water consumptions drastically. Locally, we can regulate recycling. Locally, we can decide that it is illegal to use pesticides in our gardens. We can prohibit wood burning stoves - we can do things like that in our municipality as a small thing. We can put more money into public transportation and there we really have room for improvement in our municipality because we all want at least one car maybe two cars per household and our excuse is that we live where we do (remotely) and we want our freedom, and we could really do something here."

(Excerpt from interview with Heather, Harboøre, April 2nd 2019, translated from Danish)

When discussing climate change by bringing in sub-political subjects it is necessary to take a look at what connections emerge from the division. The distancing of the self or the 'we' from a political other. When these sub-political aspects are mentioned, what does it stand in stead of? Is it a matter of politicians taking responsibility instead of 'me'? People and politicians do not stand in contrast to each other as politicians are also people living in the community and people who aren't politicians are also responsible for electing them. To open it up even further, politicians and people do not exist in a binary reality. There are more stakeholders that could be included in the conversation in stead of politicians. What about the private sector? There has been no critical mention in any of the interviews of companies that should perhaps take a greater responsibility for practices that cause damage to the climate.

So why is it so relevant to talk about political aspects of climate change? My empirical data shows that the matters are connected through trust and mistrust. There is on one hand a great sense of trust that the answers to how humankind can and must adapt to changes in the climate and adapt their behavior as to mitigate climate change lie in the realm of these political aspects. There is, at the same time, a prevalent mistrust in the political system and in whether politicians have the political will to take the necessary steps to ensure that this happens. Therefore, the discussion of sub-politics in relation to climate change are connected to the notion that humankind must change their behaviors and practices to persist in the face of climate change. In other words, there is an awareness of Social Formation Reproduction. While the people of Lemvig and Thyborøn do not (of course) use this academic term, they know that changes are needed within the large scale of social formations and they perceive that there is an essential political connection to making these changes. In this way, even if they have a mistrust in whether specific politicians have the will to do so, they do trust that the political system is the answer to how this change must be implemented and accomplished.

06 What does all this mean in relation to Klimatorium?

After having conducted my research and analyzed my empirical data, I now wish to bring the findings of this work back to the context of Klimatorium and discuss how knowledge may be used to involve the fourth strand of the quadruple helix in the aim to develop a holistic approach to climate change adaptation.

Firstly, I would, on the basis of my findings, recommend that Klimatorium nuance their understanding of the people living in Lemvig municipality and cease to name them as ‘civil society’. In viewing them as a singular social formation that is unchanging and only seen in a current temporal context will cause a severely lacking understanding of the people of Lemvig municipality. The understanding of the influences of time, geography and the particular landscape that surrounds the social formations will allow for a better understanding for how the people view climate change and how to engage with them on the topic.

Secondly, understanding how Social Formation Reproduction is essential for the perseverance of the people can help to broaden Klimatorium’s understanding of Climate Change Adaptation to not only include academic, practical and technical knowledge but also the knowledge of the social formations in order to create a holistic approach to Climate Change Adaptation.

Thirdly, based on the established premise that the matter of climate change is inherently also political, Klimatorium should incorporate this into their involvement of the people of Lemvig municipality. Klimatorium has political involvement within the organization already, in that the primary beneficiary is a municipally owned utility company and the secondary beneficiary is Lemvig municipality itself. Therefore, politics is not far from Klimatorium in the traditional sense. However, it would be pertinent for Klimatorium to see the sub-politics that are a part of the climate change conversation in order to expand on their approach to Climate change Adaptation in a manner that moves closer to the people of Lemvig and Thyborøn’s understanding of the topic.

I would, finally, suggest that Klimatorium use their existing plans for exhibitions in conjuncture with these three premises to form thematic exhibitions based on topics that emerge from various social formations that the people of Lemvig and Thyborøn are a part of. These exhibitions should also be informed, explained and showcased through the knowledge provided by the other three strands of the quadruple helix. These exhibitions could be based on subjects such as: the migration

of fish populations, plastics in the sea (both locally and globally), and action to mitigate – what can people do to changes practices in their daily lives that will cause a lesser carbon footprint? The possibilities are many but must speak to all of the four strands as well as come from all of them.

I would like to state one final reminder for the inclusion of the fourth strand in the quadruple helix. It is important to remember that this strand should be viewed as a source of knowledge and not the recipient of one-way information. The knowledge that lies within the memories of the people paint a broad and colorful picture of the landscape, the history and the experiences of how the people have lived in and of the nature for generations. The aim to create holistic Climate Change Adaptation will fail if this knowledge is not also incorporated into the Klimatorium. I would suggest that Klimatorium, among other things, plan workshops, interviews and similar activities in order to establish a genuine collaboration with the people in the community moving forward.

07 Conclusion

Through the analysis I have shown that the people of Lemvig and Thyborøn place themselves collectively in social formations by “we’ing”, that can stretch geographically, temporally, and in relation to particular landscapes, which shape them. Each person is a part of a multitude of changing social formations that are imperative to the understanding of who these people are in a collective sense and how they relate to the landscape and the nature that surrounds them. Secondly, it is also a finding of this research that people in Lemvig and Thyborøn perceive many sub-political aspects to be an inherent part of the conversation of climate change. The social formations must be reproduced in order to persevere in the face of change and this change is entrusted to be influenced by political involvement in the change of practices both on a local and a global scale.

08 Reflections

In finishing of this thesis, I will end with reflections from my own perspective. After all the perspective that I gained from my internship and the reflections that I had along the way are what shaped the focus of this thesis, so it is fitting to end it in the same manner and thus frame the thesis.

Along the process of planning, executing and writing this thesis I have thought many times of my own influence on the project, from staying as true as possible to the data while still writing the ethnography from my experiences to contemplating what 'we's I am a part of. I live near the northern west coast of Denmark, an hour's drive from Lemvig and a 20-minute drive and a 10-minute ferry trip from Thyborøn. In many ways this has led me to feel a great deal of connection to the stories that the informants told of the landscape and the people who live there.

In addition to this I have worked with Klimatorium for several months now. These two factors have led me to have an understanding and a curiosity of both the nature, the people and this organization. Combining this with my soon-to-be completed master's degree in Techno-Anthropology which taught me to apply ethnographic research to the technical and to aim to build bridges between these banks I have felt it very natural (although not necessarily easy) to work in the interim between these two particular 'banks' and attempt to bridge them. I see this thesis as a valuable contribution to this goal and hope to continue to work to realize the changes that I have underlined as needed and the recommendations that I have extended to Klimatorium.

I learned a lot through this process, in fact I learned valuable lessons about all the steps of the process. However, what I learned the much from was listening to the people that I interviewed. Both during the interviews and in later listening to the audio recordings, I learned how much you can discover by asking questions. It sounds mundane, but it is anything but that. Since I felt that I had an understanding of what stories there were to be found in this community and I knew the general aim of my thesis, I went digging for those stories. I was still very much aware of keeping to correct methodological approaches and asking open ended questions, but I assumed that I would know what the answers would be. This was often proven not to be the case and I learned just how important it is to do ethnographic work, keep the strangeness factor in mind and ask questions.

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Appendix:

Interviewguide: befolkningens oplevelser af klimaforandringer i Lemvig/Thyborøn

Identitet

Hvor længe har du boet i Lemvig kommune?

Kan du sætte nogle ord på, hvad der kendetegner området her i Lemvig kommune og omkring Thyborøn?

Hvad er kendetegnende for befolkningens her? (fælles identitet)

Hvad kendetegner landskabet her?

Og hvad kendetegner forholdet mellem mennesker og natur?

Klimaforandringer

Hvad er klimaforandring, for dig at se?

hvordan får du informationer og viden om klimaforandring?

Mærker du konsekvenser af klimaforandringer? (Hvilke? Påvirker det personligt eller samfund?)

Hvilke problemer medfølger ifm. disse konsekvenser, og for hvem?

Bekymrer du dig over klimaforandringer? (Hvad bekymrer dig, hvorfor, hvorfor ikke?)

Hvem har ansvar?

Løsninger

Hvad bliver der gjort, for at løse problematikkerne?

Hvordan forestiller du dig at problematikker, som følge af klimaforandringer, kan løses?

Hvad forestiller du dig at man kan gøre teknologisk, for at forhindre ødelæggelser relateret til klima?

Som du ser det, hvilke handlinger er der størst behov for lige nu?

Hvem har ansvar for at der bliver gjort noget?

Andet

Hvem bør jeg ellers tale med i lokalsamfundet?

Må jeg kontakte dig igen, hvis der er opfølgende spørgsmål eller behov for et opfølgende interview senere i projektet?