Living well within limits

**Exploring the potential to arrange
consumption corridors in Denmark**

Aalborg University - Department of Planning
Environmental Management and Sustainability Science

4th semester
Master's thesis

Project title
Living well within limits – exploring the potential
to arrange consumption corridors in Denmark

Author
Caroline Bøggild

Supervisor
Sara Bjørn Aaen

Completion date
June 2, 2023

Number of pages
57

Contact
cbaggi18@student.aau.dk

Preface

This thesis is written as a part of the 4th semester of the master; Environmental Management and Sustainability Science at Aalborg University, from February to June 2023.

This thesis revolves around the concept of consumption corridors to explore the potential to arrange minimum and maximum limits on consumption in Denmark. The interest of this topic originated from a curiosity to explore the concept as a new powerful planning tool for responsibly pursuing 'the good life' in a world of ecological and social limits. What makes the concept fascinating is that it can help to create a thriving world to meet needs for all individuals, now and in the future. This might sound utopic in a capitalistic society, but too often an emphasis is positioned on negative impacts and prevention of harm. The concept of consumption corridors takes another perspective by pointing attention to reflection and action towards enhancing all individuals' chances to live a good life.

I would like to thank all the respondents who took part in answering the questionnaire and participated in interviews. I would also like to give sincere appreciation to my supervisor for constructive input, motivation, and inspiration.

Abstract

This thesis examines the topic of living well within limits by investigating; what is the potential to arrange consumption corridors in Denmark?. The concept of consumption corridors offers a need-based rationality as a new paradigm for sustainability to combat unsustainable consumption behavior. A questionnaire was conducted with a sample size of 156 respondents to investigate the state of acceptance towards the concept. In addition, interviews and observations were conducted with focus on evaluations from two citizens' assemblies. A conceptual framework was developed to help structure the analysis and operationalize the concept of consumption corridors. Besides the concept of consumption corridor, the conceptual framework consists of theoretical perspectives on fundamental human needs and citizens' assemblies. The analysis showed that there is a willingness to change consumption behavior. However, discomfort from the respondents were indicated, which stress the importance of allocating resources to increase public information to articulate that corridors are not equal to a lower standard of living but that a good life can be lived within limits. The context of this thesis was in relation to meat as a consumption domain, where the respondents were asked what has caused them to reduce their meat consumption among other. The results showed that been inspired by others and dialogue/sharing experiences with others (e.g. colleague, friend or family member) has influenced the most. Based on the results, it was indicated that citizens' assemblies provide a potential arena to deliberate about the concept of consumption corridors. Observations from Aarhus citizens' assembly and evaluations from the climate citizens' assemblies showed that the deliberative formal arena also is being transformed into informal deliberative arenas at home and at work. A new language about 'living well within limits' could take place allover society, from the kitchen table, in associations, at work, in cultures – between people. All individuals within society could engage in personal self-transformation directed at what it feels like to 'live well within limits. Identifying a fair consumption space seems utopic in our capitalist society. It would require a complete deconstruction, which when reflecting on how many diverging lifestyles there exist in today's society would be challenging. However, there are also similarities uniting human beings given the fact that we all share the same fundamental needs, which should be the core agreement within society to construct social cohesion among us. Recommendations was constructed considering the design of deliberative arenas to create acceptance towards the concept of consumption corridors. In conclusion, there is a window of opportunity to begin deliberation on creating a fair consumption space through deliberative arenas.

Table of contents

Introduction 1

Over the last decade, greenhouse gas emissions have been at the highest levels in human history (IPCC, 2022). Furthermore humanity's demand for ecological resources and services each year exceeds what the Earth can regenerate (Earth Overshoot Day, n.d (a)). In 2022, the 28th of July marked the date of Earth Overshoot Day, meaning that in order to reach humanity's demands in 2022 we need 1,75 Earths. For the remaining year, humanity is operating in overshoot, and each day are draining resource stocks and emitting unsustainable amounts of carbon dioxide in the atmosphere (Global Footprint Network, n.d; Earth Overshoot Day, n.d (b)). Figure 1 illustrates Country Overshoot Days in 2023, which is the date on which Earth Overshoot Day would fall if all of humanity consumed like the citizens in that country (Earth Overshoot Day, n.d (c)).
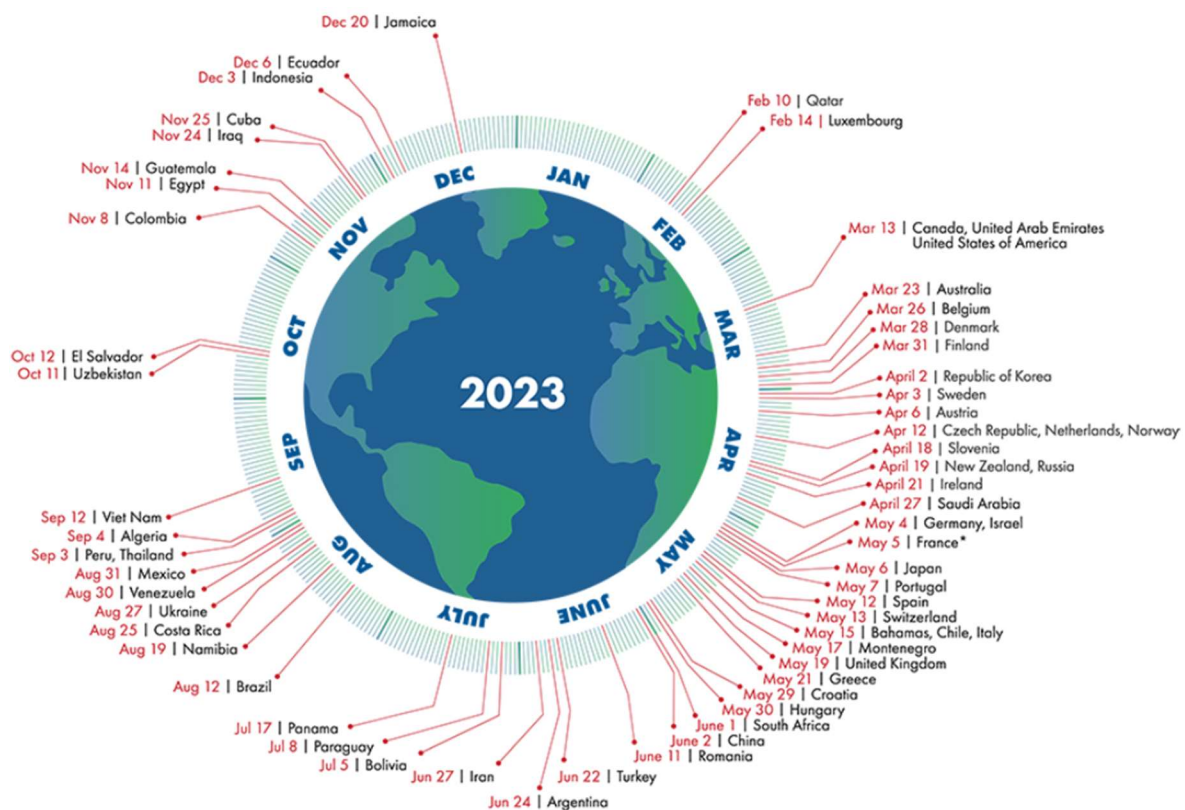

Figure 1: Country Overshoot Days in 2023 (Earth Overshoot Day, n.d (c)).

The calculations are based on the ecological footprint of each country divided by the global biocapacity multiplied by 365 days (Earth Overshoot Day, n.d (b)). Combining the ecological footprint with biocapacity it allows assessing how (un)sustainable the economy is. If all people consumed like Danish citizens, it would require around 4 Earths to cover the consumption demand, because already at the end of March 2022, Denmark had used up its share of the yearly resources (Earth Overshoot Day, n.d (c)). When the global biocapacity is affected by climate change, it alters the functions of ecological systems, where the provision of ecosystem services is being modified. As a consequence, food, water, energy, and other goods as well as cultural identity and resilience will be affected (Nelson et al., 2013). Since humans' very existence is dependent on nature, efforts to combat climate change are needed to ensure sustainable consumption. The definition of sustainable consumption was proposed at the Oslo Symposium on Sustainable Consumption in 1994 as: *"the use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of further generations"* (Ari and Yikmaz, 2019). Households' consumption behavior is estimated to be responsible for 72% of the global greenhouse gas emissions (Hertwich and Peters, 2009). The high per capita material footprint is challenging because of unsustainable amounts of carbon dioxide emitted into the atmosphere. Environmental policy and business strategies have: *"gradually shifted their focus from pollution prevention and cleaner production, through lifecycle-based efficiency, to the systematic change of socio-technical systems"* (Hotta et al., 2021, p.3). Table 1 illustrates three phases of sustainable consumption and production policy discourse and domain (SCP 1.0, SCP 2.0, SCP 3.0), developed by Hotta et al. (2021).

Approaches	SCP 1.0	SCP 2.0	SCP 3.0
Major concepts	Pollution prevention Cleaner Production (as an intermediate between SCP 1.0 and 2.0)	Industrial ecology Resource efficiency Product lifecycles	One planet living, Sufficiency, Decarbonization Transition
Key issues	Industrial pollution	Climate change, waste, environmental issues associated with consumption	Well-being, Life-style Socio-technical system
Environment-economy relationship	Separate, contradictory, confrontational	Compatible, industrialization harmonized with environmental conservation	Inclusion of social consideration, Sustainability as a key for next socio-technical innovation
Approaches	Installation of end of pipe technologies Technology and management for cleaner production	Increasing material and energy efficiency	Consensus building Changes in infrastructure Changes in lifestyles New business models
Major actors and stakeholders	Government vs. industry	Collaboration of government and market agents	Social entrepreneurship Multi-stakeholder Lifestyles of people
Attitude of policies	React and cure	Anticipate and prevent	Long-term goal setting, investment, creating business environment, creation and communication

Table 1: Three phases of sustainable consumption and production (SCP) (Hotta et al., 2021).

Hotta et al. (2021) argues that we are now observing a significant expansion in the SCP 3.0 policy domain, compared to SCP 1.0 and SCP 2.0 policy domain. In the light of limitations of efficiency improvement in products and services to solve the climate crisis alone, there is a rising recognition of the need to construct socio-technical systems that enable or limit consumption behaviour. It is emphasized by Dubois et al. (2019) that the international climate policy debate has targeted technology innovation and economic initiatives and relegated behavioral change. Changes to lifestyles and behaviour have for the first time been highlighted by the Intergovernmental Panel on Climate Change (IPPC), to have large potential in reducing greenhouse gas emissions as well as leading to improved wellbeing (IPPC, 2022). Climate policy efforts in Denmark have so far mainly focused on technology and the market and climate taxes as a tool to influence how citizens and businesses act (Madsen and Jensen, 2022). However, with the hope that each Dane will reduce their consumption, effects of the efforts are still waiting – Danes still generally find it difficult to cut back on consuming goods (Madsen and Jensen, 2022). In order to change consumption patterns, it is emphasised by Hansen and Nielsen (2023) and Fuchs et al. (2021) that a one-sided focus on individuals should be avoided – instead it is needs and wellbeing at a collective level, which will be further clarified in the next section.

1.1 Thresholds and sustainable consumption

In the recent decade, there has been a growing research area suggesting that a social boundary is required for sustainability transformations (Di Giulio and Fuchs, 2014; Brand et al., 2021; Pirgmaier, 2020; Sahakia et al., 2021; Fuchs et al., 2021). Concepts such as "a safe operating space for humanity" by Rockstrom et al. (2009), "doughnut economy" by Raworth (2017) and "consumption corridors" by Di Giulio and Fuchs (2014) (Brand et al., 2021). These related concepts bring attention to thresholds to help prevent human activities from causing unacceptable environmental change. Social-ecological transformations to remain in a safe space require considering the: *"dynamics and variability of the capitalist mode of production, re-production, and living, as well as its social power relations and social inequalities within and across societies"* (Brand et al., 2021, p.274). Capitalism is according to Pirgmaier (2020) a mode of production and profit in which people are structurally minded with regard the exploitation of each other. Acting in own interest, at the expense of other individuals can cause overconsumption and depletion of resources. This dilemma is known as *Tragedy of the Commons*. The types of resources that are most vulnerable to the Tragedy of the Commons are *Common Pool Resources (CPR).* This type of resource is non-excludable and subtractable, meaning that CPRs is open for everyone to use and that the use of the resource by one person decreases the ability of another person to use it (Telemo, 2015). As the Earth's atmosphere is a common, shared resource, Tragedy of the Commons describes the difficult task of tackling climate change (O'Gorman, 2010). As a result when people are thinking logically, but not collectively, harmful effects of their consumption are spread across society. A solution is according to Brand et al. (2021) to collectively define thresholds not to trespass. However, it is emphasized that; *"there is no guarantee that societies would democratically decide a path toward self-limitation not that this can be achieved via consensus formation (…) as long as we limit ourselves collectively and make space for others to share the resources it has to offer in a responsible way among current living and future generations"* (Brand et al., 2021, p.275). Limits to growth is a central element in ecological economy, where the: *"economy is seen as a metabolic organism that develops within the limits of the biosphere"* (Urhammer and Røpke,

2017). It is argued by ecological economist that humans now live in a "full world", meaning there is an ethical call for redistribution of resources for future generations as well as disadvantaged in the present (Urhammer and Røpke 2017). The main questions lie within how consumption could be reduced while preserving human well-being in order to live well within the limits of our planet. Achieving the aspirational goal of living well within limits is implied by the concept of consumption corridors (Pirgmaier, 2020), which differs from other social-ecological concepts by having focus on human needs instead of emissions or resources as the rationality (Brand et al, 2021). Consumption corridors is an open discussion about limits towards exploring; *"what are minimal limits that are necessary for people to be able to live a good life and what are the maxima that should not be trespassed by individuals to make that possible"* (Sahakia et al., 2021, p. 308). By addressing limits, consumption corridors combine ecological thresholds with human well-being. While well-being in the context of capitalism is characterized as 'the more the better', well-being in the context of social-ecological transformations is instead about sufficiency and equity (Fuchs et al., 2021). The concept of consumption corridors does not imply that everyone will consume or should consume the same quantity and quality of resources. It is emphasised by Fuchs et al. (2021) that corridors must be envisioned and developed by means of democratic debate where varied groups must be present, representing differing fields of interest. The goal is ultimately to address need satisfaction. An example of meeting needs and defining consumption corridors has been made by Kanerva (2022) in the context of the current meat system. Meat is defined as a satisfier, however it is not the only satisfier in relation to nutritional needs, such as protein. It is emphasised that *"when consumers view a meat consumption corridor as a continuum of different meat-ways, the dichotomy of meat versus no-meat may diminish, allowing for various socially accepted choices for meat consumption"* (Kanerva, 2022, p.637). Therefore, consumption corridors can preserve some degree of consumer sovereignty in polarized policy areas (Kanerva, 2022). Other examples of integrating consumption corridors have been researched by Vladimirova (2021) for fashion and by Godin et al. (2020) on laundry. It was found though minimalist fashion challenges that the act of clearing one's wardrobe invites to uncover needs and to separate them from desires to reflect upon what one's wear and why. Having a common understanding of possible ranges for upper limits encourages public deliberations and personal reflections, which may contribute to forming a common ground (Vladimirova, 2021). In the research on laundry households were able to significantly reduce their laundry cycles through a living lab experiment. The experiment showed that defining limits can be achieved when people come together in a societal process and when reducing consumption is compatible with sustainable well-being (Godin et al., 2020). Common for the three examples of working with consumption corridors shows that change can be supported by amplifying new approaches of doing/experiences and deliberating. The concept of consumption corridors is aiming to support what is necessary for sustainable wellbeing with respect to planetary boundaries as well as justice and equity. However, as the concept is an open discussion about limits, implications and objections have been designated towards the assumptions behind the methodology of consumption corridors, which will be presented in the following section.

1.2 Implications and objections

As already mentioned, restricting individual freedom is expressed as a major objection towards introducing consumption corridors in society. When presented with the concept of

consumption, several individuals may perceive themselves as losing under corridor arrangements. Therefore, the argument that upper limits may well inhibit freedom of choice is deemed a significant concern (Gumbert and Bohn, 2021). It is accentuated by Gumbert and Bohn (2021) that: *"as long as the notion of "limits" represents a restriction of freedom to both individuals and state actors, and freedom is, in turn, closely linked to unlimited consumption options, the public is more likely to reject any limits on freedom"* (Gumbert and Bohn, 2021, p. 91). Hence, investigating the way societies deal with freedom and limits is essential in order to develop political and societal support for the concept of corridors. In relation to policies aiming at attaining sustainable consumption, Defila and Giulio (2020) underlines that the perspective of sustainable consumption is mainly about accomplishing something, not about avoiding something. An implication occurs when attempts to change individual consumption are based on avoiding environmental or social impacts, rather than consider and acknowledge the individual's purposes of consumption. In order to identify corridor arrangements Giulio and Fuchs (2014) stresses that being certain about defining objective needs and sufficiently understanding the direct and indirect impacts of single acts of consumption has substantial implications. Besides the argument for lacking information, the argument of lacking acceptance in similarly an objection. As long as the concept of consumption corridors is denied, it will not make common sense to introduce such processes and launch subsequent societal debates (Defila and Giulio, 2020). In order to explore how the concept of consumption corridors would be met by society Defila and Giulio (2020) tested seven beliefs that are crucial to the fundament of the concept among citizens in Switzerland. The beliefs are listed in Table 2 (Defila and Giulio, 2020).

Belief about human beings: (non)existence of universal human needs
Belief about the significance of limiting consumption: (non)necessity of a sufficiency strategy to ensure that future generations can satisfy their needs
Belief about the role of the government: (non)entitlement of the government to limit individual freedom in the name of social justice
Belief about the individuals' willingness to limit their freedom: (non)willingness of individuals to accept limits
Belief about the economic impacts of corridors of consumption: (no) harm to the economy
Belief about the potential of corridors of consumption: (not) useless to start in a single country
Belief about the significance of societal deliberation: societal negotiation vs. definition by experts

Table 2: List of beliefs used in the survey (Defila and Giulio, 2020).

The results indicated that introducing a debate about the concept may not lead to in reality being put into practice, but it could be introduced as a frame reflective deliberation, which is: *"the practice of reflecting on one's own and other deliberators' diverging knowledge claims, arguments, ideologies and motives"* (Defila and Giulio, 2020, p. 317). One of the reasons why the concept of consumption corridors is not fully accepted by society is argued to be the belief that technological innovations will arrive in time (Fuchs et al., 2021). Society perceives that practices of investment, innovation, and technological distribution react to business opportunities and government motivations, both of which are activated by scarcity or crisis (Fuchs et al., 2021). Another reason why it may be difficult to implement corridor arrangements is the argument that *"the only agent that would be able to enforce corridors of consumption is the state"* (Giulio and Fuchs, 2014, p. 188). Since action by the state is needed, Gumbert and Bohn (2021) empathizes that the concept of consumption corridors will remain a solely academic discussion if the state is not involved in supporting the conditions. Supporting deliberative participatory processes are desirable as a foundation for the outline of consumption corridors to initiate deliberations of how-to live a good life within limits and agree upon thresholds not to trespass.

1.3 Research Question

The concept of consumption corridors provides a need-based approach to address limits that combine ecological thresholds with human well-being. To this date, the concept of consumption corridors is only a concept – implementing it would require further elaborating on how such corridors could be developed, how satisfiers fulfill needs, and how the concept could translate into policies and policy measures through deliberative participatory processes. The success criterion of this research is to improve 'collective acceptance', which is developed by Toumela and Balzer (1998). Collective acceptance is created by performative acts of utterances and agreements where a commonly accepted commitment is created. The concept of consumption corridors offers a need-based rationality as a new paradigm for sustainability to combat unsustainable consumption behavior. Therefore, it is essential to look into the following research question for this thesis:

What is the potential to arrange consumption corridors in Denmark?

In order to clarify and provide a more specific direction for the research question, sub-questions have been made to further break down and explore associated aspects:

1) What are former experiences with addressing needs and satisfiers in supporting sustainable transitions?

2) What is the state of societal acceptance towards the concept of consumption corridors?

3) With which deliberative processes within which arenas can consumption corridors be discussed and communicated across society?

To plan the design for this research, several decisions have been made, which will be presented in the next chapter.

Research Design 2

This chapter will present the decisions made and the overall strategy to answer the research question. The research design of this thesis is presented in Figure 2.
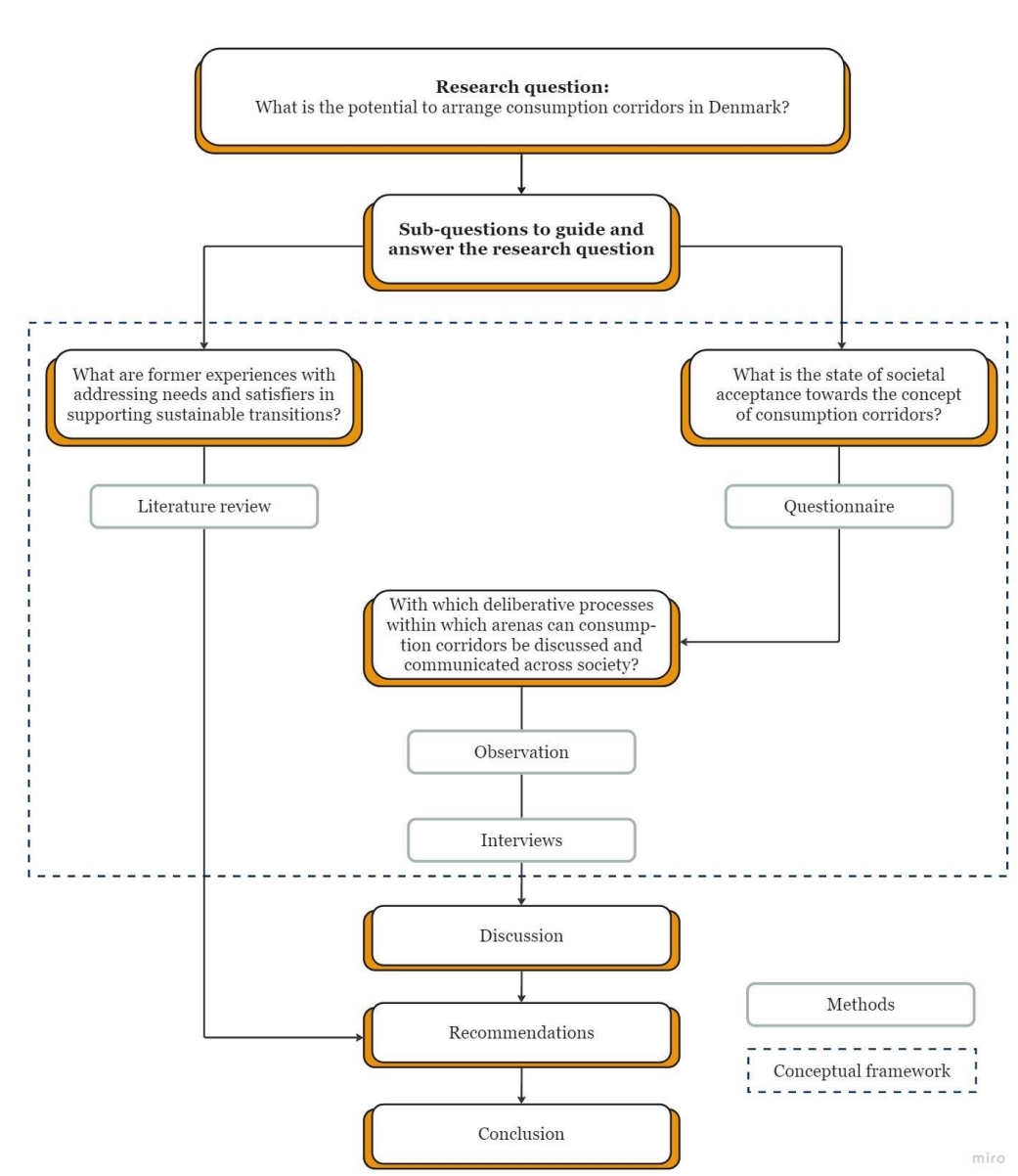

Figure 2: Research design.

This thesis has been carried out in a parallel independent structure concerning the first and second sub-questions. The results from the second sub-questions will then be used to answer the third sub-question. The results from each sub-questions will be used to present recommendations and provide a conclusion to the research question. In the light of investigating the potential to arrange consumption corridors, it was decided, in order to provide sufficient data, that the incorporation of former experiences, investigating the state of social acceptance among Danish citizens and elaborating on arenas where the deliberative conversation could take place were important elements to include in this thesis. One significant note to make is that this thesis is exploring an under-research topic. Consumption corridor is still a research concept and has not been a discussion in society so far. As a consequence, the empirical data is a bit weakened in terms of 'how to' implement within society. However, it gives an entry point to further elaborate on the potential to arrange consumption corridors. A conceptual framework, containing the concept of consumption corridors, theory of fundamental human needs and citizens' assemblies, forms and supports the structure of this thesis. The philosophy of science of this thesis is conducted from a critical realism point of view. The starting point of critical realism is that reality has an objective existence independently of our knowledge of it which constructs the ontology and epistemology. The social world is conceptually determined by the concepts that people use about it and therefore generated in discourse. An objective reality exists, and people interpret reality into it based on knowledge that is socially and culturally situated (Andersen, 2007). This thesis is designed through a paradigmatic case study. A paradigmatic case study sets the standard for how similar cases can be investigated. It is in the form of paradigms that illuminate more general characteristics of the societies in question (Flyvbjerg, 2010). The paradigm that is being investigated in this thesis is consumption corridors, a new paradigm for sustainability. It is a new paradigm that goes beyond the current economic growth paradigm. It requests the need to identify limits to reconstruct consumption patterns of consumers (Lombardi and Cembalo, 2022). The context of investigating this new paradigm is the current unsustainable meat system, with a focus on consumers' willingness to limit their meat consumption. With a focus on the meat system, this thesis is setting the standard of how similar cases, referring to other consumption domains, can be investigated, by other researchers focusing on other convergence within the new paradigm. If there is support and consensus, the previous paradigm will be replaced (Videnskab.dk, 2019). In order to investigate the paradigmatic case, several methods were used; literature review, questionnaire, observations and interviews, which will be presented in the next chapter.

Methods 3

This chapter is describing the methods used to conduct this thesis. The chapter explains the data collection and how it has been analyzed consisting of both qualitative and quantitative data.

3.1 Literature review

The aim of conducting a literature review is to collect relevant literature on a chosen topic, to then synthesize it into an organized review of existing knowledge in the research field (Creswell, 2009). Since the goal of this study is to investigate the potential to arrange consumption corridors, it is an important element to bring clarity around former experiences with addressing needs and satisfiers in supporting sustainable transitions. More information about the definitions on needs and satisfiers are presented in the conceptual framework in chapter 4. But in order to start the conversation about changing consumption behavior it is important to questioning needs and satisfiers to satisfy those needs. To present the existing knowledge in a systematic way, the following research string were used:

(title contain) "human needs" OR "fundamental human needs" OR "universal human needs" OR "basic needs" OR "protected needs" AND (subject contain) satisf* AND (all fields contain) "consumption" OR "consumption corridors"

The keywords were selected based on preliminary readings. Then the selected keywords were used as a search string in different databases (Aalborg University Library Primo, ProQuest, Taylor and Francis). The systematic structure of this literature review is illustrated in Figure 3. After searching in databases, with a combined sources of 64 from the used databases, assessments of relevance and evaluation of content constitutes the next step. The aim is to determine whether the articles will make a useful contribution to answering the research question (Creswell, 2009). The articles that were excluded were among others about self-care, emotional eating, violence, peer pressure and communication rights. 8 articles were selected from the databases and additionally 6 articles were selected based on snowballing. Snowballing is a method of finding sources by consulting the references in the articles. The selected articles constitute the literature review, sharing the results of other studies that are closely linked to elements of the one being undertaken (Creswell, 2009). The topics that the articles present are; consumption and subjective well-being, human needs language and identification of need satisfiers.
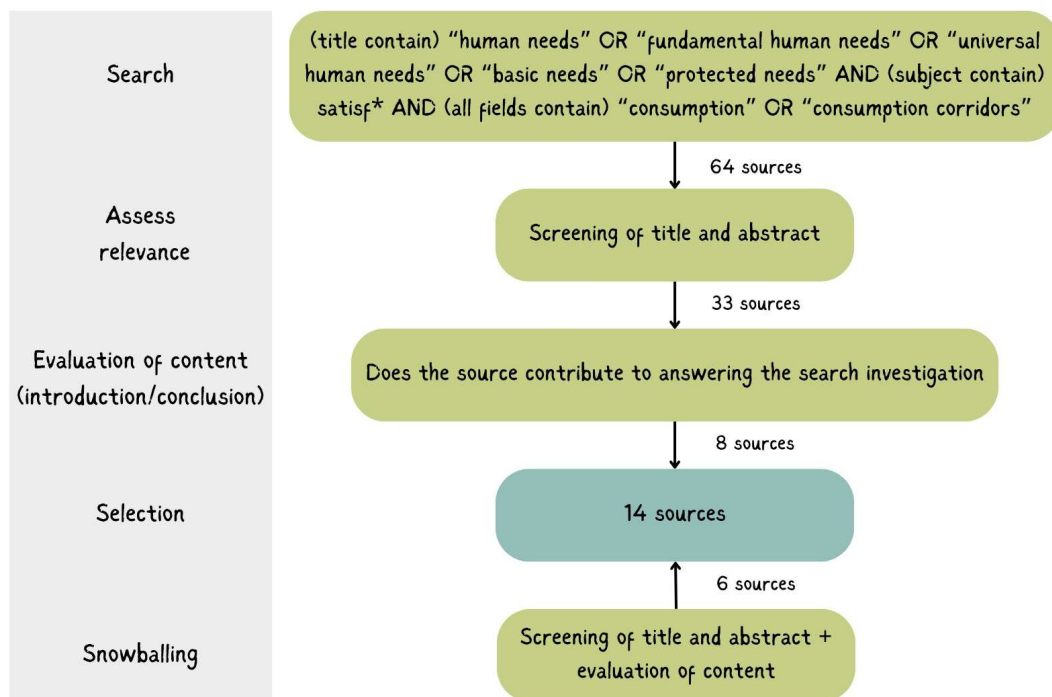
Figure 3: Literature review, systematic structure.

3.2 Questionnaire

A questionnaire provides a quantitative description of attitudes or views of a population by examining a sample of that population. Based on the sample results, it is possible to make claims about the population (Creswell, 2009). The purpose of the questionnaire is to investigate the state of social acceptance towards the concept of consumption corridors. The intention is to get a representative sample of the Danish population. The participants in the questionnaire should represent the population in terms of different age and educational level. The background variables for the questionnaire along with the answer can be found in Appendix A. The questionnaire was distributed online, first from a post on my Facebook page, and by encouraging my family to spread it across their network (friends and colleagues). The questionnaire was additionally distributed in Facebook groups. An online version of the questionnaire was chosen to quickly access a large sample size without restrictions on time or location (McCombes, 2022). The questionnaire was distributed in three weeks. The accessibility of online questionnaires means less control over the selection of respondents (McCombes, 2022). Since the aim is to get a representative sample of the population this disadvantage was not a problem. However, it quickly led to self-selection bias, since the channels that I was able to use were significantly smaller than for example an organization, university, municipality or national government who were to distribute the questionnaire. By distributing it through my network, automatically it is difficult to present every culture, age,

educational background etc. Posing it on Facebook groups was an approach to ensure that people from outside my network could be represented. Also given the fact that my family was willing to spread it across their network channels, decrease bias. The total number of respondents was 156 people, whereas the number of males represented 46% and females 54%. 43% of the respondents were located in the age group 21-30, whereas the rest were equally divided between age groups. The background variables and the results are presented in Appendix A. The design of the questionnaire is presented in Table 3. The questionnaire is divided into three subjects with different measures. The result of the questionnaire is presented in chapter 6 and 7. In these chapters it is elaborated whether the results support or contradict acceptance towards arranging consumption corridors.

Subject	Question(s)	Measure
Consumption behavoiurs and limits	Technological innovation plays an important part in order to lower greenhouse gas emissions, but there is a significant need to also create change in the way we live and consume in order to meet the climate objectives We have good intentions to change consumption behavior, but we do not act upon it, because others (neighbors, family members, colleagues etc.) also do nothing about it The climate crisis requires a look at what our needs actually are and where they come from, but also that we actively consider which new, climate-friendly ways we can imagine our needs met We as a society can collectively and democratically agree to create a fair consumption space by setting upper and lower limits for consumption to avoid overconsumption and provide the opportunity to meet fundamental human needs, under decent living conditions	Agree, neither nor, disagree
Habits and standard of living	State whether you fear being affected negative: 1) That you have to give up a lot of habits and live in a very different way 2) That your standard of living will decrease	0 to 5
Meat consumption	How rarely would you agree to eat meat? What has helped to influence your attitude towards reducing your meat consumption?	Several respons options

Table 3: Design of questionnaire divided into subject, question(s) and measure.

3.3 Participant observation

Participant observation is a research method: *"where the researcher immerses themself in a particular social setting or group, observing the behaviors, interactions, and practices of the participants"* (George, 2023). In the beginning of the thesis period, I participated in an event at Aarhus municipality regarding a presentation of Aarhus first Citizens' assembly's recommendations on climate action. The event was held on the 9th of March 2023. The event consisted of first presentation of recommendations, how it has been to be part of the citizens'

assembly and afterwards it was possible to walk around and talk with the participants about the recommendations. At the end, based on each subject (transport, food etc.), discussion about the recommendations were initiated in smaller groups. Around 70-80 people participated in the event, including the 27 members of the citizens' assembly. The other participants were family members, friends and interested citizens living in Aarhus municipality. As a participant observer, I took part in the dialogue as well as listening and interpreting the behavior in the groups where different members of the citizens' assembly were talking about the recommendations and their experiences of being a part of the assembly. There was no attempt to control or manipulate the situation. The field notes of the event can be found in Appendix B. These notes are recorded in an unstructured way, since it was a beginning of the project, and at that time I hadn't decided on my research question yet, but knew I was interested in knowing more about citizens' assemblies and the participants experiences with the deliberative arena. The reference of the observations is cited as (Bøggild, 2023) in the text.

3.3 Interviews

Interviews are a qualitative research method that depends on asking question to collect data. Interviews allow us to gather rich information and draw detailed conclusions (George, 2022). Semi-structured group interviews have been conducted in connection with evaluations by the first Danish climate citizens' assembly. The focus group interviews were held by researchers from Aalborg University, where I have been given access to two audio files. The purpose of the interviews was to gather the participants' views and experiences of being a part of the citizen's assembly. In addition, the interviews were about barriers and improvements of the deliberative setting. I myself have conducted structured interviews in connection with elaborating on attitudes towards the questionnaire. The aim was to get more context of the question of agreeing that *'we as a society can collectively and democratically agree to create a fair consumption space by setting upper and lower limits for consumption to avoid overconsumption and provide the opportunity to meet fundamental human needs, under decent living conditions'.* Structured interviews are effectively used when there is a very clear understanding of the study, and when time and resources are constrained (George and Merkus, 2022). The interviews were conducted with 5 people the 17th of May from my parents workplace, who have participated in the questionnaire. The question asked were; 1) why did you choose to agree with the statement?. By asking the same question it mitigates potential biases (George and Merkus, 2022). Notes from both interviews can be found in Appendix C and D.

Conceptual framework 4

This chapter presents the conceptual framework of this thesis to elaborate on the concepts and assumptions that support and inform this thesis.

4.1 Consumption Corridors

Consumption corridors is an open discussion about limits towards exploring; *"what are minimal limits that are necessary for people to be able to live a good life and what are the maxima that should not be trespassed by individuals to make that possible"* (Sahakia et al., 2021, p. 308). Figure 4 illustrates the concept of consumption corridors (Di Giulio and Fuchs, 2014). The definitions of levels allow for adjustment over time, considering the historical and cultural context as well as social, ecological, and technological developments (Di Giulio and Fuchs, 2014). The space between minimum and maximum consumption standards is where indivi-duals make their consumption choices freely according to their beliefs of a good life (Sahakia et al., 2021).
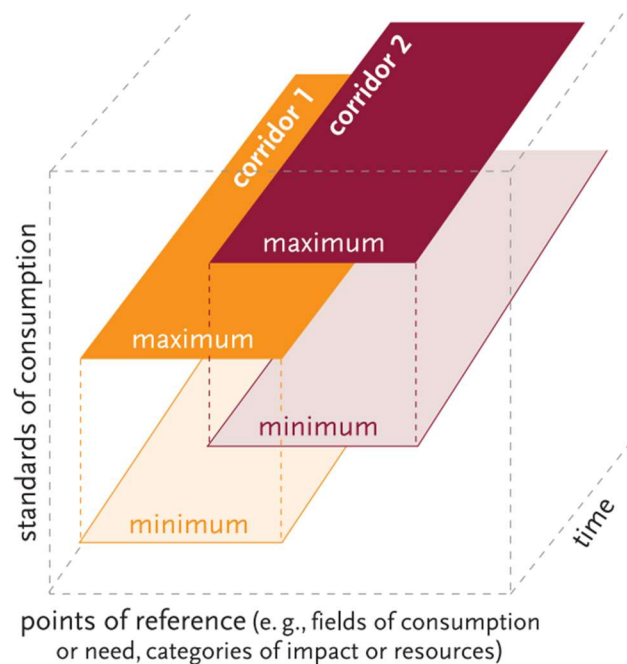
Figure 4: Corridors of sustainable consumption defined by minimum and maximum standards of consumption (Di Giulio and Fuchs, 2014)

Needs are defined as the precondition of human flourishing, that should be fulfilled in order to be able to live a good life (Fuchs et al., 2021). Needs are universal, but societies have the opportunity to structure differently to satisfy these needs (Fuchs et al., 2021). Satisfiers on the other hand are variable and the means used to satisfy needs. Satisfiers are the external conditions; structures, services, infrastructures etc. (Giulio and Defila, 2019). A third aspect, in contrast to needs, are desires which are subjective wishes. Desires are not defined to be crucial to an individual's ability to live a good life and do not correspond to needs (Fuchs et al., 2021, Giulio and Defila, 2019). The connection between needs, satisfiers, and desires is illustrated on Figure 5 (Giulio and Defila, 2019).
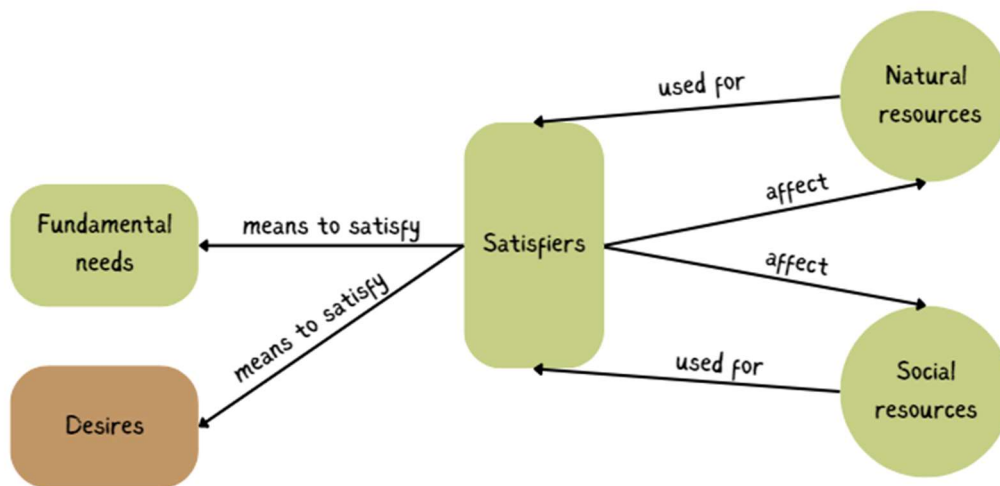

Figure 5: Need satisfaction (Own illustration based on Giulio and Defila (2019)).

Defining consumption corridors means allowing evaluating satisfiers with regard to their contribution to needs fulfillment corresponding *to "the environmental and social resources they consume and affect"* (Fuchs et al., 2021, p. 17). Individuals have different conceptions of how their needs should be satisfied, however their individual freedom is restricted by the ethical rule of not intruding others' opportunity to satisfy their needs (Giulio and Defila, 2019). Fuchs et al. (2021) call attention to the necessity to distinguish needs from satisfiers. The concept of consumption corridors implies creating a safe consumption space where individuals have freedom to consume differently within limits.

4.2 Operationalization

In order to turn the concept of consumption corridors into measurable observations, a quantifiable value must be added. Since a need-based rationality to solve current unsustainable consumption patterns has not been addressed across society in Denmark, introducing a new approach means investigating the potential of adopting this new approach. Hence, introducing the concept of consumption corridors is equal to acceptance, which is measurable among the Danish population. Therefore, the assumption behind consumption corridors have been

translated into statements and questions to be used in the questionnaire. In order to operationalize the concept of consumption corridors, the theory of fundamental human needs was used. The postulate of the theory is that: *"development is about people and not objects"* (Max-Neef, 1991, p. 16). As a result, it is important to understand the dialectic between needs, satisfiers and economic goods. As of now, where society engages in a senseless productivity race; *"life, then, is placed at the service of artifacts, rather than artifacts at the service of life. The question of the quality of life is overshadowed by our obsession to increase productivity"* (Max—Neef, 1991, p. 25). Human needs can be organized into two categories; existential and axiological. Existential refers to needs that are related to human existence; being, having, doing and interacting, whereas axiological refers to needs that are related to human values: subsistence, protection, affection, understanding, participation, idleness, creation, identity and freedom (Max-Neef, 1991). Table 4 presents the two categories of fundamental human needs. The different squares on the figure are possible satisfiers, and these satisfiers can give improvement to different economic goods (Max-Neef, 1991). The main view of applying the concept of fundamental human needs is that: *"satisfiers are not the available economic goods"* (Max-Neef, 1991, p. 24), but are presenting forms of being, having, doing and interacting, which is illustrated in Table 4. (Max-Neef, 1991). As an example, there are different ways of 'doing' for the need of 'understanding' such as investigate, meditate and experiment, and the corresponding economic goods could be books, computers etc. (Max-Neef, 1991).

	Being	Having	Doing	Interacting
Subsistence	Health, adaptability Sense of humour	Food, shelter, work	Feed, procreate, rest, work	Social setting, environment
Protection	Care, equilibrium, solidarity	Rights, social security, family	Cooperate, plan, help	Living space, dwelling
Affection	Self-esteem, respect, passion	Friendships, family, relation with nature	Make love, share, cultivate, appreciate	Privacy, intimacy, home, togetherness
Understanding	Critical conscience, curiosity, discipline	Literature, education teachers	Investigate meditate experiment,	Groups, community, schools, family
Participation	Dedication, respect, receptiveness	Rights, responsibility duties, work	Cooperate, dissent, agree on, interact	Associations, churches, family
Idleness	Curiosity, tranquillity, imagination	Peace of mind, games, parties	Day-dream, relax remember, brood	Privacy, intimacy, free time, landscape
Creation	Passion, intuition, imagination,	Abilities, skills, method, work	Work, invent, build, compose, design	Productive settings, workshops, time
Identity	Sense of belonging, self-esteem	Language, symbols, religion, values	Commit oneself, grow, recognise	Social rhythms, maturation stages
Freedom	Autonomy, boldness, passion	Equal rights	Dissent, choose, disobey, run risks	Temporal/ spatial plasticity

Table 4: Matrix of Fundamental Human Needs and satisfiers (Max-Neef, 1991).

In order to concrete the realization of fundamental human needs as a tool and mindset to construct consumption corridors, meat as a consumption corridor will be used as an example to facilitate understanding. All individuals from a nutritional point of view need protein, but

meat is not the only satisfier for such nutritional needs (Kanerva, 2022). It is evident that the impacts on production and consumption in relation to meat contributes to several crucial issues linked to a range of environmental impacts. As a consequence, there is an urgent need to transform the meat system (Kanerva, 2021). However, this transition is not straightforward because: *"meat eaters have generally justified their diet as something natural, tradition or necessary for humans"* (Kanerva, 2021, p. 61). The current industrial meat system is unsustainable which is why it is important that societies question meat as an everyday need. Figure 6 illustrate meat as an everyday need satisfier, as the vast majority live by, compared to a continuum of different meat ways to satisfy protein as an everyday need satisfier, which the vast majority should live by, in order to create a sustainable meat system (Kanerva, 2021; Kanerva, 2022).
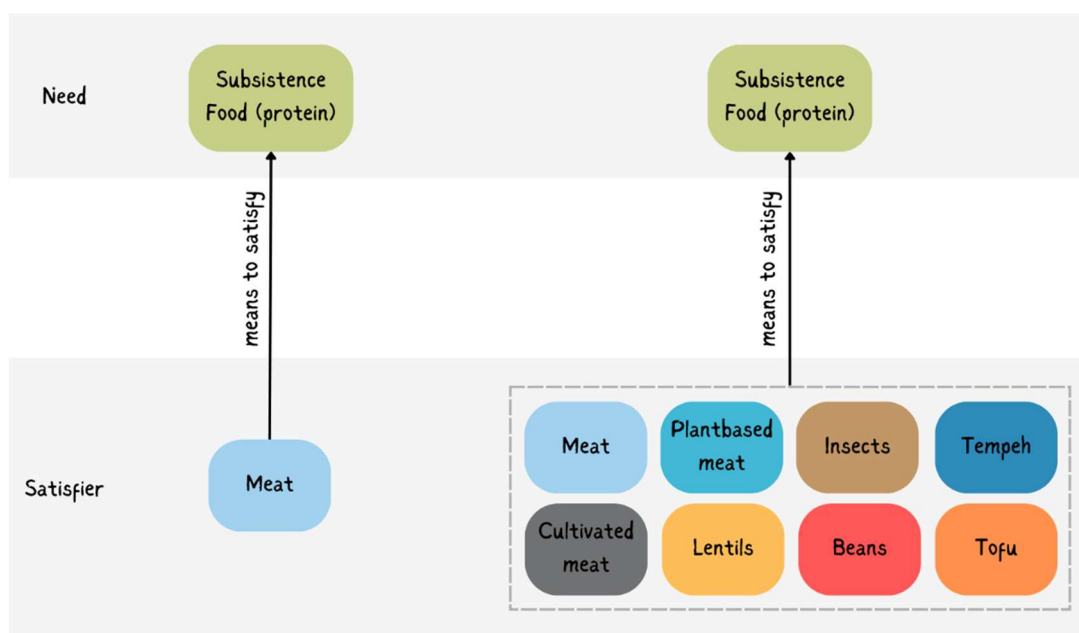

Figure 6: Continuum of different meat ways of need satisfaction.

While it is shown for simplicity that meat is not the only satisfier for nutritional needs, satisfiers are according to the fundamental human need theory not the available economic goods. Satisfiers are presenting forms of being, having, doing and interacting, which contributes to the actualization of human needs (Max-Neef, 1991). As an example, education is a satisfier, and by enabling access to information about alternative food options that addresses quantity and quality of food and other lifestyle choices that affect nutrition and health in order to affect individuals' food choices in a sustainable way. An educational seminar could be about food preparation skills. It is essential that we as a society ask; how can we satisfy our needs in other more sustainable ways. By applying the fundamental human needs approach, it is possible to be aware of the potentialities which can serve as an instrument for both policy arrangements and climate action. By identifying satisfiers to transform the meat system, it is essential to question meat as an everyday need satisfier, which is why it is relevant to talk about consumption corridors. In order to arrange consumption corridors, deliberations

about living well within limits and needs are central to a gradual acceptance of the concept as well as agreeing on minimum and maximum limits (Fuchs et al., 2021).

4.3 **Citizens' assemblies**

Deliberative citizens' assemblies are increasingly promoted as a viable arena for climate change gouvernance (Willis, 2022). Deliberative citizens' assemblies are designed to be: *"groups small enough to be genuinely deliberative, and representative enough to be genuinely democratic"* (Goodin and Dyzek, 2006, p. 220). Citizens' assemblies are constructed by randomly selected citizens so that everyone affected has an equal chance of being selected. The citizens are selected based on e.g., age, gender, income, education, religion, geography etc. to ensure that the wider society is adequately represented (Escobar and Elstub, 2017). The output of citizens' assemblies is informed and collective citizen recommendations on policy questions (OECD, 2020). The outcome is collectively considered rather than individual views. The citizens' assembly model is presented in Figure 7.
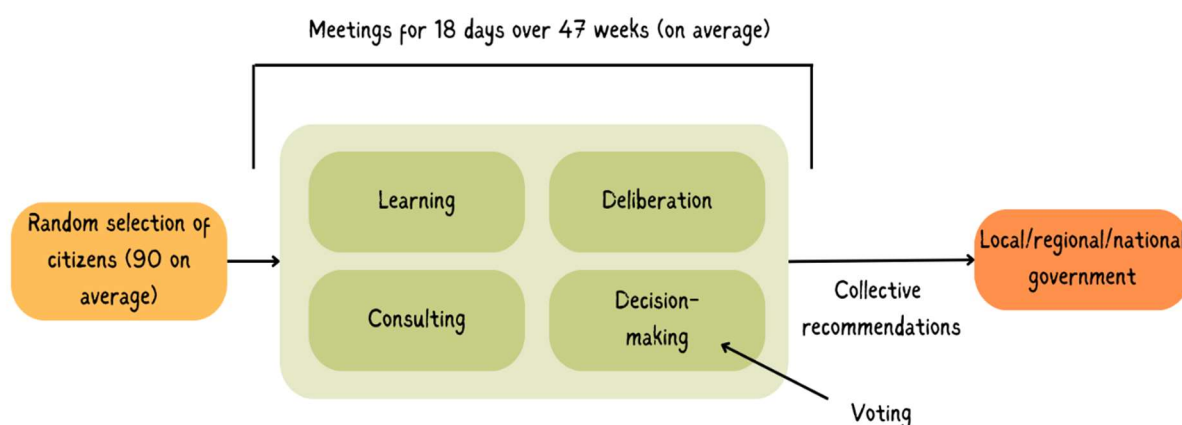

Figure 7: Citizens' assembly model. Own drawing based on OECD (2020).

After random selection of citizens, learning and consulting is the first step, where citizens are presented to perspectives by experts, stakeholders and affected groups. Learning and consultation is followed by deliberation to discuss evidence and opinions in which recommendations are collectively developed. Then the recommendations are voted on, resulting in a detailed report, which is then presented to the government authority (OECD, 2020). Citizens are tasked with creating consensus on the recommendations they provide to public decision makers. Table 5 sums up potentials and limitations in regard to citizens' assemblies (Jacquet, 2017; Escobar and Elstrup, 2017; Godin and Dyzek, 2006).

Potentials	Limitations
Diversity	Lack of commitment
Empowerment	Lack of feedback or accountability
Knowledge transfer	Challenging and demanding

Table 5: Potentials and limitations of citizens' assembly (Jacquet, 2017; Escobar and Elstrup, 2017; Godin and Dyzek, 2006).

The possibilities by applying citizens' assemblies are; diversity, empowerment and knowledge transfer. The limitations that might occur when applying the citizens' assemblies are; lack of commitment, lack of feedback or accountability and that the process can be challenging and demanding. The potentials and limitations will be in focus in the analysis of the collected data.

Need satisfaction 5

This chapter will present a literature review of need satisfaction to examine former experience with addressing needs and satisfiers in supporting sustainable transition. Accordingly, three sections will address; consumption and wellbeing, the language of needs and observed characteristics of applying the fundamental human needs approach. The intention of presenting the former experiences is to get a clearer understanding of what a need-based approach can offer.

5.1 Consumption and subjective well-being

Human need-based approaches support the non-consumerist claim: *"that what people buy is what they have learned to want and what they want bares only weak reference to their level of welfare"* (Wolfgang and Benedikt, 2020, p. 2). Rather than implying wants for well-being, it is the actualization of human needs for well-being (Wolfgang and Benedikt, 2020). In the study by Lindellee et al. (2021) about *"prioritizing human needs in operationalizing sustainable welfare and co-developing eco-social policies"* it is believed that need-based approaches advance the likelihood to identify common ground rather than overly stressing individualized perception of wellbeing. In the study by Vita et al. (2019) about *"connecting global emissions to fundamental human needs and their satisfaction"*, the analysis showed that rising subjective needs is almost certainly linked to: *"what people 'are' and 'do' in wealthier economies, rather than to what they happen to consume or own"* (Vita et al., 2019, p. 13). As a result, it is argued that policies should undertake subjective satisfaction and not merely count on consumption or objective improvements (Vita et al., 2019). In a similar study by Buhl et al. (2017), investigating *"how much environmental do human needs"*, the results showed that humans do not need substantial material footprints to be additional satisfied with their lives. Instead decreasing resource use was argued to possibly lead to higher subjective life satisfaction (Buhl et al., 2017). The formed belief that 'the more one consumes, the better off they are', according to the study by Balyeijuse (2019) about *"the role of the human needs language"* has: *"created greed in human beings where they have or never have content with their present adequate satisfaction of their human needs"* (Balyeijuse, 2019, p. 304). To fulfill the idea of well-being divided, increasing well-being by reducing consumption, it is emphasized by Guillen-Royo (2010) and Balyeijuse (2019) that we need to change human needs production and consumption patterns that cannot be realized without the presence of synergic satisfiers that has a positive impact on human needs. In the study by Guillen-Royo (2010) about using the human scale development approach it was stressed that by identifying synergic satisfiers, the participants were capable of recognizing the existence of wellbeing divided. This was achieved by engaging groups of people in society to deliberate concerning needs and satisfiers. Applying a fundamental human needs approach entails shifting from

consumer goods to synergic satisfiers, where the gathering of attitudes, infrastructures, cultural characteristics, values, laws, and organizational arrangements will support ideal needs fulfillment. Hence, restructuring of habits, infrastructure and policies is essential for the transition (Guillen-Royo, 2020).

5.2 Human needs language

Using the language of needs has not been addressed in current efforts of practicing sustainable development – the language used is mainly about goals and preferences (Balyeijuse, 2019). The language of human needs is argued to successfully be leading the sustainable development practice and agenda because the language of human needs is universal (Gough, 2020; Wolfgang and Benedikt, 2020; Balyeijuse, 2019). Presenting a common language helps to rebuild interactions between the personal and social perspectives that helps to establish primary objectives based on personal needs and global objectives that are shared, to move beyond the individual level of needs satisfaction (Jolibert et al., 2011; Jolibert et al., 2014). As a result, it is stressed that it will strengthen bottom-to-top collective decision making (Jolibert et al., 2011). It is emphasized by Wolfgang and Benedikt (2020) that: *"it has become clear that the process of need satisfaction via satisfiers is social in nature"* (Wolfgang and Benedikt, 2020, p. 8). Satisfiers are the characteristics of culture itself; it changes across cultures and over time. To realize the well-being divided, see section 5.1, fundamental human needs-based approaches undertake a participatory tool to address satisfiers and the language of human needs (Guillen-Royo, 2010). In addition, in the study by Cruz et al. (2009) about *"building on the human scale development paradigm"* it is highlighted that need-based approaches can be used for multiple purposes – from participatory exercises such as diagnosis and planning and as an evaluation tool. Gaining self-awareness about preferences in an assigned set of satisfiers and how these correlates and affect each other helps to satisfy people's needs in terms of their own unity with acknowledgment to other individuals (Cruz et al., 2009). Hence in the study by Jolibert et al. (2011) about needs assessment it is emphasizes that: *"humans find it easier to understand a situation, to accept a decision, and to implement it when they take part in the decision-making process"* (Jolibert et al., 2011, p. 267). Encouraging self-reliance is related to the belief that: *"people are able to analyze their own realities and design the strategies to transform the way human needs are met"* (Guillen-Royo, 2014, p. 130). By adapting a human need-based language, it is according to Balyeijuse (2019) most likely promoting behavioral change by ensuring a common language to coalesce members from different cultures around policies and engaging in actions that promote sustainable development.

5.3 Identification of need satisfiers

To identify need satisfiers in a particular context, two forms of knowledge are according to Gough (2020) essential: *"the codified knowledge of experts and the experientially grounded knowledge of ordinary people in everyday lives"* (Gough, 2020, p. 212). The codified knowledge is to determine the arrangement of several needs satisfiers, and it is represented in the knowledge of experts on what individuals need such as components of a healthy diet, education etc. Opposite, practical knowledge is the understanding of individuals in their

everyday lives and circumstances. This knowledge must contribute to determining what objects and what activities that are necessary for wellbeing in any given context (Gough, 2020). In a study by Guillen-Royo (2020) six workshops were conducted applying the fundamental human needs approach in three phases. First, deliberations about negative satisfiers that the participants counted to be obstructing needs satisfaction, by creating a negative matrix. Second, deliberation revolved around identifying singular and synergic satisfiers to support the ideal actualization of needs, by creating a utopian matrix. Third, the participants debated on 'synergic' bridging satisfiers by identifying bottom-up or top-down interventions that could help bridge the two matrices. The study showed that when the participants identified synergic or synergic bridging satisfiers, their impact and knowledge were enhanced, and consideration was given to maximum and minimum consumption limits in needs-based workshops (Guillen-Royo, 2020). The same approach by identifying and bridging negative and utopian scenarios was studied by Guillen-Royo (2010). It was observed that the participants were able to recognise the existence of a well-being divided and discuss arrangements of satisfiers for its realization by examining societal and personal views and perspectives (Guillen-Royo, 2010). The participants highlighted the value of: *"identify change; removing fears and materialistic values and promoting self-confidence and universalism"* (Guillen-Royo, 2010, p. 391). With regard to the individual context, participants in the study by Guillen-Royo (2017) about *"a need-based illustration from Granada"* believe that they first needed to transform their 'inner-self' in order to become active members of the local community. 'Inner-self' is concerning personal needs, values, attitudes and behaviors to move towards non-materialistic values and seek self-awareness and engaging in dialogue with others (Guillen-Royo, 2017). In the study by Jolibert et al. (2014) about *"assessing needs in the search for sustainable development"* it was observed that when participants were sharing personal information it created a climate of trust, which stimulated expectations and obligations with affection to other participants and encouraged actions. The concept of needs generates social change because of the fact that participants were able to reframe their own situation in ways that facilitate more positive social action. It is argued by Jolibert et al. (2014) that: *"given that we all share the same fundamental needs, taking them into account enables us to develop a subtler understanding of social dynamics, less conflicting relationships, and more empathy for others"* (Jolibert et al., 2014). It was likewise observed in deliberative setting in the study by Guillen-Royo (2014) about *"participatory action-research for sustainable development it the importance of collective work and learning from each other"*, highlighting the interdependence of unity/social cohesion. Addressing needs promotes engagement in discovering different perspectives on sustainable transformations by empowering the participants (Guillen-Royo, 2014). The empowering effect is according to Guillen-Royo (2014) not common to all participatory deliberative approaches. It is common that participants have been used to legitimize top-down approaches and are rarely involved in design phases (Guillen-Royo, 2014).

Summary

Adopting a need-based language approach is claimed to create common ground and make society realize the well-being divided by identifying synergic satisfiers that have a positive impact on human needs. Gaining self-awareness about a given set of satisfiers helps to satisfy people's needs in terms of their own coherence with respect to other individuals. Given the fact that we all share the same fundamental needs, adopting a need-based language enables us to construct unity/social cohesion among us.

State of social acceptance 6

This chapter will elaborate on the potential of implementing consumption corridors by investigating the state of societal acceptance towards the concept. This analysis is carried out by interpreting the answers of the questionnaire. Section 6.1 and section 6.2 present the general level towards acceptance of limits and changing of habits and standard of living. Section 6.3 transitions to a concrete level with focus on meat consumption. The section will elaborate on how rarely Danes would accept to eat meat and how these answers correspond to a potential meat consumption corridor.

6.1 Acceptance of change toward limits

In order to answer the research question of this thesis, it is essential to test the state of acceptance towards arranging upper and lower limits on consumption. Danish citizens were asked to take a stand on whether they agree or disagree with certain statements regarding; the importance of adopting a need-based rationality to combat unsustainable consumption, intentions to act differently, and if society can agree on defining limits. Figure 8 presents the answers for each statement. First, the respondents were asked to choose whether they agree or disagree with the fact that there is a need to create changes in the way we live and consume other than relying on technological innovation to arrive in time to help to support action for sustainable consumption. 85% of the respondents agreed with the statement, 10% disagree and 5% did not take a stand. Since the majority of the respondents agree with the statement, it indicates a willingness to accept changes in the current way of living which is a good starting point to discuss changes in everyday life and consumerism. However, an interesting shift in response occur when the respondents were asked whether they agree or disagree with the third statement, that in order to encounter the climate crisis, it requires a look at what our needs actually are and where they come from, and that we actively should consider which new climate-friendly ways we can imagine our needs. 69% of the respondents agree, 10% disagree and 21% did not take a stand. Compared to the answers from the first statement where almost no respondents choose not to agree or disagree, it could indicate that the respondent to a greater extent undertakes an individualized point of view/morals, rather than thinking of the shared values of what is best collectively on how society should organize their living together and their systems of provision. The second statement presented in Figure 8 is regarding intentions to change consumption behavior, that we have good intentions, but we do not act upon them because others do not act. The statement is addressed around the 'bystander effect', which is when a critical situation occurs while people stand by and watch, which has been confirmed to partly explain inaction towards climate change (Vries, 2020).
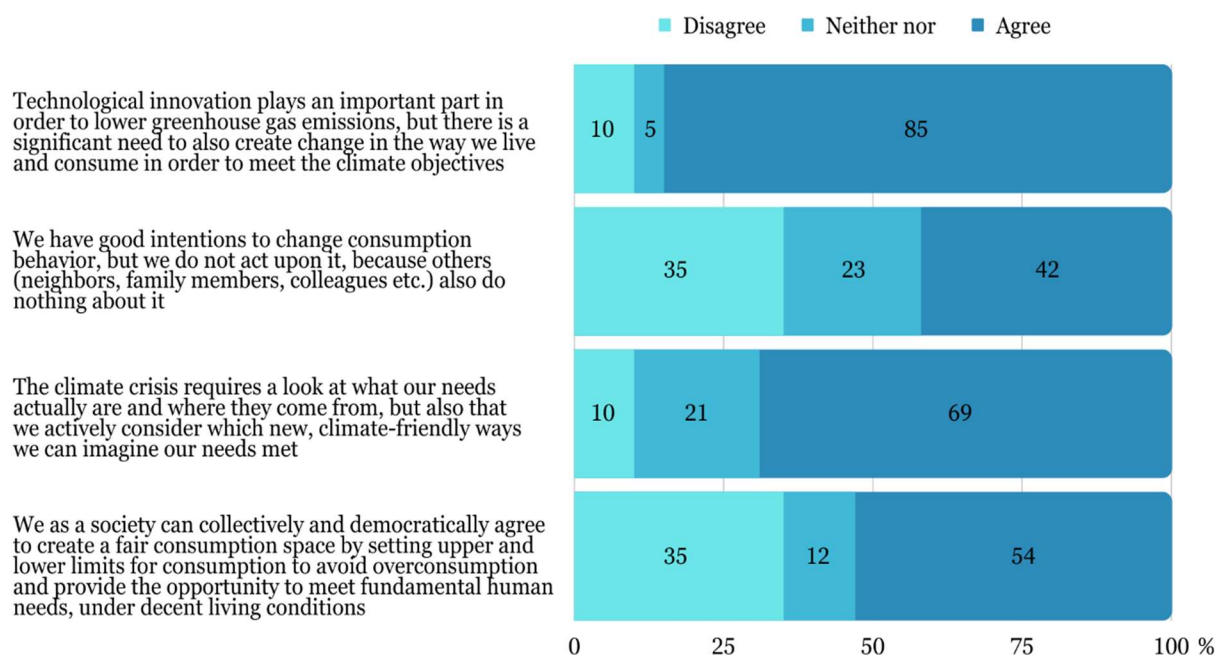
Figure 8: Statements about consumption behaviors and limits, n=156.

People are most likely to act when they understand the urgency of it, which could indicate based on the answers that there is a shift away from the 'bystander effect', and people now acknowledge the urgency and act. Hence it can be partly argued that the pluralistic ignorance of people is decreasing, which stresses the importance that we begin to be aware of each other's willingness to act and start the dialogue with each other as well as observe and experience that others act on the climate crisis. It reinforces the experience that climate action is possible and desirable. With the potential to address our needs and the way we live and consume a dedicated focus should be on creating democratic deliberative conversations among groups of individuals of society. Therefore, the respondents were asked to state whether they agree or disagree with the statement that we as a society collectively and democratically can agree on creating a fair consumption space by setting upper and lower limits on consumption to avoid overcon-sumption and provide the opportunity to meet fundamental human needs, under decent living conditions. 54% of the respondents agree with the statement whereas 35% disagree with the statement and 12% did not take a stand. Hence, it could indicate an agreement to weigh in on the discursive contest on behalf of the common good against individual interests. In order to get context about the respondent's thoughts on believing in the concept, selected respondents were asked these questions; 1) why did you choose to agree with the statement?. One of the respondents elaborated that she chooses to agree because she would like to have belief in that it is possible and did not think much about the possibilities of implementing it. Another respondent shared some of the same views, she put emphasis on the urgency to act for the sake of the next generations. It was common for all the respondents that they emphasized that there is a willingness to change habits and a dissatisfaction that some do not act. One respondent elaborated that it would be preferable with some negotiated frames, and the democratic agreement didn't scare him, because if it is that mindset that many individuals in society have, then it should be possible. In addition, he states that some individuals may not agree with the

limits but emphasized that the limits hopefully not will be decided if it is then impossible to live a good life. A fourth respondent has the same view, but additionally expresses that our society is already limited by laws and agreements on how to act, that most put of with. So he questioned why shouldn't it be the case with implementing limits on consumption. In terms of achieving consensus towards arranging limits, two of the respondents expressed the same, that people usually always come to an agreement, and that creating framing for consumption would make it easier to understand if they are living the climate-friendly way that is said to be lived.

6.2 Habits and standard of living

In regard to habits and standard of living, the respondents were asked whether they fear being negatively affected as a consequence of new-climate friendly changes in the way they life and consume:

> (1) that you have to give up a lot of habits and live in a very different way,

> (2) that your standard of living will decrease.

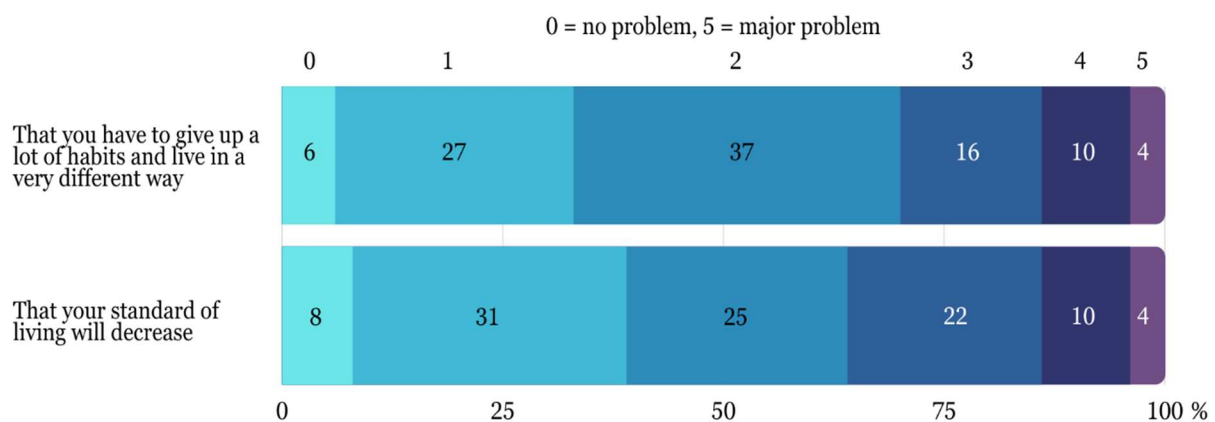The answers are presented in Figure 9.

Figure 9: Statements about fear of being negatively affected, n=156.

The blue light colour to the left indicates 0, which is no problem, whereas the purple colour to the right indicates 5, which is a major problem. By comparing the two outer ends of the spectrum, it can be argued that more respondents do not fear being negatively affected in terms of habits and standard of living in contrast to the respondents who see it as a major problem. The majority of the respondents have indicated that they see themselves in the middle of the spectrum, which indicates that there is a discomfort towards changing behaviour linked to everyday life. Compared with the majority of respondents agreeing with the statements in Figure 8, reinforces the assumptions that we need to address renegotiation of the good life as we know it to address the concrete concerns that Danes have, so that more sustainable ways of

living are not associated with fewer opportunities and a lower standard of living. It lays the groundwork for an existing discussion of what is considered a good standard of living, which is the fundament of discussing consumption corridors and fundamental human needs. The standard of a good life in the left of the spectrum would most likely differ from the right end of the spectrum.

Summary

The acceptance of the concept of consumption corridors has been investigated through a questionnaire. It has been indicated on a general level, that there is a willingness towards accepting changes in the current way of living. However, over one-third of the respondents disagree with the fact that we as a society can agree upon limits on consumption, which could indicate that arranging consumption corridors could be difficult. However, when interviewing some of the respondents from the questionnaire that agreed with the statement, it indicated that people usually come to agreement with the terms and that arrange corridors could make it easier for people to understand what is meant by living climate-friendly. In terms of fearing being negatively affected, a large proportion of the respondents indicated a discomfort towards changing behavior to everyday life. Hence, it is important that resources are allocated to increase public information to articulate that corridors are not equal to a lower standard of living but a good life can be lived within limits.

6.3 Meat consumption corridor

In the questionnaire, the respondents were asked to select which category of choice that apply to them in order to figure out how rarely Danes would accept to eat meat, which is presented in Figure 10. 36% of the respondents chose to only eat meat one day a week, 16% one day every two weeks and every second day and 12% want to be allowed to eat meat every day. Almost 2/3 of the respondents are not willing to accept not eating meat if they are not allowed to eat it once, twice or more every week. Around 33% of the respondents could accept to only eat meat one day every two weeks, one day a month or a few times a year, indicating that 1/4 of the respondents can be categorized as strong flexitarians, who eats meat only frequently (Kanerva, 2022). The respondents who indicated that they want to be allowed to eat meat every day can be categorized as societal carnist, who desire to eat meat on a daily out of habit (Kanerva, 2022), constitute 28% of the total amount of the respondents. The respondents who are willing to accept to eat meat one day a week and every second day can be categorized as weak flexitarians, who eat meat a few times a week (Kanerva, 2022).
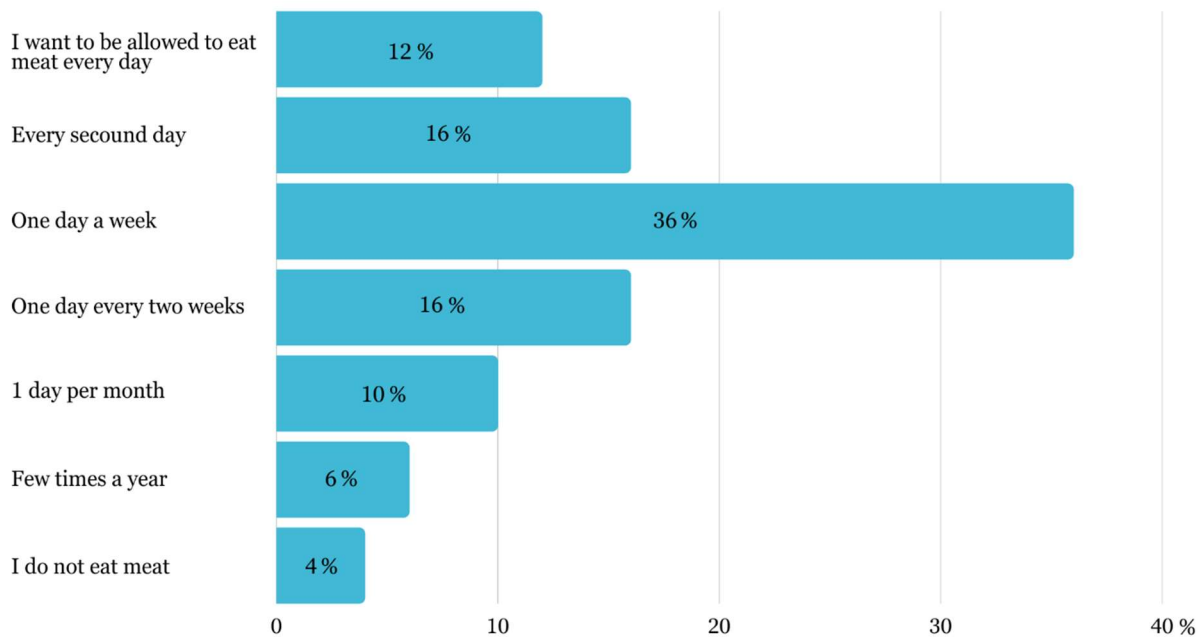
Figure 10: How rarely Danes accept to eat meat, n=156.

In order to get an indication of how to define a meat corridor based on the answers from the respondents, the study by Kanerva (2022) "Consumption Corridors and the Case of Meat" is used as a reference to define upper and lower limits. Kanerva (2022) uses a journey metaphor that suggests seeing meat eating as a continuum of different meat ways rather than a dichotomy of eating, or not eating meat. It is stressed in the study that metaphors can play a key role in framing perceptions, and in framing actions: *"a journey may take place initially at the individual level but can be reflected at the societal level through discourses and shifting values and norms"* (Kanerva, 2022, p. 639). The continuum of different meat ways along with a potential meat consumption corridor, developed by Kanerva (2022), is illustrated in Figure 11.
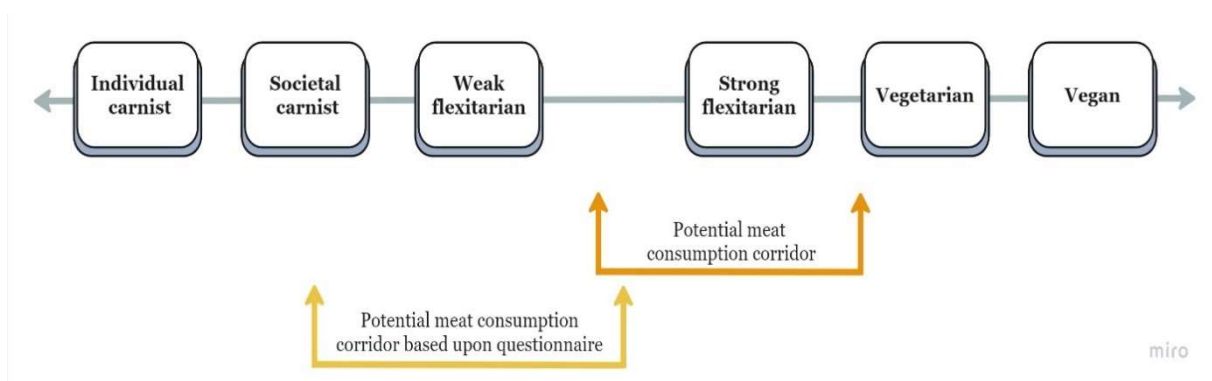

Figure 11: Potential meat corridors. Own drawing based on Kanerva (2022) and Kanerva (2021).

The continuum of meat ways consists of individual carnist to the left and vegan to the right. The vertical line illustrates a rough estimate of the closeness of the different meat ways (Kanerva, 2021), which indicate that moving from weak flexitarian to strong flexitarian is characterised as a 'long journey' going from eating meat a few times a week to only eating it frequently. The orange potential corridor is based upon the study by Kanerva (2022) whereas the yellow corridor is based on the results presented in Figure 10. With the orange potential corridor presenting an ideal consumption corridor to transform the current meat system, the yellow potential consumption corridor, that Dane's hypothetical may agree upon, overlaps only slightly. It is important to state that the orange consumption corridor is hypothetical but indicates an ideal corridor to limit conventional meat to cultured and plant-based meat options that are better for the environment and climate change. The corridors are dynamic, so when new contexts (environmental, cultural, health related etc.) occur, corridors can change (Kanerva, 2022; Fuchs et al, 2021). Arranging a corridor may not according to Kanerva (2002), on its own, propose a change in consumption. However, arranging a corridor can prepare society to consume in a different way by replacing unsustainable consumption patterns with more sustainable consumption patterns. Hence, broad public debates are fundamental to a gradual acceptance of arranging consumption corridors (Kanerva, 2022).

Deliberation 7

This chapter will elaborate on deliberative processes and arenas that consumption corridors can be discussed and communicated within society. Section 7.1 will elaborate on the final result from the questionnaire about what has caused the respondents to change their consumption behavior. Section 7.2 will present and elaborate on observations and evaluations on citizens' assemblies to gather experiences from being a part of this type of deliberative arenas. Section 7.3 will focus on which processual barriers that can arise in these deliberative settings to arrange consumption corridors.

7.1 Changing consumption behavior

The respondents in the questionnaire were asked to choose what had caused them to change their consumption behavior in relation to reducing their meat consumption. It was possible to choose several response options. The answers are presented in Figure 12.
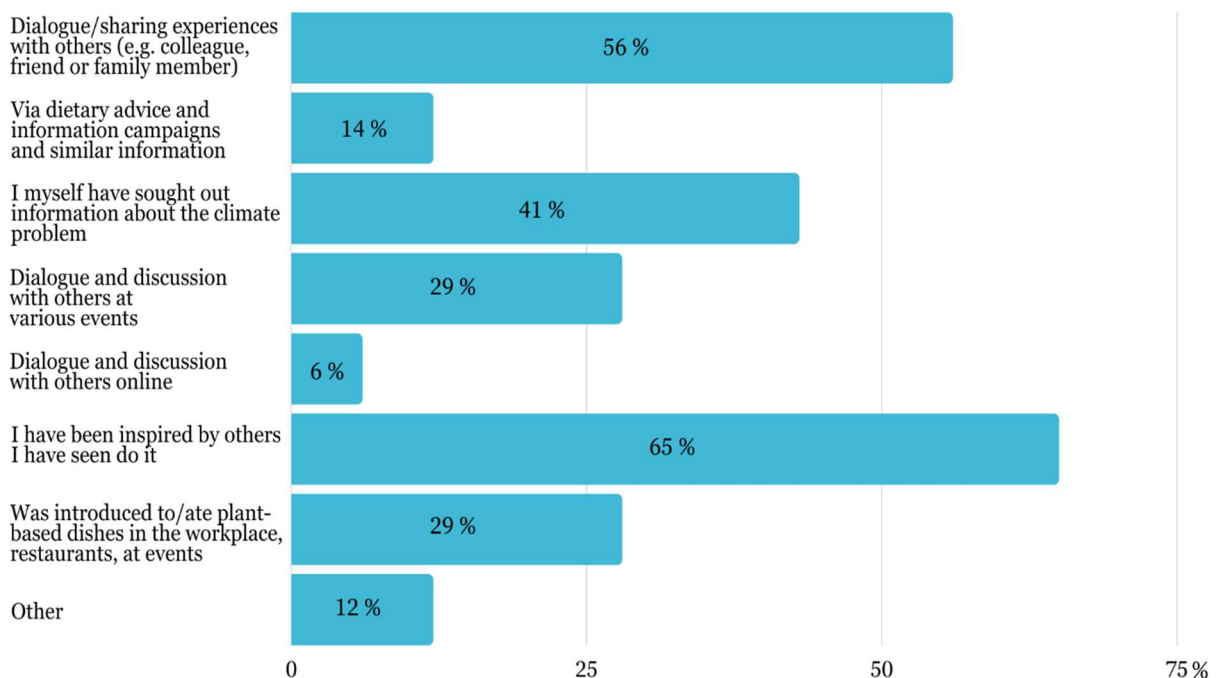

Figure 12: What have influenced to change consumption behavior, n=156.

The options that have influenced the respondents' consumption behavior the most are; I have been inspired by others I have seen do it with 65%, dialogue/sharing experiences with others (e.g. colleague, friend or family member) with 56% and I myself have sought out information about the climate problem with 41%. The response options with less influence towards meat reduction are; via dietary advice and information campaigns and similar information with 14% and dialogue and discussion with others online with 6%. Besides the response options, the respondents wrote other reasons that have influenced their attitude. The reasons are illustrated in Figure 13.
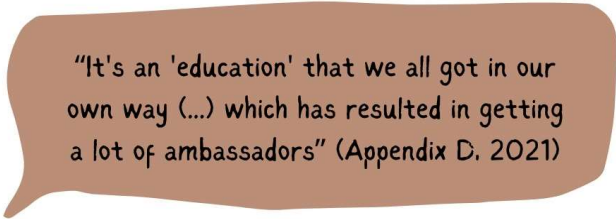

Figure 13: Responses towards changing/not changing behavior, n=18.

Each reason provides different perspectives in terms of economy, reducing other consumption domains, gastronomically curiosity, educational reasons and the more fixed attitudes towards unwillingness to make changes and that not everyone is 'climate hysterical'. The results from the questionnaire, Figure 12, could indicate that there is a potential in deliberative arenas to move from the yellow corridor to the orange corridor cf. Figure 11, and to create acceptance.

The next sections will elaborate on observations and evaluations from two citizens' assemblies. To investigate the potential of arranging consumption corridors, it is essential to investigate what current deliberative arenas of discussing climate actions can offer.
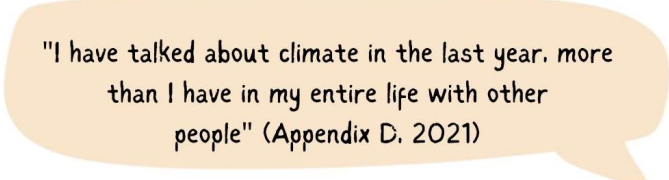
7.2 Observations and evaluations

Willingness to learn more about the climate crisis and express personal views and attitudes has persuaded randomly selected citizens to agree on participating in citizens' assemblies with the goal to make recommendations to local and national governments to tackle the climate crisis. The perspectives presented in this section are from Aarhus citizens' assembly cited as (Bøggild, 2923) and the Danish national climate citizens' assembly cited as (Appendix D, 2021). One of the participants from the climate citizens' assembly expressed during the interview (Appendix D, 2021):

"It's an 'education' that we all got in our own way (...) which has resulted in getting a lot of ambassadors" (Appendix D. 2021)
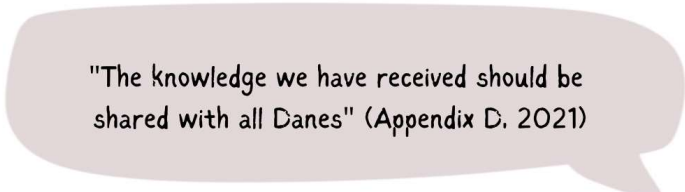
It has been a general observation that participating in citizens' assemblies creates increased knowledge and commitment to take climate action (Appendix D, 2021; Bøggild, 2023). Observations from Aarhus citizens' assembly show that the deliberative formal arena also is being transformed into informal deliberative arenas at home. One female whose husband was a member of the assembly expressed that the conversations and discussions that her husband had with the other members were discussed at home as well. The female expressed that because she has become more aware of the climate agenda, from talking with her husband, she has decided to be a member of the 'collective wardrobe' a clothes exchange community (Bøggild, 2023). An additional observation at the citizens' assembly event in Aarhus was that it was clear to see when talking with the members, that they are becoming ambassadors. Many participants have made actual changes in their everyday lives e.g. reducing meat consumption, using public transport more, buying recycled products and choosing to repair instead of buying new products. Some participants also mentioned that they haven't changed their behavior yet but are more aware of the climate debate (Bøggild, 2023). The participants during the event emphasised that citizens could easily change behaviors themselves without much political influence. Some sustainable choices are already accessible that are influenced and framed by laws and infrastructures that determine how individuals transport themselves, and how they eat and much more. However, it was stressed that a lot of the climate initiatives that are already being implemented in Aarhus they were not aware that these existed. Therefore, it was emphasized that there should be more information spread out to the citizens about these initiatives (Bøggild, 2023).

A participant from the climate citizens' assembly voiced that (Appendix D, 2021):

"I have talked about climate in the last year, more than I have in my entire life with other people" (Appendix D, 2021)

The statement could be said by many of the participants of the citizens' assembly because the majority feel like they have an obligation to spread the knowledge they have gained within society e.g. talking to colleagues at work or with local politicians (Appendix D, 2021). In fact, the participants emphasized that:

"The knowledge we have received should be shared with all Danes" (Appendix D, 2021)

The members do acknowledge that it would not be possible, but seeing how it affected them it would be preferable in a utopian world (Appendix D, 2021). Based on the observations and the above quotes, citizens' assemblies could provide a potential arena to create acceptance in terms of arranging consumption corridors.
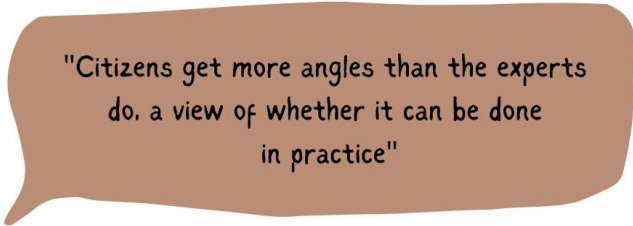
7.3 Adopting a new language

Language is argued by Pirgmaier (2020) to be a powerful medium of communication. The world is united in praxis – both in: *"the old-to-be-transformed and the new-to-come-into-being"* (Pirgmaier, 2020, p.281). The selection of language and choice of framings is thus important to reshape reality. In the light of letting go of the old vocabulary 'the more the better', it requires a broad deliberation that could take place in informal arenas. A new language about 'living well within limits' could take place all over society, from the kitchen table, in associations, at work, in cultures – between people. All individuals within society could engage in personal self-transformation directed at what it feels and looks like to 'live well within limits. By initiating these conversations, the discomfort that was indicated in section 6.2 about the fear of being negatively affected could be reduced. When picturing deliberation, it was research

in a study by Does and Petite (2022) that support for deliberation occurs when it is informal rather than formal discussions. It is argued that (Does and Petite, 2022):

> *"when dissatisfied citizens instead understand deliberation as low-key, informal talks similar to those they have in their daily lives, they are more inclined to view it as a form of respectful communication that could stimulate problem-solving, learning, and bridging differences"* (Does and Petite, 2022).

Even though citizens' assemblies are formal arenas, it has been indicated based on the observations and evaluations that it is possible to initiate conversations similar to those in everyday life. It indicates in relation to investigating the acceptance of arranging consumption, that dissatisfied citizens who might be skeptical towards the concept, then can participate in deliberative arenas where it is easier to express their views and in the end accept the premises of the concept by bridging the differences. An important element in relation to ensuring civic participation in deliberations is that the citizens are mini-experts. A participant from the climate citizens' assembly states that:

"Citizens get more angles than the experts do, a view of whether it can be done in practice"

This statement emphasizes that citizens being experts in everyday life is an important element, and it will also be important when starting the conversation about consumption corridors. A discussion towards what our needs are cannot be determined by experts. Experts can say general things e.g. related to health, but what can be accepted in everyday life, the citizens become the experts (Appendix D, 2021). The next section will elaborate on processual barriers towards citizens' assemblies as a deliberative arena to discuss consumption corridors and create ambassadors to spread the knowledge out into society.

7.4 Processual barriers

The evaluations from the climate citizens' assembly indicates that there was an unsatisfied feeling after handing over the recommendations to the governments. The members didn't feel like their work was being taking seriously, and that it seemed like a waste of time. However, when the members were asked to continue as a part of the assembly, 40% would like to continue, because of the belief that some would pick it up and take it seriously and because the

members feel that it is a privilege to be selected and given the opportunity to be ambassadors and to learn more. However, the opposite occurred at the event in Aarhus, where there was an obligation to take the recommendations seriously. However, the politicians were quick to acknowledge that they couldn't guarantee that all of the recommendations will be included in the decisions and policy design (Bøggild). Even though there have been different experiences with handing over the recommendations, it can be indicated that there is a little uncertainty about the purpose of citizens' assemblies. The participants of the climate citizens' assembly would like the process to be more than an advisory/representative acceptance body that does not have direct impact. It could preferably lead to debates that shape policies with knowledge of how it would work in everyday life. In the study by McGeown (2021) about lack of feedback it is emphasized that:

> "*the crux of the problem lies in the status of the citizens' assembly as an advisory body. Lacking legislative capabilities, these assemblies are effectively toothless; their influence over decision-making is curtailed by the state, both in terms of its prescribed mandate and uptake of the recommendations. This is not to undervalue the functions these assemblies serve as forums for learning, deliberating, and, ultimately, deepening citizen engagement with the decisions that govern their lives*" (McGeown, 2021).

In reference to realizing consumption corridors, it requires clear guidelines about creating an inclusive, fair and transparent deliberative process. A second processual barrier is related to the fact that participating in citizens' assemblies can be challenging in terms of the time that the participants use besides their everyday tasks to participate. A reason why, a participant from the clime citizens' assembly didn't want to be a part of the assembly again was because of the many hours that are allocated to meetings and presentations. With two kids, a new job and the daily chores, participating in the deliberations was not an option (Appendix D, 2021). Consequently, the process may have an overrepresentation of certain groups of people in society, and those do not live up to the potential of ensuring diversity across society with different backgrounds and cultures. As a result, deliberation has to come even closer to everyday life and to be integrated in the local community of which people are a part of every single day. If the deliberative process is not ensuring diversity and equity, the potential to arrange a fair consumption space vanishes.

Summary

Citizens' assemblies provide a potential arena to deliberate about the concept of consumption corridors. It has been a general observation that participating in citizens' assemblies creates increased knowledge and commitment to take climate action. Observations from Aarhus citizens' assembly and evaluations from the climate citizens' assemblies show that the deliberative formal arena also is being transformed into informal deliberative arenas at home and at work. A new language about 'living well within limits' could take place allover society, from the kitchen table, in associations, at work, in cultures – between people. All individuals within society could engage in personal self-transformation directed at what it feels and looks

like to 'live well within limits. By initiating these conversations, the discomfort that was indicated in section 6.2 about the fear of being negatively affected could be reduced. In reference to realizing consumption corridors, it requires clear guidelines about creating an inclusive, fair and transparent deliberative process to avoid processual barriers.

Discussion 8

This chapter will interpret the findings, in terms of the relevance and importance of this thesis and put them into the context of the overall research. Additionally, this chapter will elaborate on reflections regarding the validity and reliability of the design and outcome of this thesis.

8.1 Consumption corridors as utopia

This study has been investigating the potential to arrange consumption corridors in Denmark. At first sight, the concept of consumption corridors is a powerful planning tool for responsibly pursuing the good life in a world of ecological and social limits. However, creating a thriving world to meet the needs for all individuals, now and in the future, by identifying a fair consumption space seems utopic in our capitalist society. It would require a complete deconstruction, which when reflecting on how many diverging lifestyles there exist in today's society would be challenging. However, there are also similarities uniting human beings given the fact that we all share the same fundamental needs, which should be the core agreement within society to construct social cohesion among us. When talking about corridors, the narratives should not reflect restrictions but the positivity of pursuing a good life. The aim is: *"to give room for heterogeneity to be lived, without defining every inch of what happens in this room, but also without making it arbitrary"* (Di Giulio and Fuchs, 2014, p. 188). It requires a positive discourse towards showing that corridors arrangement is not equal to a miserable life with a low standard of living. Additionally, it requires front figures who advocate for the change, as well as making sustainable options accessible in order to actually discuss upper and lower consumption levels. A quote from the Danish climate minister Lars Aagaard Møller stresses that he does not believe that it is the individual Dane's task to solve the climate crisis, nor his (Tantholdt, 2023):

> *"I think my task is different. This is, among other things, to contribute to information. That is why I would also like to say to the Danes that eating a lot of meat is bad for the climate. You then have to decide for yourself what you want to do with that information"* (Tantholdt, 2023).

Lars Aagaard Møller additionally states (Tantholdt, 2023):

"I have to make sure that our tax system is turned around so that we can have a green transition. I have to make sure that our utility sector can roll out district heating and power lines so that we can get more charging points for the electric cars. I believe that the Danes know that meat is harmful to the climate" (Tantholdt, 2023).

By emphasizing that the citizens have to decide for themselves and that he believes that citizens know when products are harmful to the climate, it indicates that the realization of consumption corridors will never take place if that is how the politicians view consumption behavior. There has to be political courage to take chances that can make one unpopular. Current consumption patterns are devastating for the present populations and future generations, and it requires talking about our needs and satisfiers because not acting upon consumption behavior will cause environmental and social harm. In the interview with the climate minister, he also pronounces that: *"I don't want to point fingers at how other people eat. They have to deal with that themselves"* (Tantholdt, 2023). It can be argued to be problematic climate rhetoric by promoting this behaviour. It provides a one-sided focus on individuals, which should be avoided (Hansen and Nielsen, 2023). A challenge is whether there are enough of us who change habits quickly enough. Are socially shared ideas enough or does it require political involvement?. Because who decides what a fair consumption space is and is it naive to think that everyone will consume within collectively agreed limits? If the outcome tends to be diluted compromises, the whole idea of arranging consumption corridors will not have an effect and will not contribute to the new paradigm of sustainability past economic growth. With the prediction that it would be challenging to arrange consumption corridors, further discussion should discuss the vision of corridors focusing on where do conflicts between freedoms exist, what limits can we collectively agree upon. Broad deliberation on these questions across society can act as a counterweight against unlimited expansion of options (Gumbert and Bohn, 2021). Broad deliberations about the concept of consumption corridors start from the assumption that a good life can be a shared aim, it also acknowledges that how societies agree on what is 'a good life', and how it can be achieved, would need to be debated and operationalized in society.

8.2 Reflections

In this section, reflections on the scientific practice of this thesis will be assessed by providing reflections regarding validity and reliability. Validity refers to whether the results of the investigation measure what the investigation is supposed to measure. Validity is related to the collection of data and the interpretation of them (Middleton, 2023). Thereby, the validity of this thesis is determined by the connection between the research area, data collection and the conclusion. Based on the way that the obtained results have been interpreted in a structured way the research is considered valid. The various data sources, questionnaire and interviews, have contributed to ensuring the validity of this thesis. Reliability refers to the consistency and whether the results can be replicated with the same methods multiple times (Middleton, 2023). This thesis is considered reliable in the certain conditions that are present. However, the reliability is not considered high. The ideal aim was to get as representative a sample of the Danish population as possible, but since it was distributed across my network, besides the

Facebook groups, it is certain to say that most of the respondents are located in Jutland. Therefore, if the same questionnaire were to be distributed in Copenhagen, it may result in differing answers. If it were possible to distribute it across Denmark instead of making selections, it would be considered high reliability. Therefore, it could have been preferred to have distributed the questionnaire across other channels.

Recommendations 9

In this thesis, it has been highlighted that consumption corridors are difficult to envisage and attain in capitalist societies, starting the discussion is one first step towards revealing the potential.

The main findings from this thesis, that the recommendations are based on, are listed below:

- Willingness among Danish citizens to change consumption behaviour

- Discomfort concerning to what it means to live within limits/live climate-friendly

- Potential in deliberative formal arenas, citizens' assemblies, to create acceptance

- Potential in deliberative informal arenas to create acceptance and share experiences

The recommendations aim is to prepare society to consume differently, which is why the recommendations are regarding the design of deliberative arenas to create acceptance towards the concept of consumption corridors. The recommendations are presented in Figure 14.

Recommendations for the design of deliberative arenas when arranging consumption corridors

Point of direction	Action	Intended outcome
Create fair and inclusive deliberative arenas	Initiate more local informal deliberative arenas (work, home, school, institutions etc.)	Action-oriented citizens
Deliberativ arenas as advisory body and as policy-making impact	Increase public information (e.g. libraries, schools and associations)	Citizens as mini-experts Personal self-transformation
Informal conversations – similar to those in daily life	Construct a new climate rhetoric (The choice of language and framings is key for reshaping reality)	Common language of the good life in a world of ecological and social limits

Figure 14: Recommendations.

Conclusion 10

The concept of consumption corridors offers a need-based rationality as a new paradigm for sustainability to combat unsustainable consumption behavior. The effects of current efforts to cut back on consuming goods are still waiting. Therefore, this thesis has been investigating:

What is the potential to arrange consumption corridors in Denmark?

The success criterion of this thesis has been to improve 'collective acceptance' (Toumela and Balzer, 1998). A questionnaire was conducted to investigate the state of societal acceptance towards the concept of consumption corridors and interviews provided additional context to the questionnaire and context to citizens' assemblies as a potential deliberative arena. A conceptual framework has been developed to help structure the analysis and operationalize the concept of consumption corridors. Besides the concept of consumption corridor, the conceptual framework consists of theoretical perspectives on fundamental human needs and citizens' assembly. The literature review revealed that adopting a need-based language approach is claimed to create common ground and make society realize well-being divided. Gaining self-awareness about a given set of satisfiers helps to satisfy people's needs in terms of their own coherence with respect to other individuals. Investigating the state of societal acceptance indicated a willingness to change consumption behavior. Regarding the fear of being negatively affected, a large proportion of the respondents indicated discomfort. Therefore resources should be allocated to increase public information to articulate that corridors are not equal to a lower standard of living but that a good life can be lived within limits. When transitioning to a more concrete level with a focus on meat consumption, the results indicated divided opinions on how rarely one could accept to eat meat. Compared with an ideal meat consumption corridor that envisioned a new meat system, the results showed that a potential corridor based on the respondents' answers only slightly overlapped. Hence, broad public deliberation is central to a gradual acceptance of consumption corridors. It has been indicated that citizens' assemblies as a deliberative formal arena provide a potential arena to deliberate about consumption corridors. Observations and evaluations stress that participating in citizens' assemblies result in increased knowledge and commitment to take climate action and be an ambassador of the Danish population. To make sure that everyone within society has the opportunity to be a part of conversations regarding consumption corridors, needs and satisfiers, informal deliberative arenas have been identified to provide a potential to create broad inclusive debate. In conclusion, the concept of consumption corridors represents a powerful planning tool for responsibly pursuing the good life of all in a world of ecological and social limits. It would require a complete deconstruction of our capitalist society, which when reflecting on how many diverging lifestyles there exist in today's society would be almost impossible. However, there are also similarities uniting human beings given

the fact that we all share the same fundamental needs, which should be the core agreement within society to construct social cohesion among us. Recommendations for the design of deliberative arenas to create acceptance have been identified. Actions that set the framework for conversations about limits. These actions are to initiate more local informal deliberative arenas which are closer to the citizen's everyday life. A second action is to increase public information e.g at libraries and schools, to promote action-oriented citizens. A third action is constructing a new climate rhetoric because it has been indicated that the choice of language and framing is essential in order to reshape reality. The narratives and the intended outcome should be needs and well-being at a collective level. In conclusion, this thesis has investigated the potential to arrange consumption corridors in Denmark. There is a window of opportunity to begin deliberation on creating a fair consumption space through deliberative arenas. Since the success criterion of this thesis was to archive collective acceptance of the concept of consumption corridors, further research should be carried out to elaborate on what is a fair consumption space, how can it be determined, and where do conflicts between freedoms exists to agree on what is a good life within limits.

References

Andersen, 2007, Kritisk realisme som perspektiv i socialt arbejde - en introduktion og forskningsoversigt

Ari and Yikmaz, 2019, Greening of industry in a resource- and environment-constrained world, Handbook of Green Economics, Chapter 4

Balyeijuse, 2019, Sustainable Development Practice: The Central Role of the Human Needs Language, Social Change (New Delhi), Volume 49 (2)

Brand et al. 2021, From planetary to societal boundaries: an argument for collectively defined self-limitation, Sustainability: Science, Practice, and Policy, Volume 17 (1)

Buhl et al., 2017, How Much Environment Do Humans Need? Evidence from an Integrated Online User Application Linking Natural Resource Use and Subjective Well-Being in Germany, Resources (Basel), Volume 6 (4)

Creswell, 2009, Research Design: Qualitative, Quantitative and Mixed methods Approaches, Third Edition

Cruz et al., 2009, Towards a systemic development approach: Building on the Human-Scale Development paradigm, Ecological economics, Volume 68 (7)

Defila and Giulio, 2020, The Concept of "Consumption Corridors" Meets Society: How an Idea for Fundamental Changes in Consumption is Received, Journal of consumer policy, Volume 43(2)

Di Giulio and Fuchs, 2014, Sustainable Consumption Corridors: Concept, Objections, and Responses, GAIA - Ecological Perspectives for Science and Society, Volume 23 (1)

Does and Petit, 2022, Picturing deliberation: How dissatisfied citizens make sense of it, International political science review

Dubois et al., 2019, It starts at home? Climate policies targeting household consumption and behavioral decisions are key to low-carbon futures, Energy Research & Social Science, Volume 52

Earth Overshoot Day, n.d (a), About Earth Overshoot Day, https://www.overshootday.org/about-earth-overshoot-day/

Earth Overshoot Day, n.d (b), Past Earth Overshoot Days, https://www.overshootday.org/newsroom/past-earth-overshoot-days/

Earth Overshoot Day, n.d (c), Country Overshoot Days, https://www.overshootday.org/newsroom/country-overshoot-days/

Escobar and Elstub, 2017, Forms of Mini-publics, newDemocracy Foundation

Flyvbjerg, 2010, Fem misforståelser om casestudiet, Hans Reitzels forlag, kapitel 22 https://www.researchgate.net/publication/244485915_Fem_misforstaelser_om_casestudiet

Fuchs et al., 2021, Consumption Corridors – Living a good life within sustainable limits, Routledge (BOG)

George, 2023, Types of Interviews in Research | Guide & Examples, https://www.scribbr.com/methodology/interviews-research/

George, 2023, What Is Participant Observation? | Definition & Examples, https://www.scribbr.com/methodology/participant-observation/

George, 2022, Types of Interviews in Research | Guide & Examples, https://www.scribbr.com/methodology/interviews-research/

George and Merkus, 2022, Structured Interview | Definition, Guide & Examples https://www.scribbr.com/methodology/structured-interview/

Giulio and Defila, 2019, The 'good life' and Protected Needs, Routledge Handbook of Global Sustainability Governance, Chapter 8

Giulio and Fuchs, 2014, Sustainable Consumption Corridors: Concept, Objections, and Responses, GAIA - Ecological Perspectives on Science and Society, Volume 23(1)

Global Footprint Network, n.d, Earth Overshoot Day, https://www.footprintnetwork.org/our-work/earth-overshoot-day/

Godin et al., 2020, Doing laundry in consumption corridors: wellbeing and everyday life, Sustainability, Volume 16 (1)

Goodin and Dyzek, 2006, Deliberative Impacts: The Macro-Political Uptake of Mini-Publics, Politics & society, Volume 34 (2)

Gough, 2020, Defining floors and ceilings: the contribution of human needs theory, Sustainability: science, practice, & policy, Volume 16 (1)

Guillen-Royo, 2010, Realizing the 'wellbeing dividend': An exploratory study using the Human Scale Development approach, Ecological economics, Volume 70 (2)

Guillen-Royo, 2014, Human needs and the environment reconciled: Participatory action-research for sustainable development in Peru, Sustainable Consumption and the Good Life, 2014, p.126-145

Guillen-Royo, 2017, Sustainable development in times of economic crisis: A needs-based illustration from Granada (Spain), Journal of cleaner production, Volume 150

Guillen-Royo, 2020, Applying the fundamental human needs approach to sustainable consumption corridors: participatory workshops involving information and communication technologies, Sustainability: science, practice, & policy, 2020, Volume 16 (1)

Gumbert and Bohn, 2021, Are liberal objections to consumption corridors justified? On the relation of freedom and limits in green liberal thought, Sustainability : science, practice & policy, Volume 17 (1)

Hansen and Nielsen, 2023, Consumption, Sustainability and Everyday Life (BOG)

Hertwich and Peters, 2009, Carbon Footprint of Nations: A Global, Trade-Linked Analysis, Environmental Science and Technology, Volume 43 (16)

Hotta et al. 2021, Expansion of Policy Domain of Sustainable Consumption and Production (SCP): Challenges and Opportunities for Policy Design, Sustainability, Volume 13 (12)

IPPC, 2022, Climate Change 2022 – Mitigation of Climate Chang

Jacquet, 2017, Explaining non-participation in deliberative mini-publics, European Journal of Political Research, Volume 56(3)

Jolibert et al., 2011, Should We Care About the Needs of Non-humans? Needs Assessment: A Tool for Environmental Conflict Resolution and Sustainable Organization of Living Beings, Environmental policy and governance, 2011, Volume 21 (4)

Jolibert et al., 2014, Addressing needs in the search for sustainable development A proposal for needs-based scenario building, Environmental values, Volume 23 (1)

Kanerva, 2021, The New Meatways and Sustainability Discourses and Social Practices

Kanerva, 2022, Consumption Corridors and the Case of Meat, Journal of consumer policy, Volume 45 (4)

Lindellee et al., 2021, Operationalizing sustainable welfare and co-developing eco-social policies by prioritizing human needs, Global social policy, Volume 21 (2)

Lombardi and Cembalo, 2022, Consumption Corridors as a new paradigm of sustainability, Resources, Conservation & Recycling, Volume 184

Madsen and Jensen, 2022, https://www.altinget.dk/klima/artikel/concito-vores-forbrugeradfaerd-staar-i-vejen-for-det-gode-og-klimavenlige-liv

Max-Neef, 1991, Human Scale Development - CONCEPTION, APPLICATION AND FURTHER REFLECTIONS

McCombes, 2022, Survey Research | Definition, Examples & Methods, https://www.scribbr.com/methodology/survey-research/

McGeown, 2021, Citizens' Assemblies Won't Save Us, https://www.greeneuropeanjournal.eu/citizens-assemblies-wont-save-us/

Middleton, 2023, Reliability vs. Validity in Research | Difference, Types and Examples, https://www.scribbr.com/methodology/reliability-vs-validity/

Nelson et al., 2013, Climate change's impact on key ecosystem services and the human well-being they support in the US, Frontiers in Ecology and the Environment, Volume 11 (9)

OECD, n.d., Innovative Citizen Participation and New Democratic Institutions: Catching the Deliberative Wave

O'Gorman, 2010, Global Warming: A Tragedy of the Commons, https://digitalcommons.osgoode.yorku.ca/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1099&context=clpe

Pirgmaier, 2020, Consumption corridors, capitalism, and social change, Sustainability: Science, Practice, and Policy, Volume 16 (1)

Sahakia et al., 2021, Advancing the concept of consumption corridors and exploring its implications, Sustainability: Science, Practice, and Policy, Volume 17 (1)

Tantholdt, 2023, Ny minister vil ikke være et forbillede – spiser rødt kød og kører dieselbil, https://nyheder.tv2.dk/politik/2023-01-17-ny-minister-vil-ikke-vaere-et-forbillede-spiser-roedt-koed-og-koerer-dieselbil

Telemo, 2015, Self-Governance in the Commons, https://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/10130/Kandidatarbete_REV3.pdf?sequence=1&isAllowed=y

Toumela and Balzer, 1998, Collective acceptance and collective social notions, Synthese (Dordrecht), Volume 117 (2) ÅRSTAL ER RETTET

Urhammer and Røpke 2017, Biophysical limits to growth, https://www.ecomacundervisning.dk/metabolisk-vaekst/?lang=en

Videnskab.dk, 2019, Hvad er et paradigme?, https://www.youtube.com/watch?v=xAuwrsx54sU

Vita et al., 2019, Connecting global emissions to fundamental human needs and their satisfaction, Environmental research letters, Volume 14 (1)

Vladimirova, 2021, Consumption corridors in fashion: deliberations on upper consumption limits in minimalist fashion challenges, Sustainability, Volume 17 (1)
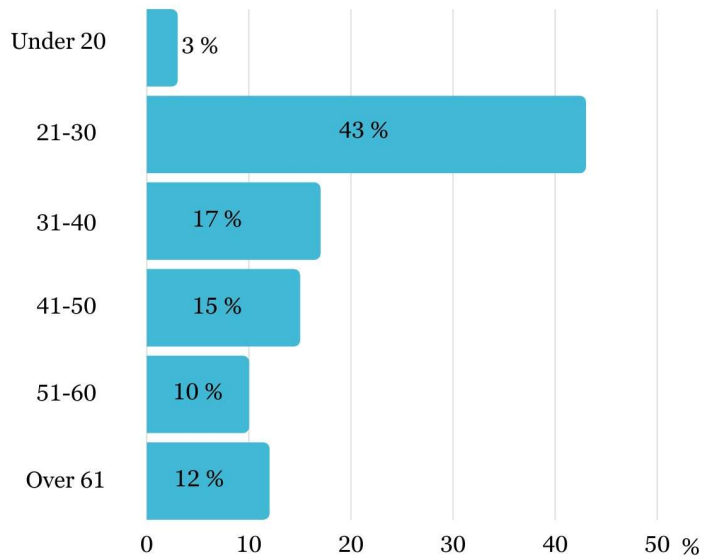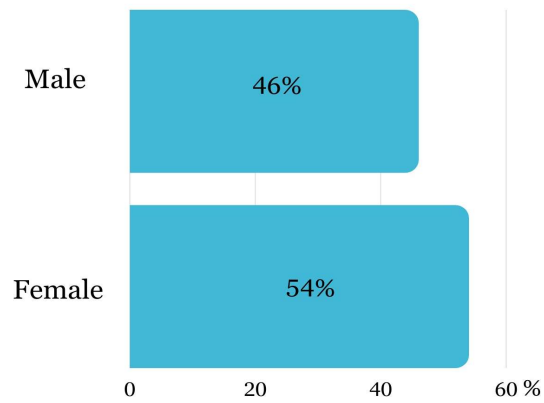
Vries, 2020, How the bystander effect can explain inaction towards global warming, https://blogs.lse.ac.uk/businessreview/2020/01/07/how-the-bystander-effect-can-explain-inaction-towards-global-warming/
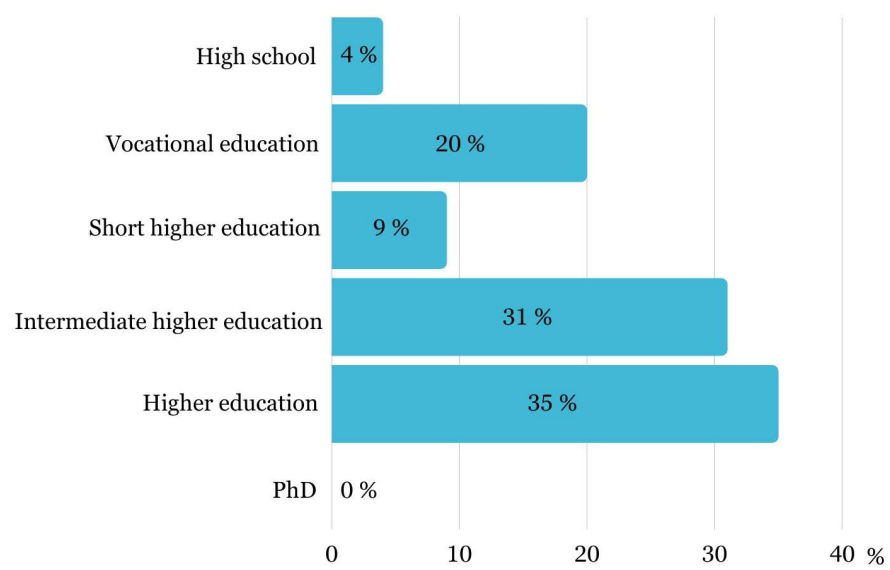
Willis et al., 2022, Deliberative democracy and the climate crisis, Wiley interdisciplinary reviews. Climate change, Volume 13 (2)

Wolfgang and Benedikt, 2020, Human Needs, Consumerism, and Welfare, Cambridge of journal of economics, Volume 44 (2)

Appendix

A Background variables

High school	4 %
Vocational education	20 %
Short higher education	9 %
Intermediate higher education	31 %
Higher education	35 %
PhD	0 %

0   10   20   30   40 %

B Resume of field notes

- Between 70-80 people, seems to be relatives to the participants as well as other citizens
- Politicians are also present
- The event starts with a presentation of how the evening will unfold.
- A total of 27 members of the citizens' assembly are present.
- The members talk about their experiences of being part of the citizens' gathering (all good; empowerment, learning, spreading their knowledge with friends and family) and tell a little more about the reasons and the process of their recommendations.
- Says they hope the recommendations will be used by the policies.
- Speaking from politicians, is much admired by the process of expanding the democratic conversation - they promise that they will take their recommendations into the political decisions but are also told that it is not certain that they will all be used.
- After the presentation and speech, it is possible to move around to various posters that tell a little more in depth about their recommendations.
- I get into a conversation with a different lady from the citizens' assembly, where she happily talks about the process and how they came up with these particular recommendations, she emphasizes that it has been exciting to be put together with so many different people, who each come each with their own experiences.
- While we are talking, another woman joins the conversation and tells us that she is married to one of the men from the civic assembly. We talk about circular economy, where she asks if she has become of the concept of the collective wardrobe, and that the conversations that they have had in the citizens' assembly, her husband has told her at home, which has inspired her.
- I go over to another woman, where she starts talking about the recommendation while I stand and read the poster. One of the things she tells is that she was actually very surprised at how many measures already exist, sometimes when they came up with a recommendation, they were told that it was already a measure. I ask if she has changed her habits by being part of the civic gathering, she has started eating less meat and taking more public transport when possible.
- Others I got into a conversation with during the evening, bought more used and had his washing machine repaired instead of buying a new one.
- I get into a conversation with another member who expresses that it has been an exciting process and that he has learned a lot, but that he has not changed that much in his everyday life, but that he is more aware of the climate problem - the same got I told from 2 other members

C Interview notes in relation to questionnaire

Male, 52

People usually come to an agreement, it is a good way to make some framings, it would be easier to understand if you are living the climate friendly life that is said to lived,

Female, 48

Urgency, some does not contribute and act, my kids and grandkid's opportunity to satisfy the same needs with the same resources, there are many who are changing small things in relation to the climate, including me, I think it is possible

Female, 42

The belief that it is possible, didn't through about the concerns or difficulty of doing it, based on the urgency of the climate crisis, limits may be the solution, there are many who are beginning to change their habits

Male, 55

It would be preferably with limits, many Danes are not doing anything, I do different things (food, transport, energy) negotiated frame would be a good thing, the democratically agreement does not scare, if it is the common mindset among Danes that action is needed then it should be possible, and hopefully limits will not be decided so strict that it is not possible to live a good life

Male, 36

Good approach, our society is already limited by laws and agreements that inhibits behavior (driving limits, alcohol limits etc.), limits that people put off with, why shouldn't that be the case with implementing limits on consumption, people always come to some sort of agreement, whether they like it or not, they will settle

D Interview notes from the climate citizens' assembly

First interview:

- Inhibiting with digital meetings
- Readings of competences and power relations
- What is the purpose of the citizens' meeting, somewhat uncertain
- Everyone must be involved, it takes political courage, it takes muscle to make oneself unpopular
- The knowledge we have gained must go out and work in the Danish population, but there is a need for translators, who will put our role into play
- The recommendations must be included in the decision-making processes
- Talking about the training that the members have received:

    "Its and education that we all got in our own way (...) which has resulted in getting a lot of ambassadors"

- Need for all levels of knowledge and skills
- It is important to be able to read competences and power relations
- We can become good ambassadors, the spreading effect and educational effect that is one of the most important things
- Humble contribution

Secound interview:

- Our purpose, how do we get it down so that it becomes every day, that's how we are experts:

    "Citizens get more angles than the experts do, a view of whether it can be done in practice"

- The Citizens' Assembly represent several angles, we are different and are taken from all over Denmark
- A little disappointed with the delivery of the recommendations, will it move anything at all
- Lack of feedback
- Maybe our work has been a game for the politicians, not sure that it can be used for anything
- Have had debates with others, take home the knowledge they have gained in the citizens' parliament, share knowledge with colleagues:

    "I have talked about climate in the last year, more than I have in my entire life with other people"

- The knowledge that the members have gained, all Danes should be told, then we can move:

"The knowledge we have received should be shared with all Danes"

- Recognizes, however, that it is not possible and will be difficult
- They feel that they have a duty to push on with knowledge, to share it
- Has become involved in sustainability at work
- Small changes, transport, eating less shopping, it was not something that I did not know before, but now that I have participated in the process, I can move a little
- Even if there is a lack of response, 40% would like to continue
- It is a gift to participate again, an opportunity to represent the people of Denmark
- Others could not make it work in everyday life
- In terms of time, it requires a lot, difficult when you also have children etc. on the side
- Although many were disappointed, there is a belief that some will pick it up (the recommendations)