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„Local and global perspectives on climate change mitigation in the deliberative process of a local climate citizens' assembly"

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Abstract

Researchers in the field of climate communication and activists alike have been looking for successful strategies to shape public attitudes about global warming and increase support for mitigation policies. One approach, intuitively believed to decrease people's psychological distance to climate change, is to present its local consequences instead of the distant or global ones. However, research on this so-called 'proximising' strategy has been inconclusive about its effectiveness in influencing people's attitudes and policy support.

Most studies have analyzed the influence of geographical proximity of climate impacts by measuring framing effects in individual survey experiments. To explore the use of proximate and distant perspectives on climate change in a deliberative setting, I examined the transcribed communication of the Washington Climate Assembly, a locally organized citizens' assembly on climate mitigation. Using thematic analysis, I analyzed how experts, stakeholders, and participants talked about local and distant consequences of climate change, respective responsibilities, and locally relevant aspects of climate policies.

Results of the analysis suggest that practitioners and commissioners should consider presenting information on both local and more distant climate impacts and including adaptation measures along with mitigation policies into the scope of future climate assemblies. Moreover, the study shows that people do not just consider the balance of local costs and benefits of mitigation policies, as earlier literature suggested, but are also concerned with how much the policy decision-making involves local communities and reflects their particular needs.

Contents

Introduction

As part of their anthropological research on the relationship between fresh water, climate, and humans living in the Arctic, in the summer of 2006, Marino and Schweitzer conducted interviews with Inupiaq residents of northwestern Alaska (Marino/Schweitzer 2016, 209ff). Indigenous peoples of the Arctic are among the most affected by climate change communities worldwide, which is why they have been experiencing an abundance of scientists, journalists, and photographers visiting their villages in the last decades to report on the visible impacts of climate change in the area (cf. ibid, 212). Despite frequent contact with scientists, the local consultants showed little confidence in speaking about climate change during the interviews. They associated the term exclusively with scientific discourse, containing specific vocabulary from various fields they knew from the visitors or the media but existing outside of their personal experience and their competence to talk about. However, when researchers asked the same individuals about changes in the local environment, without mentioning climate change or global warming, they received detailed descriptions about specific water bodies drying up or unusually rainy seasons, including long-term observations passed on through generations. This example shows a remarkable gap between the global climate change discourse and the local everyday experiences of "ordinary" people, arguably due to science dominating the public climate debate and undervaluing other types of knowledge that would be more approachable to the wider public (see, e.g., Blue 2016).

Similarly to indigenous communities, "modern" and urbanized western societies, which are broadly familiar with the global climate change issue, often do not recognize it as something that would concern them personally either (see, e.g., Marlon et al. 2020). To address this discrepancy between the scientific knowledge and public perception of climate change, scholars in climate communication have been arguing for drawing people's attention more to climate change's impacts on their local areas instead of filling them with dismay through the ubiquitous images of polar bears on melting ice caps (see, e.g., Moser/Dilling 2011). The chairman of the Intergovernmental Panel on Climate Change (IPCC), Rajendra Pachauri's, also expressed the need for a more local approach as early as 2003. Commenting on introducing regional climate forecasts to the IPCC's[1] assessment reports, Pachauri stated: "I am aware that there is an opportunity for much political debate when you start to predict the impact of climate change on specific regions, but if you want action you must provide this information" (Schiermeier 2003,

[1] Intergovernmental Panel on Climate Change

879). Researchers in climate communication have been studying the effects of various frames on social attitudes to find more effective ways of communicating about climate change, including the local versus global frame (see, e.g., Scannel/Gifford 2013; Nisbet 2009; Moser/Dilling 2011). However, presenting climate change from the local, i.e., geographically proximate perspective, while a seemingly common-sense way to make people care for it more, does not serve as a simple solution and needs further investigation (see, e.g., Brügger et al. 2015a).

One way of including the public in decision-making regarding climate policies, especially on the local and regional level, has been public deliberation. Within the last years, we can observe a global trend toward organizing public deliberation events, particularly the so-called 'mini-publics', i.e., gatherings of randomly chosen citizens, to discuss local climate policies (see, e.g., Romsdahl et al. 2018). Proponents of deliberative democracy argue that it is much better suited to address global climate change effectively than electoral democracies (see, e.g., Dryzek/Niemeyer 2019; Baber/Bartlett 2018). Also, the climate movement has made the organization of deliberative forums on climate policy one of its main demands (see, e.g., Extinction Rebellion 2019). As a place of careful debate between various local community members, such events offer a convenient opportunity to examine how people make sense of climate change together. For this reason, I will base my research on the observation of a locally organized climate citizens' assembly.

To explore the use of global and local frames in a deliberative setting, I will attempt to answer the following research question:

RQ: What roles do local and global perspectives on climate change play during a locally organized public deliberation on climate policies?

The first chapter will review a theoretical attempt to explain the insufficient public support for climate action by the lack of appropriate framing and a high psychological distance to climate change. It will discuss earlier findings on the effectiveness of some of the framing strategies and the research question in more detail. I will also present the application of deliberative mini-publics for addressing climate change. In the second chapter, I will briefly explain the method of analysis. Chapter 3 will describe the analysis results of a climate assembly case study. I will discuss the results in Chapter 4, following the theoretical framework outlined in the first chapter.

1. Theory

In this chapter, I will introduce the relevance of frames for climate change communication in general and review past research on the effects of framing climate change from a local perspective. I will also clarify the application of the concept of frames in this thesis and their operationalization for answering my research question. Finally, I will outline the concept of deliberative democracy and its relation to climate policy and present citizens' assemblies as a prevalent form of deliberative mini-publics.

1.1. Communicating about climate change

As global warming has been progressing, and its observable impacts have already been greater than previously estimated (cf. IPCC 2022, SPM-8), researchers and activists have been searching for ways to motivate individual and collective action aimed at counteracting the most negative scenarios. The past decades of addressing climate change in the public debate have shown that some of the widely applied communication strategies, although seemingly appropriate, have proved insufficient. For example, a common way of presenting climate change, motivated by the need to raise public awareness about the urgency of the issue, has been 'motivation by fear': projections of an unavoidable global catastrophe, disturbing images of disastrous wildfires, floodings, or droughts, and wildlife losing its natural habitats, accompanied by other means of rousing a sense of doom. Contrary to the communicators' intentions, this strategy has proved largely ineffective in empowering action (cf. Moser/Dilling 2011, 164f). Moreover, it is especially susceptible to climate change skeptics, who can successfully discredit this messaging style as mainstream media alarmism and exaggeration (cf. Nisbet 2009, 19f; see also Moser/Dilling 2011). For the worrying prognoses about the potential climate change consequences to be persuasive, instead of inducing fatalism and apathy, they need to be accompanied by recommendations of effective solutions to the threat, i.e., collective and individual action, as well as messages "enhancing perceptions of collective efficacy" (Maibach et al. 2008, 495; see also, e.g., Scannel/Gifford 2013).

Another widespread assumption underlying a significant share of public communication about climate change is the so-called 'information deficit model', which links the lacking concern and engagement of the public to the lack of information and understanding of climate science (cf. Moser/Dilling 2011, 163). While the information deficit model "assumes that information and understanding are necessary and sufficient conditions for behavioral or political engagement", available evidence does not prove the accuracy of this model (ibid.). In other words, more profound knowledge does not necessarily predict

a higher concern and perceived relevance of climate change (cf. Kahlor/Rosenthal 2009, 404). Research within the field of climate communication suggests that instead of simply presenting scientific facts, communication about climate change should be tailored to fit the culture, values, interests, and knowledge of the particular audience (cf. Moser/Dilling 2011, 166; see also Hulme 2009, 217ff, Leiserowitz 2009, Nisbet 2009), as well as make use of adequate frames (see, Lakoff 2010). One of the aspects considered potentially relevant to the public is geographical proximity, i.e., the consequences of climate change for the given local area. I will discuss this strategy in more detail in the following section.

1.2. Climate communication – framing climate change from the local perspective

In this section, I will present an approach from the field of climate communication, arguing for careful framing of climate change from the local perspective, and review some of the research on the results of applying this strategy.

This perspective shares the dissatisfaction with the deficit model, primarily due to its ineffectiveness in changing people's attitudes. As George Lakoff (2010, 73) argues, it is not enough to present to people data and information on climate change to inspire them to support more radical climate policies:

> What actually happens is that the facts must make sense in terms of their system of frames, or they will be ignored. The facts, to be communicated, must be framed properly. Furthermore, to understand something complex, a person must have a system of frames in place that can make sense of the facts. In the case of global warming, all too many people do not have such a system of frames in the conceptual systems in their brains. Such frame systems have to be built up over a period of time.

Frames can be described as "interpretative storylines that set a specific train of thought in motion" (Nisbet 2009, 15), placing information in one of the available contexts. Framing is not synonymous with manipulation, although it can be used in a manipulative way, given what is already known about how people react to ambiguous information, depending on how it was presented to them (see, e.g., Kahneman 2002). Due to the complexity of the communication process, it is unavoidable to frame information in some way by emphasizing some of its elements over others. Frames help us organize information, make sense of complex issues, and filter their most relevant aspects (cf. Nisbet 2009, 16). Forsyth (cf. 2003, 77ff) points out that analyzing frames of (e.g., environmental) political debate is crucial not only for educating and promoting an understanding of ecological reality but because frames, although more often implicitly than explicitly, shape the actual policies. Nevertheless, they should not be equated with specific policy positions, as they can potentially support various arguments (e.g., the

frame of economic development can be used by both opponents and supporters of a 'green' energy sector transformation). However, they can be more frequently used with some than others (cf. Nisbet 2009, 18).

One of the frames considered potentially effective in communicating climate change is to present its consequences from a local perspective so that people perceive it as closer and more personally relevant to them (cf. Scannel/Gifford 2013, 63f). Surveys from, e.g., the United States and Great Britain have shown a lower concern of respondents about the impacts of climate change on their local communities and their own lives compared to the global consequences (see, e.g., Downing/Ballantyne 2007, Leiserowitz 2009). This is thought to be the reason why the issue of climate change consistently ranks lower in priority than other concerns, as "[l]ocal threats are generally perceived as more salient and of greater urgency than global problems" (Leiserowitz 2009, 53), and climate change is not seen as one of them.

This communication strategy is based on two theoretical assumptions from psychology: personal relevance of a topic, which can increase the motivation for an attitude change (cf. Maio/Haddock 2007, 576), and construal level theory, operating with the notion of 'psychological distance'. The psychological distance can be observed in four different dimensions: temporal (e.g., an event occurs sometime later in the future), spatial (something happens in a remote location), hypothetical (an event is less likely to take place), and social (something happens to people different than oneself) (cf. Milfont 2010, 32). According to the theory, the greater the psychological distance of an event, the more distant and abstract it appears, which further affects peoples' predictions, evaluations, and actions (cf. ibid.). As climate change can be seen as a situation psychologically distant in several ways (cf. ibid.), acquainting people with possible risks of climate change to their local environment – what is referred to as 'proximising' (Loy/Spence 2020) – is presumed to decrease the perceived spatial psychological distance of the issue.

Shwom et al. (cf. 2008, 346) name further premises for the hypothesis that geographical proximity can be important for people's perception of environmental impacts. First, the logic of the commons suggests that the more local the impact area, the more it will be treated as a private rather than a public good and therefore more actively stewarded. Second, people might be willing to pay to live further away from a negative environmental impact. And finally, the so-called NIMBY ("not in my backyard") phenomenon demonstrates that people are more willing to act to prevent a negatively perceived impact (e.g., placement of a waste treatment facility or windmills) from happening in their proximate area than when it is planned elsewhere. What follows from

these considerations is the assumption that people will be more supportive of policies mitigating local environmental impacts (or adapting to them) than policies addressing issues perceived as more spatially distant from them.

There have been several ways of studying the relevance of the local perspective for successful climate change communication and raising popular support for climate change mitigation and/or adaptation policies[2]. The following section will review several studies approaching this question.

1.2.1. Perception of climate impacts

One of the ideas behind proximising climate change is to make it feel less distant and abstract by presenting its impacts as proximate and thus concerning people more personally. However, studies examining the perception of local climate change impacts seem to discover findings surprisingly contradictory to such intuitions. Uzzell (2000) compared the results of studies conducted in Australia, Ireland, Slovakia, and England over three years of the previous decade. In all three studies, respondents were asked to assess the seriousness of environmental problems (including global warming) on various distance levels: for themselves, for the local town area, for the national level, for their continent, and the global level. The studies' results were consistent in demonstrating that respondents perceived environmental problems to be more serious the more geographically distant the locale. The impact of environmental problems was considered the lowest for themselves personally and the local town, and steadily rising towards the global scale.

Several newer studies confirmed that people perceive geographically distant impacts of climate change or other environmental risks to be more severe than the local ones (see, e.g., a study in France by Fleury-Bahi (2008)). This was also true when participants were presented with projections of future climate change consequences, even though they were similar for both local and distant locations (see Spence and Pidgeon (2010)). Uzzell (cf. 2000, 315) recognizes these observations as a form of emotional denial (on the local scale) due to the perceived uncontrollability of the environmental threat, leading to inaction. Moreover, the low assessed seriousness of the problems in respondents' immediate environment can be understood as a form of an optimism bias (in this case of

[2] In the context of climate policies, mitigation is defined as "the prevention of greenhouse gas emissions" (Fröhlich/Knieling 2013, 11) in various sectors (particularly energy, transport and agriculture). Adaptation, on the other hand, aims at adjusting the human infrastructure to the expected changed weather conditions and addresses especially public health and urban development (e.g. urban heat islands, overheating), as well as water management and flood protection (cf. ibid.).

'environmental hyperopia', ibid. 314): a belief that unwanted experiences will more likely happen to others, than to the self (cf. ibid., 316). This kind of bias is also more common in the case of an uncontrollable threat (cf. ibid.).

As depicted in Figure 1, a comparison of data from seven waves of the "Climate Change in the American Mind" survey (Leiserowitz et al. 2009, 2014, 2016, 2018, 2019, 2020, 2021) demonstrates how the perception of the risk posed by climate change has been rising since 2009 for all points of reference. Nevertheless, it still confirms the regularity of risk perception dropping with increasing proximity to the respondent. As it is evident from these results, Americans see climate change as clearly less dangerous to themselves, their families, and their communities than to the rest of the country and more distant areas or groups.

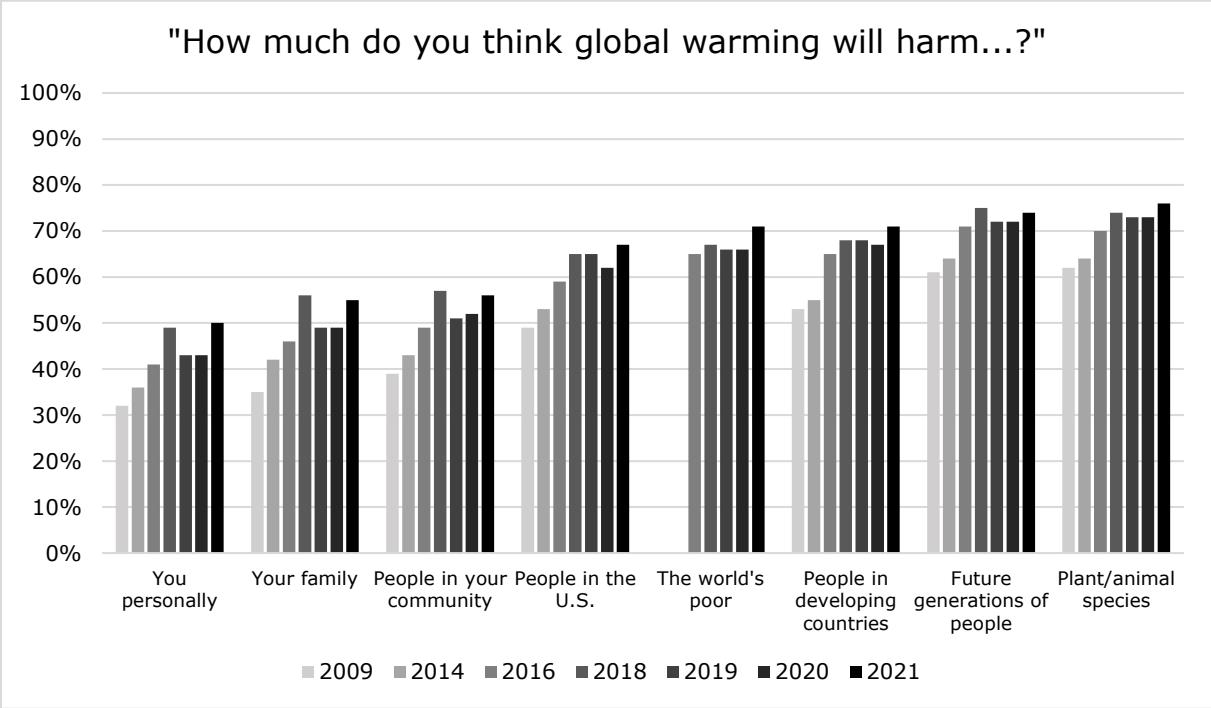

Figure 1: Percentage of Americans expecting a "moderate amount" or a "great deal" of harm by global warming to the respective groups. Source: Climate Change in the American Mind report, waves 2009, 2014, 2016, 2018, 2019, 2020, 2021.

1.2.2. Responsibility for the local area

Studies suggesting the existence of a local hyperopia effect do not necessarily undermine the importance of a continued effort to raise the public's awareness of the local impacts of climate change. Analyzing the popular perception of climate change is useful to improve our understanding of what determines people's engagement, which can eventually lead to pro-environmental actions and behaviors. In results reviewed by Uzzell (cf. 2000, 314), the perceived individual responsibility for the state of the environment was the highest

for the local community and significantly lower for the more remote areas. This discrepancy can play a role in understanding the low public engagement in environmental issues, as people feel most responsible for the area where they perceive minor problems. On the other hand, Fleury-Bahi (2008) found that, indeed, when respondents recognized a higher risk for themselves, their town, and their country, they were more motivated to behave pro-environmentally. Moreover, an experiment conducted by Wiest, Raymond, and Clawson (2015) showed that although participants who watched a video about local impacts of climate change were not more concerned about the national and global impacts of climate change in general, they assessed the seriousness of the issue for their state (Indiana) as significantly higher than those who were exposed to the global frame. Studies have also been done on the cognitive effects of presenting people with computer visualizations of the local landscape in various climate change- or active policy response scenarios, which might convince them of the necessity to address the issue of global warming, as well as arouse emotional response and behavioral change (see, e.g., Sheppard 2005).

1.2.3. Place attachment

The strategy of proximising climate change assumes that reducing the geographical distance will make the issue more personally relevant to citizens. Devine-Wright (cf. 2013, 67) points out that people might not necessarily have a stronger sense of place attachment to the area they live in, so 'local' should not be equated with 'more relevant' without caution (see also Brügger et al. 2015a). What plays a role here is how important a place is to an individual and how much they identify themselves with that place. Results from a study conducted on participants of a natural-resource-based youth work program in Colorado showed that a stronger identification with the local natural resource area (where they worked for several weeks as a part of the program) predicted a higher pro-environmental engagement and environmentally responsible behavior (see, Vaske/Kobrin 2001).

This factor was also considered by Scannel and Gifford (2013), who studied the relevance of both local message framing and the individual place attachment for citizens' climate engagement. Participants of the study were presented with a poster with photographs and text on either global sea levels rising (global frame) or on climate change impacts specific to their local regions in British Columbia: forest wildfires, mountain pine beetle infestation, or rising sea levels, with particular place names used (local frame). Participants in the control group did not receive any message but completed the questionnaires on climate change engagement and place attachment, just like the other

two groups. According to the results, a stronger attachment to the local area was associated with greater climate change engagement, as expected. Moreover, the study showed that being presented with information on local consequences of climate change increased the reported climate engagement to a greater extent than a message on global consequences in the control group. Interestingly, the results did not differ between the participants who received a globally framed message and those who received no information about climate change impacts. However, the study did not consider the varied nature of the presented climate change impacts. E.g., a projection of sea-level rise might appear more distant and abstract or uncontrollable than forest wildfires and thus produce different reactions. For this reason, comparing the risk of sea levels rising (presented as the global frame) and local risks of other types (except for Vancouver Island, where the local risk was rising sea levels as well) might have distorted the comparison focused on the spatial aspect of framing.

Findings by Fleury-Bahi (2008) confirmed that different types of environmental risks are perceived differently. According to her study, technological and chemical hazards (e.g., air pollution caused by industry) were associated with a significantly greater risk than hazards related to climate change (e.g., heat waves) and hazards related to loss of biodiversity (e.g., loss of varieties of fauna). The difference was observed for all levels of spatial distance to individuals (perceived risks for oneself, town, country, and humanity). In contrast, the participants' risk assessment between climate change and loss of biodiversity did not differ.

1.2.4. Policy support

The impact of the local framing on public climate policy support has also been analyzed. The effectiveness of proximising strategies for influencing people's opinions on public climate policies has not been proven by past research, as it can produce various results depending on the specific perspective applied (see also Brügger et al. 2015a).

Shwom, Dan, and Dietz (2008) surveyed randomly chosen households in Michigan and Virginia, dividing respondents in each state into two groups. One group received a survey with a one-page summary of climate impacts information about their region and the other one about the national-scale impacts. They found that although there was a modest impact from the state of residence (respondents from Michigan were less supportive of most proposed policy measures than those from Virginia), the local or national information treatment received had no statistically significant impact on policy support. Similarly, in a previously mentioned study, Spence and Pidgeon (2010) found no

difference in attitudes towards climate change mitigation policies due to local or distant framing treatment. In a more recent study, Halperin and Walton (2018) found no difference between local and global frames in raising the willingness to mitigate or adapt to climate change. However, local and global information treatments were still more effective than presenting no information. Simultaneously, the local frame produced higher support for personal adaptation measures, and the global frame more support for adaptation policies.

A similar correlation has been observed earlier by Brügger et al. (2015b): the local frame predicted only a greater willingness to apply personal adaptation measures, while distant framing was superior in producing higher support for mitigation and adaptation policies. This seems to agree with the observation mentioned above by Uzzell (2000) that people associate different levels of spatial distance with varying levels of responsibility. The area of the direct proximity is what they feel responsible for, thus applying personal adaptation measures. On the global scale, they would instead expect an appropriate action from policymakers.

Taking a slightly different approach, Longo, Hoyos, and Markandya (2011) considered the relevance of local ancillary benefits of climate change policies (i.e., "positive externalities benefiting a local community, such as reduction in local air pollution", ibid., 121) for the peoples' attitudes towards these policies. They applied the term 'willingness to pay' (WTP) as an indication of the extent to which people support not only such policies but also are willing to participate in carrying the costs of climate change mitigation measures (in this case, in the form of a tax). Results from questionnaires completed by 1000 households in the Basque Country showed a clear connection between considering the local benefits of climate change mitigation policies and the willingness to pay for these policies. The average WTP of respondents, who were concerned about the local effects, was 58 to 75 percent higher than those who were not. Perhaps more surprisingly, presenting the respondents with information on these local effects within the survey text produced no changes in WTP, so the respondents' concern about the local impacts must have been before the framing treatment. On a side note, presenting the benefits of climate policies, which the study has focused on, is also referred to as 'gain outcome framing' and has been shown to produce generally more positive attitudes towards climate change mitigation than warnings of 'losses' of not applying climate policies (see, e.g., Spence/Pidgeon 2010).

The opposite perspective, i.e., one of the costs of policy measures, was employed by Yarnal, O'Connor, and Shudak (2003) to study local versus national framing effects on

the public support for mitigation policies. The survey about potential greenhouse gas mitigation policies was framed from either a national (US-wide) or a local perspective (central Pennsylvania). While the national frame presented the sacrifices related to implementing the mitigation policies in general terms (although still focusing on the costs), the local frame additionally named the local context of these costs for the people of the region, mentioning, e.g., names of specific local coal plants that would be closed, or how many people are employed at these plants. Moreover, the local frame text was formulated from a first-person perspective, including wording like “our two coal plants” or “our region”, which were not present in the national frame text. The results showed minor but statistically significant differences in responses for the two framing conditions. Namely, local frame respondents were up to 11 percent less likely to agree to the policy measures or take voluntary actions towards lower emissions than those who received the nationally framed survey. This confirmed the authors’ hypothesis that the local frame would invoke self-interests in respondents more strongly than the more general national frame, resulting in lower support for greenhouse gas mitigation measures. The findings are also in agreement with one of the conclusions by Brügger et al. (cf. 2015a, 1033) that proximising the costs and inconveniences of climate policies while leaving the benefits aside may decrease the support for such policies.

1.2.5. Other factors

Some experiments show that presenting respondents with locally or globally framed messages about climate change produced different effects on policy support, but mostly when other factors were considered. Wiest, Raymond, and Clawson (2015) found that framing the issue of climate change locally resulted in increased behavioral intentions to address climate change, but for Republicans and Independents only. This frame did not influence Democrats, probably because they were already familiar with this perspective, as they generally express a higher climate engagement (cf. ibid., 196).

An interesting approach was tested by Schoenefeld and McCauley (2016), who examined the proximising framing effect in the context of individual value orientations. Only having read local climate information did not affect the perceived importance of climate change to the respondents, their behavioral intentions, or climate policy support. However, the framing effects varied between respondents with self-enhancing values (concern for social power, status, recognition, material achievements, etc.) and self-transcending values (the importance of broader community and beliefs about justice). Respondents with stronger self-transcendent value orientations generally recognized the importance of climate to a greater degree than the others. They were also more willing to

engage in pro-environmental behaviors. Nevertheless, none of the received (local or global) information treatments altered these attitudes compared to the control group. This trend was less clear for climate policy support, although there was a possible interaction with self-transcendent values and receiving a global frame treatment. Interestingly (and contrary to the researchers' predictions), receiving information about local climate change impacts decreased their perceived importance of climate change, behavioral intentions, and policy support for people with stronger self-enhancement values.

Several studies have confirmed the critical importance of personal knowledge and concern about climate change before the experiment for the observed reaction. Halperin and Walton's (2018) analysis indicated that the responses to global and local frames depended significantly on the extent of the local place attachment and prior personal beliefs on climate change. They note (ibid., 301) that the most significant reaction to the information treatment was observed among the group of Americans "concerned" about climate change and not the "alarmed" ones:

> This may be because the alarmed are the most informed about climate change (Maibach et al. 2009), limiting the effectiveness of additional information. Additionally, the alarmed may not be able to demonstrate increased action within the confines of the survey questions because they are not able to score any higher (Evans et al. 2014).

Other factors identified during the studies mentioned above determining higher support for climate change policies included: female gender (Scannel/Gifford 2013), membership in environmental organizations, high income level, left-wing political orientation, local cultural identity, and concern about energy security issues (Longo et al. 2011).

1.2.6. Summary

The inconclusive findings suggest that more research on how to make use of local framing successfully is needed (see, e.g., Devine-Wright 2013; Scannel/Gifford 2013), as the proximising strategy – depending on the specific approach – can either encourage people to action, have no effect, or even backfire and arouse defensive reactions (see Brügger et al. 2015a). The general 'common sense' expectations about the effects of proximising climate change communication appear to belie its complexity. The local frame is another strategy proving the need for a careful audience segmentation for communicating climate change successfully, as "a 'one size fits all' approach will almost certainly fail" (Moser/Dilling 2011, 166).

The key findings of the above-reviewed research on proximising climate change can be summed up as follows:

- People tend to perceive climate change impacts as less severe in their closest environment than in more distant locations. However, recognizing an environmental risk as a proximate one can motivate them to engage in environmentally friendly behaviors.
- The local environment is the area for which people feel the most personally responsible. This is an essential point, as the awareness of effective (individual and collective) ways of addressing climate change is crucial for avoiding apathy resulting from the perceived unpredictability of the threat.
- Presenting climate change from a local perspective can encourage people to act if they have a sense of place attachment and identification with the local area.
- Finally, presenting people with a local perspective on climate change does not affect climate policy support. However, what is relevant and considered by citizens are the expected policy's costs and benefits for the local area.

Most research on the impact of local versus global frames focuses on surveys with individual respondents answering questions about their climate change and policy attitudes after being presented with a single article on climate change aspects. While adequate for recreating conditions similar to real-life situations of communicating climate change to citizens via media or information campaigns, this method has its limitations. Most studies mentioned above admit the limited potential of generalizing findings based on confronting respondents with a single treatment (e.g., information sheet, poster, article, video, etc.). More substantial impacts might be observed if people were repeatedly presented with local messaging about climate change (cf. Loy/Spence 2020, 3). Moreover, studying just close-ended responses in survey experiments "reduces the substance of public opinion to the direction of opinion" (Brewer/Gross 2005, 932). As Druckman and Nelson (2003, 73) point out, the popular way of studying framing effects by experiments and surveys focused on individual responses places study participants in "a social vacuum". They cannot discuss the issues with others nor reach for alternative sources of information as they might in real life. Moreover, as respondents' initial attitudes and values in survey-based studies are treated as given, it remains unclear how they developed in the first place. People's ways of organizing information and making sense of the world, their values, and consequently formulated judgments and attitudes are not something we are born with – we develop them through experience with our information environments and social interactions (cf. Walsh 2004, 19). This

understanding is central to the idea of deliberative democracy (cf. Blue 2016, 69), which I will address in more detail in section 1.4.

Recognizing the limitations resulting from the previously described methods for understanding the relations between geographical proximity and social attitudes towards climate change and climate policies, I will recontextualize these issues into an interpretive methodological approach and a deliberative setting in order to generate new insights and a deeper understanding of these relationships. Applying more qualitative methods can create opportunities for richer observations of how citizens use frames in their deliberation and how they negotiate or even resist their meanings and implications (cf. Brewer/Gross 2005, 932). In order to further explore the use of the various spatial perspectives in the dynamics of a deliberative process of local policymaking, in my thesis, I will aim to answer the following central research question:

RQ: What roles do local and global perspectives on climate change play during a locally organized public deliberation on climate policies?

1.3. Frames and deliberative framing

Various disciplines have developed their understandings of frames and approaches to studying them. It is important to specify how frames are understood and analyzed in this thesis to avoid ambiguity.

One usual approach is to recognize frames as media effects: on the one hand 'media frames', i.e., storylines by which media organize their reporting, serving as routines for journalists, and 'audience frames' on the other hand, "frames of reference that readers or viewers use to interpret and discuss public events" (Scheufele 1999, 105), which are the outcome of media influence (for a further discussion and typology of frames as media effects see Scheufele 1999). Following this perspective, studies analyzing media framing of climate change examine how mass media portray climate change and how it shapes the public understanding of the issue (cf. Blue 2016, 73). Framing can also suggest how the issue at stake should be addressed (Entman 1993, 52):

> To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described.

Scheufele (cf. 1999, 105ff) describes an interactive model of construction of social reality, in which mass media, as the sender, use schemes of presenting information (i.e., media frames), and the public receives and interprets it. How people process and interpret information depends on their preceding schemes and personal experience. These are

'individual frames', i.e., "mentally stored clusters of ideas that guide individuals' processing of information" (Entman 1993, 53).

Climate communication research focuses on exploring ways of increasing public awareness and engagement with climate change. It often analyzes the ability of frames to change perceptions or opinions on specific issues. As presented in section 1.2. of this thesis, such frames can mean, e.g., showing environmental consequences of climate change in the local area as opposed to similar events in a distant location. This approach can be described as 'framing to persuade', fulfilling a rather instrumental function, with "the arguments and courses of action [being] established in advance" (cf. Blue 2018, 135). Although this understanding of frames has been utilized by a considerable number of empirical studies referred to in the first part of the chapter, the term will *not* be used in this way in the remainder of the analysis, as I will not measure any 'framing effects' (see, Chapter 2).

An entirely different approach to framing, proposed by interpretative scholars (see, e.g., Blue 2016; Blue 2018; Romsdahl et al. 2018; Romsdahl 2020), is 'framing for deliberation', or 'deliberative framing', which "seeks to present and clarify different ways of approaching an issue to help people weigh appropriate courses of action" (Blue 2018, 135). It aims to open up the discussion to other perspectives than just the dominant ones, as well as acknowledge "that competing meanings and values exist in any political discussion, and that diverse frames warrant consideration before public judgments are rendered" (Blue/Dale 2016, 4). In deliberative framing, frames are understood as collective rather than individual ways of constructing meaning, representing and interpreting knowledge, and concluding the necessary actions. In this way, they are similar to discourses (cf. Blue 2016, 72). With the exemption of Chapter 1, frames will be mainly used in this meaning throughout this thesis, called interchangeably also 'perspectives'.

1.4. Deliberative democracy

Learning from "multiple issue frames, voices and experiences" lies at the heart of public deliberation (cf. Blue 2016, 79). This is why a public deliberation event on local climate policy will be an excellent opportunity to discover how the general public understands climate change and combines it with the local context. This section will further discuss the meeting point of climate policy and public deliberation.

Deliberative democracy can be defined as "any practice of democracy that gives deliberation a central place", with deliberation understood as "mutual communication

that involves weighing and reflecting on preferences, values, and interests regarding matters of common concern" (Bächtinger et al. 2018, 2). It is based on the assumption that discussing an issue with others produces a better understanding of various interests and perspectives and may lead to agreement. Deliberation can achieve these goals better than merely voting for the preferred solutions and should, therefore, complement the features of aggregative (i.e., based on voting) democracy (ibid.). Its present-day proponents believe that "deliberative democracy provides the best hope for countering the democratic deficiencies (…), and also constitutes an essential response to authoritarian populism and post-truth politics" (ibid.). As a response to the criticism focused on the unattainableness of the deliberative ideals, they stress the aspirational quality of these ideals and that the difficulty of achieving them in practice (as any other democratic ideal) does not make it any less valuable to strive for this standard (cf. ibid., 3).

Although its early origins can be traced back to classical ideas of John Stuart Mill and John Dewey, or even Aristotle, the development of deliberative democracy as a theoretical paradigm happened mostly between 1980 and 1993. It was mainly the work of Jürgen Habermas (1992) and John Rawls (1993) that consolidated deliberative democracy as a theoretical model (cf. Floridia 2018, 35f). However, it was not a linear process but rather one built through several independent approaches (cf. ibid.), adding to the theoretical development of various ideas, which eventually became the core ideals of deliberative democracy, such as 'wisdom of the multitude', 'general will', or 'public reason' (cf. Chambers 2018, 55ff).

In the practice of policymaking, the concept of deliberative democracy promotes the idea that making decisions that will impact groups or communities should be a process of forging an agreement. This is achieved by considering various interests and perspectives on the issue and subsequent discussion among the affected members of the community. We can distinguish between normative, substantive, and instrumental rationales for applying deliberative practices to the political process (cf. Blue 2016, 70; see also Stirling 2005).

From the normative perspective, deliberative decision-making is desirable independently of the outcome, simply for its value as a procedure that puts democratic principles of emancipation, equality, and social justice into practice (cf. ibid.). It offers empowerment of citizens in contrast to the dominance of institutions and elite social groups (cf. Stirling 2005, 220). A quote from one of the "founding texts of deliberative democracy" (Floridia

2018, 41) depicts the normative value of deliberation well. Bernard Manin (1987, 351f) states:

> It is, therefore, necessary to alter radically the perspective common to both liberal theories and democratic thought: the source of legitimacy is not the predetermined will of individuals, but rather the process of formation, that is, deliberation itself. An individual's liberty consists first of all in being able to arrive at a decision by a process of research and comparison among various solutions. As political decisions are characteristically imposed on *all*, it seems reasonable to seek, as an essential condition for legitimacy, the deliberation of *all* or, more precisely, the right of all to participate in deliberation.

In order to fulfill the normative hopes, a "good" deliberation (Bächtinger et al. 2018, 1) should aim at realizing the ideals of equality (i.e., inclusion, equal opportunity for influence, mutual respect), absence of coercive power, fairness, and orientation to the common good (cf. ibid., 4ff). It should enable an informed discussion based on reasonable argumentation and other relevant considerations, making it possible to reach a consensus, a fair compromise, or a conflict clarification (cf. ibid.). Moreover, in Habermasian theory, the legitimacy of deliberative decision-making comes from the procedural properties of the process, which should ensure fairness and enable a rational consideration of arguments (cf. Barisione 2012, 3).

Another type of rationale for applying deliberative processes, entirely opposed to the above, is the instrumental one (Blue 2016, 70):

> (…) instrumental rationales regard public deliberation as valuable insofar as it produces particular outcomes that have been determined in advance by incumbent interests. The instrumental utility of deliberation can take many forms, including fostering support for existing policy preferences, building trust in government and science, enhancing public education, managing political dissent or overcoming political gridlock.

Instances of instrumental treatment of deliberation are one of the main objects of criticism and suspicion towards the existing deliberative initiatives, as such cases tend to reinforce existing power dynamics rather than challenge them (cf. ibid.). Barisione (cf. 2012, 2) argues that in the context of declining trust in the representative democracy, practices involving citizens in deliberation about potentially contested public policies are a powerful source of legitimacy. However, they can be employed to fabricate decisions (and thus legitimacy) that institutional decision-makers have already made. This can be achieved by framing the deliberation in a particular way by those with political power to structure the process: either as intentional manipulation or because of an invisible (i.e., overwhelming and 'naturalized') frame (ibid., 7). This is why deliberative practices should not be left unquestioned, but instead, we should seek what their actual goals are (Barisione 2012, 15f):

> (…) should its aim be a procedurally controlled formation of general will, or the search for wider public agreement, or more efficient problem solving, or the development and expression of considered judgments? Or should deliberation primarily be intended as a procedure to favour the people's acceptance of policy solutions pre-deliberated by the institutional and organizational elite?

Finally, substantive rationales focus on the qualities of decisions delivered through a deliberative process. They assume that policy decisions made through interactions with others will be different from those based only on individual attitudes and beliefs. The 'promise' of deliberation is that these decisions will be better, i.e., more legitimate and effective (cf. Bäckstrand et al. 2010, 4). For Habermas (1992, 359), as long as the conditions for a proper democratic procedure are fulfilled, it is an "ideal procedure for deliberation and decision making".

One of the reasons why deliberative processes can lead to more robust and informed policies is that including a broader spectrum of people from various social groups can help acquire the knowledge and experience that would otherwise be unavailable to policymakers (cf. Blue 2016, 70). A deliberative process usually does not assume direct participation of all citizens of the given political community; hence it needs to apply some form of political representation. Differently from elected bodies, it is the 'descriptive representation' (James 2008) of various social groups that ensures the inclusiveness and legitimacy of the process. This is based on the assumption that although non-minority representatives could also advocate for the interests of a minority group, the actual members of various demographic and social groups are more likely to possess types of knowledge specific to the groups' perspectives, as well as enjoy their trust (cf. ibid., 108).

Smith (cf. 2003, 22ff) argues that value pluralism and incompatibility of some of these values are intrinsic to the social and human condition, and it is the differences in values and priorities between various coexisting groups that lead to conflicts.

There might not always be a common value to both sides of such conflict. However, getting to know the reasoning of others enriches our own thinking, and without contact with other perspectives, there can be no reflective judgments (cf. ibid., 25). This does not mean that a conflict would necessarily be resolved, "rather that judgments will not be based solely on individual resources and private considerations, but will benefit from the knowledge, experience and insights of others" (ibid., 26). Empirical studies demonstrate such impact of deliberation on decision quality, e.g., using a comparison between group discussions of like-minded participants and those of varying views. Groups with similar opinions tend to demonstrate a 'polarization' effect, according to which group discussions enhance the shared belief, and, consequently more radical positions (see, e.g., Isenberg

1986). On the other hand, so-called 'cross-cutting' groups, which consist of individuals with heterogeneous viewpoints, extend participants' awareness of rationales supporting opposing opinions (cf. Mutz 2002, 116). This, as well as enabling closer personal relationships with discussion partners of different views, is related to higher political tolerance (see ibid., 119). Moreover, discussions in heterogeneous groups have been shown to neutralize elite (i.e., media) framing effects (see Druckman/Nelson 2003).

Another reason why decisions made during a deliberative process used to be normatively assessed as "good", especially by the early theories of deliberative democracy, was that they were expected to be, ideally, unanimous (cf. Estlund/Landemore 2018, 123). However, this ideal has been criticized from various perspectives, and nowadays, there is no agreement among deliberative democrats about consensus being the ultimate goal of deliberation (cf. ibid., 123ff). Critics argue that a too strong focus on reaching a consensus can lead to suppressing marginalized perspectives just for the sake of agreement (cf. Young 2000, 44). Alternative ideas on the worthwhile goals of the deliberative process include, e.g., 'positive dissensus' - "a form of disagreement that is epistemically beneficial for the group and ultimately leads to more accurate aggregated predictions" (Estlund/Landemore 2018, 125). Niemeyer and Dryzek (cf. 2007, 500) propose that what should result from a good deliberation is, first, 'meta-consensus', i.e., a consensus about the issue diagnosis, what relevant reasons, values, and beliefs should be taken into consideration, and what kind of choices need to be made. Meta-consensus does not require unanimous agreement on the priorities of these considerations or choices. The coherent result of meta-consensus is 'inter-subjective rationality', the second desired outcome of deliberation. Inter-subjective rationality signifies a situation in which, after participants have recognized all crucial considerations, they are consistent about which arguments lead to which preferences – even if they potentially disagree on the recommended actions to take (cf. ibid.). Moreover, recent approaches to the practice of deliberative democracy have been combining deliberation with majority rule as complementary procedures of democratic decision-making (cf. Estlund/Landemore 2018, 123).

The ideas of deliberative democracy have been argued to be particularly well-suited for addressing issues of environmental governance and climate policies (see, e.g., Baber/Bartlett 2018; Dryzek/Niemeyer 2019; Niemeyer 2013). The remaining part of this section will present arguments by proponents of applying deliberative processes to climate policymaking.

1.4.1. Public deliberation and climate change

First, competing social values are at the core of environmental issues (cf. Smith 2003, 1f), including climate change - even the environmental movement itself is pluralistic in its understanding of particular environmental values and preferred solutions. In this context of multiple values and interests, deliberative forums can offer a platform for dialogue and inclusion of different perspectives and types of knowledge of various social groups, including the especially neglected and marginalized ones (cf. Baber/Bartlett 2018; see also Blue 2016). This ensures both factual participation in policymaking of groups and/or individuals directly impacted by policies at stake and - as argued above - policies better informed and balanced by the inclusion of various discourses.

By enabling ordinary citizens to discuss and collectively search for solutions, deliberative processes can neutralize the effects of short-term election interests, partisanship, and strongly divisive and adversarial political stances on climate policies, all characteristic of electoral democracies (cf. Dryzek/Niemeyer 2019, ibid.). Moreover, deliberation offers an opportunity to realize citizens' actual values and priorities, often "distorted by the nature of public debate" (Niemeyer 2013, 431), and translate them better into climate policy preferences than party politics does (cf. Dryzek/Niemeyer 2019, ibid.). A piece of empirical evidence is delivered, e.g., by an experiment by Dietz, Stern, and Dan (2009), measuring the effect of deliberation on WTP. Although participants of group deliberation were not willing to pay more for a climate policy than individual survey respondents, they recognized a wider range of arguments for making the decision, the factors they considered were more oriented towards policy aspects than individual costs, and their willingness to pay was significantly less influenced by their personal political and environmental orientation.

Second, climate change is perhaps the most extreme example of the collective consequences of individual actions. The climate can be described as "a global commons" (Gunderson/Dietz 2018, 770). The environmental costs of corporate, regional, or national actions and resulting emissions are externalized to the whole world, as national borders do not apply to the atmosphere. Groups and regions contributing the most are not necessarily those who experience the most impacts (see, e.g., Neil et al. 2011 on Pacific Atolls and the Arctic). This implies a high need to prioritize the common ground over partial interests, which can be achieved particularly well through deliberation. Global dialogue and action are necessary to address the global "catastrophic risk" (cf. Gunderson/Dietz 2018, 779f) of climate change. However, a polycentric approach combining deliberation from the local and regional to the global level is required to be

sufficiently inclusive of perspectives and circumstances of diversified groups and places (ibid., 779f). Moreover, deliberation can better support long-term thinking (see, e.g., MacKenzie 2018) and incorporate the interests of those, who cannot speak for themselves, i.e., future generations and non-human organisms (cf. Dryzek/Niemeyer 2019, 411f).

Finally, deliberative decision-making has a better chance of producing broad-based social support necessary for political sustainability of environmental policies (cf. Baber/Bartlett 2018, 757), as greater involvement of civil society leads to higher public support for, e.g., global environmental governance (see Bernauer/Gampfer 2013). Deliberative forums can be a source of public trust even for citizens who did not personally participate (see MacKenzie/Warren 2012). The example of the British Columbia Citizens' Assembly on Electoral Reform showed that even if voters in the referendum that followed the deliberative process lacked sufficient knowledge on the electoral reform and the proposed single transferable vote system, the more people knew about the Citizens' Assembly, the more they were willing to support CA's recommendation (see Cutler et al. 2008). For some of the respondents, it was because they perceived members of the CA as ordinary citizens "like us", who deliberated for others on the issue in a fair process – because they trusted the expertise the CA's participants gained through the informed process (ibid.). Furthermore, from the perspective of climate communication and citizen engagement, deliberating on the possible ways of addressing climate change locally can have an empowering effect on citizens due to focusing collectively on effective policy solutions, in contrast to solutions potentially deepening the feeling of helplessness (for the influence of taking part in deliberation on political self-confidence, interest and engagement see, e.g., Knobloch/Gastil 2015, Boulianne et al. 2020).

1.5. Citizens' assemblies

This section will review the main characteristics of citizens' assemblies as one of the forms of putting the ideas of deliberative democracy into practice and some cases of their application to national and local policymaking processes.

Citizens' assemblies are one of several types of the so-called 'mini-publics', i.e., institutions intentionally designed following the deliberative ideals, composed of near-randomly selected lay citizens (cf. Bächtinger et al. 2018, 12f). Mini-publics are usually convened to form well-informed and considered judgments or policy recommendations on a specific issue due to a facilitated group discussion. They are a practical implementation of Robert Dahl's (1989) idea of 'minipopulus' and its underlying

democratic criterion of citizens' 'enlightened understanding' – equal and sufficient access to information relevant for making decisions best serving own and general interests. When well designed, they can produce high-quality and argumentation-driven deliberative outcomes (cf. Bächtinger et al. 2018, 14). Some common examples of mini-publics include citizens' juries, planning cells, consensus conferences, deliberative polls, G1000, and citizens' assemblies. They all share certain basic features but differ in their designs and goals (cf. Smith/Setälä 2018, 301f). Due to its relevance to this thesis, I will presently focus on the characteristics of citizens' assemblies.

Citizens' assemblies (CA) usually consist of about 50 to 150 participants (Gerwin 2018; Smith/Setälä 2018), following a procedure of near-random selection. Invitations are sent to randomly selected residents of a given area (using personal data from e. g. voting registry), but the final composition of the assembly is constructed using quotas for various demographic groups in order to provide a descriptive similarity to the constituency. These typically include gender, age group, district, education level, and race/ethnicity. In some cases, an intentional oversampling and additional targeted recruitment of members of marginalized groups might be advisable (cf. Smith/Setälä 2018, 302). Finally, a certain level of self-selection is unavoidable, as only those who accept the invitation will participate in the assembly. However, to secure the public trust in the independence of the deliberation, the process screens for individuals who might have a vested interest in the issue, excluding from participation, e.g., public officials, various stakeholders, organizers of the deliberative event, etc. (cf. MacKenzie/Warren 2012, 107f; Warren/Pearse 2008). From citizens who confirmed their interest in participation, a final sortition process of randomly selecting individuals according to their demographic profiles is conducted to ensure meeting the quota as closely as possible and enhancing the public trust in the randomness of the participant selection. At this point, a small additional substitute group is selected following the same procedure – should some of the initial CA's members resign during the assembly's duration, the substitute members will replace them. For increased transparency, this process is usually transmitted live and recorded (cf. Gerwin 2018, 34ff). CA participants are granted an allowance for their participation.

Compared to most other types of mini-publics, which can take a day, a weekend, or a few days, the duration of citizens' assemblies usually stretches over several months, with sessions convened on (some of) the weekends. While causing higher costs and possibly the need to replace some of the participants who stop attending the sessions, an extended period offers more space for learning and deliberating on an issue, potentially improving the quality of the outcome (cf. Smith/Setälä 2018, 302).

For the CA to meet the normative standards of good deliberation, its sessions begin with a learning phase. During the learning sessions, participants are provided with a diagnosis of the current situation and relevant background information on the topic, coming from expert presentations, sessions of questions and answers with the experts, and additional information materials. Afterward, a wide range of solutions to the issue is presented by stakeholders from various positions, who are given equal time to present their perspectives, rationales, and recommendations (cf. Gerwin 2018, 54ff). The learning sessions are usually transmitted online to make both the expert presentations and stakeholders' positions available to the public.

Next follows the deliberative phase of developing recommendations on the given issue, which consists of facilitated group discussions (both in plenary sessions and smaller groups) and final voting on individual recommendations. The deliberative phase of the assembly is usually not transmitted. Differently than, e.g., deliberative polls, which aim to measure public opinion after receiving broader information and deliberating on an issue, citizens' assemblies' goal is to reach a broad consensus, i.e., find solutions to which the highest possible majority of participants can agree. While providing each participant the possibility to freely express their opinion and sustaining the credibility of the process, the final recommendations are voted on (using either ballots or individual electronic voting) to verify the level of agreement on suggested measures (cf. Gerwin 2018, 74). As one of the methods supporting consensus, the CA participants can be asked to mark their level of agreement for each proposal rather than vote for just one of the available options. The final result shows how many participants agreed to a given solution, at least to some extent. Another possibility is preferential voting, in which participants specify their order of preference for the available recommendations. After the votes are counted, the citizens' assembly announces the results and publishes a report.

1.5.1. Citizens' assemblies in practice

In the past two decades, citizens' assemblies have been used in several places to produce an informed public opinion on various disputed issues, usually with an advisory function to policymaking on the regional and national level (be it elected institutions or popular referenda). Most prominent examples include the Citizens' Assembly on Electoral Reform in British Columbia (see Warren/Pearse 2008), Citizens' Assemblies convened in Ireland since 2016 to deliberate on a wide range of topics (among others: abortion, same-sex marriage, and gender equality; see, e.g., Elking et al. 2020, Farrell/Suiter 2019), the 'Ostbelgien Model', including a permanent Citizens' Council setting the agenda for short-

term Citizens' Assemblies on specific topics (see OECD 2020), and a British Citizens' Assembly on Brexit (see Renwick et al. 2018).

A particular type of citizens' assemblies are the ones convened to give recommendations on climate policies, usually referred to as climate assemblies. Some recent examples are the UK Climate Assembly, established by the UK parliament to make recommendations on how to reach net-zero greenhouse gas (GHG) emissions by the year 2050, and the French Citizens' Convention on Climate. The UK Climate Assembly's work stretched over several weekends in early 2020, with the last sessions moved online. In September 2020, it published an extensive report with over 50 recommendations regarding all economic sectors (see Climate Assembly UK 2020). By decision of the French president Emmanuel Macron, the French Convention deliberated from autumn 2019 to June 2020 on how to reduce GHG emissions by 40 percent by 2030, in a spirit of social justice (see Convention Citoyenne pour le Climat 2020). After the Convention published its final report with 149 recommendations, Macron declared to deliver all but three of them to the parliament, or to a referendum, "unfiltered" (cf. Morrow 2020), along with a referendum on including environmental protection and climate change mitigation to the constitution (cf. Coffey 2020). Since then, however, members of the Convention and climate campaigners have criticized the president for backsliding on his promises and weakening the original recommendations while translating them into law (cf. Farand 2021).

The case analyzed in this thesis was the Washington Climate Assembly, a citizens' assembly on climate change mitigation in Washington State, taking place online in January and February 2021.

2. Method

Applying the theory of deliberative democracy in practice has inspired numerous approaches in empirical research. Typically, analyses focus on measuring the quality of deliberation (see, e.g., Stromer-Galley 2007), outcomes of deliberation (see, e.g., Niemeyer/Dryzek 2007), preference formation, and framing effects (see, e.g., Druckman 2004), and impacts of participating in public deliberation events on 'civic virtues', i.e., knowledge, interest, and engagement (see, e.g., Grönlund et al. 2010). Methods range from experimental designs (Druckman 2004), participant observation (see, e.g., Walsh 2004), and surveys to content analysis of deliberation (see, e.g., Stromer-Galley 2007, Fischer et al. 2021).

Most of the methods more commonly applied in examining deliberative mini-publics, like experimental settings or surveys conducted in several waves throughout the duration of an assembly, were unavailable to me as an individual student researcher. Moreover, as an observer external to the Assembly process, I could not choose any method that would require additional engagement from the Assembly participants[3]. These considerations guided my choice of methods and the research question I was able to address.

As the main method for discursive content analysis, I used thematic analysis (TA) in its particular version developed by Braun and Clarke (2006, 2013). Thematic analysis is a qualitative "method for identifying, analyzing and reporting patterns (themes) within data" (Braun/Clarke 2006, 79). It is suitable for analyzing a rich data set while offering flexibility in specifying the focus of the analysis. It has previously been used for analyzing a deliberative setting (e.g., Vaccarino 2019).

I utilized thematic analysis of the data to answer the following research question (RQ): What roles do local and global perspectives on climate change play during a locally organized public deliberation on climate policies?

I recorded and coded statements from both the learning and the deliberative phase. Contents from the learning sessions should, by design, inform the deliberative and

[3] Assembly Members were already exposed to a considerable time and information strain by needing to attend five hours of meetings weekly, over the course of over six weeks, to learn about and discuss a complex topic in which none of them was an expert. Having a great deal of organizational information and additional presenters' materials to send out to the participants on a regular basis, the organizers tried to keep the amount of communication to the minimum necessary, to avoid overwhelming the participants. Moreover, a research team invited by the organizers to accompany the whole Assembly process (see, www.waclimateassembly.org /observers), asked the participants to complete a survey about their experience after each meeting. Since the organizers wished to safeguard the Assembly Members from additional burdens and research fatigue, and were already struggling to obtain a high response rates on these surveys, they were reluctant to allow further requests aimed at the participants.

decision-making process of a citizens' assembly. At the same time, the information presented to the participants can also influence their perception by emphasizing particular perspectives and aspects of the issues. Some of the arguments brought up by participants during the phase of developing and discussing policy recommendations might be their own, but some repetition of the learning contents can be anticipated. For these reasons, the deliberative phase of the Assembly cannot be analyzed in isolation from the preceding expert and stakeholder presentations.

Comparing the occurrence of the analyzed themes during both phases does not allow for concluding the scale of the influence. Testing the framing effects of the learning sessions on participants systematically would require an experimental setting, in which two or more groups with different treatments could be compared (see, e.g., Esterling 2018; Druckman/Nelson 2003). Such testing was not possible, as the case analyzed here was an externally organized deliberative event designed to deliver policy proposals, and I had no influence on the process. Therefore, the analysis presented below aims to explore the various perspectives used by presenters and participants, not to measure framing effects.

Braun and Clarke (2006) point out that thematic analysis can be combined with various theories and epistemological assumptions, but they should be transparent (cf. ibid, 81). This analysis will apply a constructivist approach to data, exploring how speakers made sense of climate change and which perspectives on this topic were presented during the process of the citizens' assembly. This approach requires acknowledging that coding the data, developing themes, and analyzing them are processes in which I, as a researcher, played an active role. The patterns did not merely "emerge" and were not "discovered"; they did not exist in the data before the analysis. The patterns result from my interpretative and creative (while still systematic and rigorous) analytical process and would, to some extent, differ from someone else's analysis (cf. Braun/Clarke 2013, 225).

The following sections will describe the process of collecting and analyzing the data in more detail.

2.1. Data collection

To collect data for the analysis, I attended the sessions of the Washington Climate Assembly as an observer. I followed both the publicly transmitted learning phase, i.e., presentations by the invited experts and stakeholders, and the non-public deliberative phase, in which the CA's participants discussed various policy recommendations. The Washington Climate Assembly was a mini-public was a typical citizens' assembly format, which was conducted online over the course of a little over six weeks. The event was

initiated and funded by a non-governmental organization located in Washington State[4] and carried out by an independent coordinating team. The Assembly consisted of eighty randomly selected Members and ten Alternates[5]. The group's composition aimed to reflect the statistical structure of Washington State's population with respect to gender, age, district, income level, race or ethnicity, education level, and attitudes towards climate change.

The Assembly aimed to develop recommendations for the state's policymakers, answering the following guiding question: "How can Washington State equitably design and implement climate mitigation strategies while strengthening communities disproportionately impacted by climate change across the State?"

Data for the analysis consists of discourse transcripts from the Assembly sessions. For most deliberative sessions, Participants were divided into several breakout groups. The transcript, therefore, includes only the conversations from groups I was assigned to by the administrator of the online meeting. However, as the facilitators used a version of the World Café method, all groups had the opportunity to deliberate on all the topics discussed in a given session. I recorded the communication and transcribed it with the help of automatic transcription software[6]. The transcription obtained in this way is of low linguistic precision, i.e., it did not include punctuation marks, pauses, etc., but was still sufficient for examining the content of the event, as I had no intention of conducting a more precise linguistic analysis. In the interest of clarity, I have edited and added punctuation in all the quotes I use within the thesis.

All participants of the study were delivered a Participant Information Sheet, sent out to them by the Assembly's organizers, which presented information on the purpose of the research, contact information, data storage, and confidentiality. They were also provided with a way of opting out if they did not consent to participate in the study[7]. In the interest of participant privacy, I changed the names and locations of the Participants to whom I refer throughout the thesis. Speakers invited to speak during the learning sessions, whether they were expert presenters or interested parties, are addressed as Presenters and assigned unique numbers as identifiers.

[4] More on the history of the initiative: https://www.peoplesvoiceonclimate.org/our-story
[5] Details on the sortition methodology: https://www.waclimateassembly.org/sortition-methodology
[6] A part of Deliberative Session 4 is missing from the transcript due to a failed recording. The final material consisted of about 35 hours of recording, which equaled to 449 pages (standard formatting, single-line spacing).
[7] The method of expressing consent to participating in the study was suggested by the organizers as one not requiring additional action from the Assembly Members as long as they were not opposed to it.

2.2. Analysis

After preparing the transcripts and checking for their accuracy, I coded the complete transcripts without excluding any parts of the material beyond the organizational announcements and process explanations made by the facilitators. I created codes inductively and assigned them widely to all what was said by presenters and participants, without excluding any topics yet. Unsurprisingly, this approach proved very labor-intensive, but it helped me avoid overlooking interesting insights from this rich, diverse data. Moreover, codes were applied non-exclusively, i.e., any data extract could be labeled with several codes.

Throughout the coding process, new codes were added to the list. After finishing the initial coding, I therefore revisited the previously coded transcripts to ensure consistent coding throughout the data set (see Braun and Clarke 2013, 221).

After the initial coding, I checked each individual code for internal coherence, i.e., the agreement between the data excerpts assigned to the same code. I reorganized some of them, combining similar codes and dividing overly broad ones into more refined ones. I also transformed single-word codes into ones that better capture the contained ideas, so that they could 'work' independently from the data" (ibid., 211). Reorganizing the codes included using temporary so-called 'domain summaries', i.e., various ideas on a 'topic' (e.g., carbon pricing) which do not relate to a common idea (as they can even be contradictory). These domain summaries were a helpful method for managing the growing code tree throughout the coding process but were not useful for the final analysis, as they should not be turned into themes (see Braun and Clarke 2019; 2020).

Next, I organized the codes and collated data around recurring themes, which contained various ideas and aspects around one "central organizing concept" each (Braun/Clarke 2013, 224). After identifying the candidate themes relevant to answering my research question, I excluded other possible themes and remaining codes from the analysis.

After revising the internal coherence and distinctiveness of the themes and checking whether the themes reflect the meanings present in the dataset, I selected extracts for illustrating the content and scope of each theme within the final analysis.

The TA method aims to identify recurring patterns in the data, not only as individual themes but also how they relate to each other to form a broader analysis. In the case of hierarchical relationships, themes can be organized into three levels: 'overarching themes', 'themes', and 'subthemes' (see Braun and Clarke 2013, 231). Overarching themes do not themselves contain any data, but they organize the analysis by capturing

broader ideas common to several themes. Subthemes, on the other hand, mark specific aspects of a particular theme. In the interest of clarity, I depicted the organization of hierarchical and lateral relationships between themes in the form of a visual map, which I present along with the results in the next chapter.

A complete list of codes included in the analysis can be found in Appendix 2.

3. Analysis results

In this chapter, I will present all the themes I identified as relevant to my research question and analyze them using excerpts from the transcribed material. The chapter will follow the structure of overarching themes, starting with the global perspective on climate change through the local perspective of Washington State and finishing with the themes representing local policy considerations.

A themes map presenting an overview of the overarching themes, themes, and subthemes included in this analysis and the relationships between them can be found in Appendix 3.

3.1. Climate change is a global problem

The first overarching theme represents the global perspective. It includes themes viewing climate change as a phenomenon of the Earth's atmosphere (section 3.1.1), speaking of its impacts globally and in distant locations (3.1.2), as well as how all people and communities must cooperate to stop further warming (3.1.3).

3.1.1. "We are at a stage where warming is at one-degree centigrade[8]" - the global atmosphere is warming

The first theme within this group treats climate change strictly as a characteristic of the global atmosphere. It is a physical phenomenon, and as such, it can be precisely measured. Global warming was presented as an increase in the average temperature of the Earth's atmosphere, usually expressed in degrees Celsius (sometimes called centigrade).

Speakers used the global average to compare historical and current global temperatures. To make the case of human activities being the reason for this change, Presenter 11 juxtaposed the average global temperatures with the corresponding carbon dioxide concentrations in the atmosphere:

> (...) this figure at the bottom shows you CO_2 concentrations in the atmosphere from 800 000 years ago on the left, moving forward in time to the present day on the right. And you can see how greenhouse gases, CO_2, in the atmosphere oscillated up and down because of natural causes and now have skyrocketed through the roof as a result of human activities, primarily the burning of fossil fuels. So (...) as a result of these increases in greenhouse gases like CO_2 global temperature has increased by about a degree Celsius or 1,8 degrees Fahrenheit since pre-industrial times, and the vast majority of this is caused by human activity (...). (P11, LS2:35)

[8] Presenter 42, LS6:186.

The challenge with speaking about global average temperatures is that it is a statistically created, highly abstract value, not available to any direct human experience nor local measurement anywhere on the planet. Furthermore, one degree Celsius of global warming relates to a different order of magnitude than what one degree might seem from the everyday perception of air temperature – and describing the temperature change using the Celsius scale might further undermine the comprehension of an American audience accustomed to measuring temperature in degrees Fahrenheit. However, as in the example above, some presenters translated these numbers into the Fahrenheit scale.

The next speaker, Presenter 12, acquainted the participants with the "warming stripes" as a different way of presenting the global temperature data. Stripes stand for average temperatures in individual years, compared to the average temperature of the whole period, and are either a shade of red in years warmer than the average or a shade of blue in the case of cooler years. Although they still symbolize statistical values, thanks to the use of colors, they visualize an easily noticeable and comprehensible trend:

> I wanted to start with something a little more fun, perhaps. If you haven't seen these, these are called the warming stripes. (…) basically, using a baseline of 1971 to 2000, looked at temperatures from just after the start of the industrial revolution, when humans started emitting greenhouse gases (…), and then looking at the temperature change over time. And the trend is really quite obvious, it's quite a visual striking image, and this is globally. (P12, LS2:63)

Speakers used average temperatures also when talking about prognoses of future warming. These were often present with certain variations, e.g., within several possible scenarios of temperature rise, depending on the future GHG emissions, sometimes related to particular policy choices:

> (…) what might happen in the future is shown on this graph in these four (…) colored lines, right, that show various amounts of warming over (…) the 2100s, from a pretty small amount to really large amounts, another four degrees Celsius, which is almost 10 degrees Fahrenheit. (P11, LS2:36)

Using a map of global regions, Presenter 25 discussed the possible levels of warming in correlation with another variable: the assessed cost of repairing the anticipated damages.

> This chart is sort of the impacts of climate change in five key areas and in natural, managed, and human systems. (…) basically, when it gets purple, the impacts are severe; when the impacts are severe, the costs are expensive, right? (…) this is a great chart from the International Panel on Climate Change (…); this is basically "what do we think the impacts will be at different changes in temperature." And you can see the impact start to get more severe as you go over two degrees Celsius change. (P25, LS4:44)

In this example, participants were presented with statistical prognoses combined with more abstract figures of estimated costs for different parts of the world. (It is noteworthy how in the face of potential natural disasters threatening the life and wellbeing of

humans and ecosystems in these places, it seems customary to present such impacts in the form of financial costs).

Continuing this rather technocratic frame of global warming, which presents the causes and consequences of the changing climate as relatively predictable and strictly measurable physical phenomena, one of the presenters introduced the participants to a climate policy modeling tool:

> I'm going to introduce to you the En-ROADS climate simulator. (…) You can play with it, and what it does is: it mimics model estimates of how human activities respond to climate policies, how those changes in human activities affect emissions of greenhouse gases, how those affect greenhouse gas concentrations over time, and how (…) those concentrations affect the climate. And so, what you see here is two sets of panels (…), a menu down below, and in the upper right there is a big number, which is the global warming at the end of the century, for a current scenario, current set of parameter selections. (P52, LS7:235-6)

The tool predicts the average global temperature increase depending on the combination of climate policy solutions, e.g., carbon pricing or transport electrification, and how these influence the structure of primal energy sources. It was suggested to the participants during the last learning session as a tool they could use for their upcoming deliberative process of developing policy recommendations.

While talking about what climate change means for ecosystems and animal species, although still using quantified and not easily imaginable scenarios, Presenter 16 translated the abstract numbers into more concrete consequences of biodiversity loss. Using the case of how this significant loss is still preventable, she strongly argued for aiming at that lower level of warming:

> (…) for example, by limiting warming to 1,5 degrees Celsius versus 2 degrees, just half a degree of warming globally means that the number of vertebrate, the number of animals with backbones, and plant species… (…) the expectation that they will lose over half of their range (…) that risk is cut in half if we just can limit our warming by half a degree. (…) The number of insect species expected to lose over half the range is cut by two-thirds if we can limit warming by that half a degree. The amount of land area expected to be affected by that ecosystem transformation by turning into a different kind of community that risk is halved by limiting it to that half a degree. (P16, LS3:55-61)

The goals of 1,5 or 2 degrees of global warming, mentioned by Presenter 16 above, which originate in the framework of international climate agreements, were utilized as assumably generally understood points of reference by several presenters. At the same time, no participant mentioned the average global temperatures while deliberating about climate change.

3.1.2. Invisible borders cannot stop climate change, so we must work together

This theme points to the nature of climate change as a global phenomenon that exceeds human-made boundaries and therefore requires joint action. To express this quality of climate change, one of the presenters expressed it using wildfires, which are both a consequence of the warming, and a similarly unstoppable force of nature: "Just like invisible borders can't stop wildfires, the impacts of climate change initiatives cannot stop at the border to be effective. Ultimately no one city or state will ever be able to deal with these issues by themselves" (P20, LS3[9]:278). This comment reveals two rationales for joint climate mitigation efforts. First, Presenter 20 stresses cooperation as crucial for the common goal and the general effectiveness of climate action. Second, he signals the individual interests in participating in such a cooperation.

From the perspective of the common goal of stopping further warming, some other speakers described local efforts as too small, on their own, to affect the problem of globally changing climate or its consequences. For example, Presenter 17:

> So you know, sadly there's not much we in Washington, there's a lot not a lot of technical fixes, you know, that we can do to cool the ocean back down or to stop ocean acidification. Those are global changes that have very local impacts. (P17, LS3:111)

Recognizing that the warming atmosphere stretches beyond borders entailed speaking about the political context of global greenhouse gas emissions and international climate negotiations. The presenters who addressed this talked about the Kyoto Protocol and the Paris Agreement, stressing that "(…) in both of these it was acknowledged that climate change is a global problem - it requires global solutions, but at multiple scales, so everyone everywhere has a role to play in mitigation of greenhouse gas emissions" (P42, LS6:185). However, the climate treaties were only discussed by speakers during the learning sessions and did not come up in the deliberations.

One of the interpretations of climate change from the global perspective presented climate as a commons, which had so far not been managed sustainably:

> I wanted to make an argument about how important it is that the global community cooperate to create fair and equitable rules to constrain greenhouse gas emissions to mitigate further climate change. Doing so is to treat the atmosphere as a commons rather than as an open-access resource, where any country can do as they please. (Presenter 4, LS1:92)

While framing climate as a commons, Presenter 4 referred to the economist Elinor Ostrom's work on good practices of collectively governing common-pool resources. Such

[9] The abbreviation "LS" stands for Learning Session, while "DS" for Deliberative Session and "IM" for Inaugural Meeting.

governance requires, among others, that all who have access to the commons honor the rules constructed to preserve the resource (see Ostrom et al. 1999). The speaker argues that some global community members are not adhering to this goal by either breaking the regulations or declining to partake in the agreements.

Some participants expressed similar concerns during a Q&A session after a different presentation. When Richard from Oak Harbor asked, "What do we do with the carbon emissions created by countries who are not trying to mitigate climate change?" (Richard, LS6:220), Presenter 42 named possible sanctions, e.g., trade embargos, as a way in which countries can keep each other accountable (P42, LS6:222). Prajesh from Issaquah raised a slightly different problem, although similarly concerning nonconformity with the international climate agreements, that put it in the context of global economic development inequalities between countries. He asked: "(…) how are we helping countries like India and China manage the emissions? Unfortunately, their emissions are going up as developed nations keep shifting their manufacturing there" (Prajesh, LS6:216). Due to its distinctiveness, I identified this aspect of global mitigation efforts as a sub-theme, which I will outline in section 3.1.2.1.

The second rationale behind climate cooperation, as suggested by Presenter 20, is - for individual cities or states - a practical one. "Ultimately, no one city or state will ever be able to deal with these issues by themselves" - jurisdictions simply need to cooperate for their own safety. Differently than in some other policy fields, in the case of climate, it is not enough to take care of just their territories to secure the safety of their populations. Several facets of cooperation beyond local jurisdictions were discussed: the need for aligning local policies with state policies and those of the neighboring counties and the necessity of a more regional approach.

In the case of various jurisdictions within the state, Nathan from Vancouver recognized their multitude as a challenge of "siloed efforts", including coexisting types of territorial administrations and intersections between their competencies:

> I think that siloed efforts is a pretty big problem whatever solutions we recommend will have to overcome. Right now, we've got cities, counties, public utility districts, irrigation districts, water districts, all sorts of layers of government doing different things, and some important things related to climate. But they're very small areas, and the only way that it seems to be coming together is with the state legislature, which is a really nimble place to make decisions. So I think that that's a problem on the siloed effort and figuring out how to work across jurisdictions… it's going to be something we need to figure out. (Nathan, D2:111)

Nathan supposed that making decisions on a higher administrative level can be more effective and improve the consistency of the applied solutions. This is in line with a strain

of statements within this theme, arguing that some policies can be implemented better on a bigger scale. One of the reasons that speakers used to support this claim was the costs of some policy solutions (in this case, carbon pricing) being too high to be carried by individual municipalities:

> **Presenter 28:** (…) I'll just say that it's more cost-effective to do it on a larger scale. You don't want your administrative overhead to eat all the money. If you do this at a small scale, you wind up paying the people to push the pencils instead of to do the change in the energy system.
>
> **Presenter 29:** There's also quite a bit of expertise involved in measuring these carbon footprints of the various fuels, and county wouldn't have the budget to hire the kind of expertise you need to measure something like that precisely, so… And the fewer the borders, the better, the more transnational you have a carbon price, the better. (LS4:261-4)

Another benefit of policies being "in harmony with your neighbors" (P29, LS4:270) was that the potential negative consequences of introducing stricter climate policies would not turn against one individual state. Such a state would have restricted powers to avoid these consequences. Presenter 29 depicted it using the example of businesses trying to retreat from states which introduced carbon pricing, suggesting that the best way of deterring such tendencies would be to introduce carbon pricing uniformly on a national scale:

> A state like ours has limited ability to protect jobs. We don't want jobs fleeing the borders, going to places (…) from a high carbon fee to a low carbon fee. A national government has a much more expansive ability to do that through a border adjustment patchwork. Laws are hard on businesses; they don't want that. And [there are] greater bureaucratic efficiencies at the national level (…). (LS4:190)

The same issue has served Allison from Kirkland to make a point that a higher policy level can enforce climate policies on businesses more efficiently:

> I would say not holding companies, manufacturing companies accountable, and when we do, they can go elsewhere… so it's sort of bigger than Washington State in terms of holding (…) all companies accountable, where we get our goods from so that they're meeting certain environmental standards (Allison, DS2:782)

Often, speakers stressed the need for regional coordination between Washington State and the surrounding states. The effectiveness of a regional approach was particularly evident in conversations about the power grid and clean energy generation. As Presenter 47 noticed, "electrons don't stop at the borders of states, so we really have to plan for this as a region" (P47, LS7:129), making it another illustrative example of phenomenons that take no notice of political borders. Presenter 31 explained how cooperating states of the region make use of their individual characteristics for more efficient use of resources and a shared benefit:

> Well, we have an interconnected grid (…), our electricity system is connected to all the states around us and across the West, and the most efficient use of our electricity resources is to share them. It's sunny in the Southwest when it's dark here, so they overproduce electricity in the Southwest with their solar resources, and they sell that up to us. (…) In the spring, when the heat in the Southwest and Southern California is on the rise, it's still very moderate here, so that's when our hydro system is [overproducing], (…) so we want to sell our electricity to the Southwest and to Southern California. So there's an exchange of resources all the time on the grid to maximize the use of our renewable energy (…). (P31, LS5:124)

Regional cooperation was also seen as a safety measure. When in a breakout room, participants discussed the case of power outages in Texas in February 2021[10] as an example of failed energy management. Yvonne from Arlington mentioned the lack of cooperation with other states as something that added to the critical situation: "But also the fossil fuels froze, and they didn't have any connection to other states, they kept it all in that state. So, I mean, they had a lot of problems" (Yvonne, DS4:810).

Interestingly enough, though, the exact shape of the region, or which states can be described as the neighbors of Washington State, was not intuitively understood by everyone and was discussed with the need for specification several times during the deliberative phase:

> **Richard/Oak Harbor:** When I say: "especially among our neighbors in the Northwest", are we talking about the adjacent states or just in Washington?
>
> **Facilitator 5:** This is Washington specific.
>
> **Facilitator 6:** Well, actually, it does say "regionally", so it's seeing our neighbors regionally.
>
> **Marshall/DuPont:** So are we talking Canada?
>
> **Facilitator 6:** Maybe, yeah, B.C.[11] maybe… I'm not exactly sure.
>
> **Team member 6:** Maybe we should specify which neighbors we…
>
> (…)
>
> **Marshall/DuPont:** Yeah, because, you know, our neighbors to the Northwest (…). We are the Northwest, and anything Northwest of us is water.
>
> (…)
>
> **Facilitator 5:** Yeah, what would that look like in your estimation?

[10] During February of 2021, the US state of Texas suffered a severe energy crisis during a series of winter storms, resulting in deficiencies across the state of heat and water supplies, as well as food shortages. Analyses have since revealed that the proximate causes of the crisis included a failure to adequately prepare natural gas transportation and the electrical grid in the state for low temperatures, as well as the Texas energy grid being kept separate from the two major national energy grids in the US, thus preventing import of electricity from other states. See, Busby et al. 2021.

[11] British Columbia, a Canadian Province.

Eve/Kent: Well, I don't know what they're talking ab[out]. I don't know what they mean as far as our neighbors.

Morris/Ellensburg: You know, in our learning sessions (…), they actually were talking about British Columbia, and Oregon, and Idaho, so I think that's what they mean. (DS4:183-212)

This lack of clarity about the region's composition suggests that participants were not accustomed to thinking about policies or political issues in terms of cooperation with the neighboring states. It seems apparent that the participants more intuitively perceived the distinctiveness of political communities and the borders between them than the globally free flow of air masses.

3.1.2.1. Common but differentiated responsibilities

Although, as expressed by the main theme, climate change is a global problem and thus requires action by a worldwide community, some speakers introduced a differentiation between its various members.

Prajesh's question (see p. 34) proposed the distinction between "countries like China and India" and "the developed nations" and the need for some support for the former. Although signaling a problem with limiting their GHG emissions on account of the mentioned countries, Prajesh attributed the locally increasing emissions in developing countries to Western economies. This example illustrates the disparity between current nominal emissions and the various related notions of responsibility. In this case, Presenter 42 pointed out the disparity between climate goals and the priorities of developing countries due to their most urgent needs: "to them, economic growth becomes primary and environmental considerations are secondary because poverty alleviation is one of the primary goals of developing countries" (P42, LS6:218).

The greater responsibility for climate change was attributed to Western countries and explained, among others, by their high historical cumulative emissions and current emissions per capita – steadily higher than those of the developing countries. Presenter 4 illustrated this comparison using the example of the United States to stress the role of the country where the W.A. Climate Assembly was taking place:

> (…) In this way, industrialized countries such as the U.S. were found to have tremendous responsibility relative to others, both in terms of cumulative emissions and ongoing high rates of emission. For instance, according to the World Resources Institute, the United States' per capita greenhouse gas emissions in 2017 [were] seven times that of Nepal (…). If you look at fossil-fuel-based carbon emissions in 2019, based on the European Commission's EDGAR database, it is a shocking thirty-one times more. (P4, LS1:75)

The speaker collided these aspects of responsibility for climate change with disproportional exposure to its consequences and lesser ability to take measures against it, emphasizing, in particular, the issue of sea level rise:

> The notion of triple injustice of climate change suggests the infuriating irony that those who have the least responsibility for creating the problem [of rising sea levels] globally also have the highest vulnerability and the least financial and technological capacity to address the problem. (P4, LS1:74)

For these reasons, the speaker argued for the need to apply the equity lens to global climate agreements, as it previously had been a part of the Kyoto Protocol, which would differentiate between countries according to their ability to contribute to solutions:

> (…) it did incorporate an equity principle called Common but Differentiated Responsibilities and Respective Capabilities, which acknowledged the stark inequalities in responsibility, vulnerability, and capacity for mitigating climate change by creating emissions reduction targets proportional to responsibility and capability. (…) any ethical approach moving forward should strive to reenter equity among nations as well as more ambitious targets for emission reductions. (P4, LS1:71)

A measure aimed at addressing the historical responsibilities of developed countries and the urgency of the issue would be to financially support the climate mitigation efforts in the Global South, e.g., through the Green Climate Fund. As Presenter 42 argued, it can also help to prevent the developing countries from repeating the development path of the West and the high emissions related to it:

> One of the arguments that these countries have definitely made is (…) that part of the world has already polluted and therefore (…) we need to reach that level [too]. And if we reach that level, the world will not be a place to live in, so there should be some help for capital, for technology, based on the capacity of these nations to be able to move towards greener technology. (P42, LS6:218)

This section dealt with the varying responsibilities between countries, taking the need for cooperation to stop further climate change as a global phenomenon. I will return to the notions of responsibility explicitly attributed to Washington State in section 3.2.2.

3.1.3. Negative climate change impacts globally and in distant places

This theme describes climate change as the cause of (usually negative) consequences observed globally or in distant places, by which I understood to mean territories of other countries and other U.S. states. The impacts discussed during the Assembly included sea-level rise, examples of extreme weather events, and general consequences to biodiversity. It is worth noting that when speakers brought up an example from a distant location, they often made a link to similar cases in Washington State.

Discussions of these impacts were often related explicitly to their effects on mental health. One presentation was dedicated specifically to this topic, addressing various ways in which the changing climate causes anxiety and eco-grief. Here, Presenter 10 utilized examples of social groups suffering from anxiety about future events independently from where they live, e.g., scientists researching climate and natural systems which are dying out, university students, and the general population (LS1:225-6). In some locations, people experienced mental health crises due to the climate change consequences they could experience directly, e.g., the unprecedented proportions of bushfires in Australia (ibid.) or the melting permafrost in the Arctic:

> For many indigenous people warming climate (…) is wiping out traditional hunting and cultural practices. One really visible example of this (…) is in the Arctic, where communities can't travel to ancestral sites because the landscape is melting beneath them. But in Washington State, it's manifesting around the huge decline in salmon from rising temperatures in our rivers. And with something that's so integral to cultural identity, of course, that also has an immense psychological and mental impact (…). (P10, LS1:229)

Here, Presenter 10 drew the parallel between impacts in the Arctic and Washington to show that even though the specific local processes triggered by the changing temperatures are different, they threaten the cultural heritage of local indigenous communities in multiple ways. Similarly, when Presenter 4 talked about island nations and coastal communities as being particularly at risk due to rising sea levels, she addressed the distant cases in general terms but specifically named the corresponding local cases:

> Another key element in environmental and climate justice conversations is (…) the acknowledgment of communities who are particularly affected and underrepresented in a global context: island nations and coastal and other communities, whose food, water, livelihood, security are severely threatened, are often identified as those, for whom climate change constitutes an existential crisis, not just in the future, but today. And in Washington State, too, we have coastal populations, particularly the Quileute, Duwamish, Makah, Squaxin, Lummi, and other tribes whose vulnerability to sea level rise, tsunamis, as well as to threatened food sovereignty as a result of climate change needs to be recognized. (P4, LS1:78)

During the next learning session, one of the speakers referred to the results of a study on the mental health consequences of experiencing a natural disaster in England and drew parallels to events in Washington State. He then stated the importance of learning from other cases how to prevent severe mental health consequences of such events in the future:

> We do have flooding in our state. (…) There's been several very large floods of the last several years in England, and they went out purposely after those floods to look at mental health issues. (…) You can see the very large increase in probable depression, anxiety, and post-traumatic stress disorder for those who['s houses] are flooded. Those people are being followed up. The

> third-year follow-up has recently [been] published, showing there's still more mental health issues in people who are flooded. We don't have good data to follow how much people are being affected by these extreme weather and climate events (…), but we do need data to get a better sense of how severe the mental health consequences are and what we need to do to prevent them when future events arise. (Presenter 12, LS2:79)

The impacts of climate change in distant locations were also used to illustrate the associated high costs of such events. Once again, the dramatic consequences of global warming were framed mainly as a financial loss:

> So what does the cost of inaction look like? We can agree that all of these things cost us money. Whether it's Australian bushfires or superstorm Sandy or the melting of the Greenland ice sheet, (…) which is, if it melts all the way, is going to raise sea levels and cause us to spend a lot of money on adaptation. The costs of not acting on climate change are substantial and real, and they're starting to be felt now. (P25, LS4:31)

The examples described above almost exhaust the list of cases in which speakers would mention examples of climate change impacts from other countries. Some presentations dealt with globally observable trends, especially related to sea-level rise, ocean acidification, changes in ranges of wildlife habitats, and changing compositions of ecological communities. The consequences related to oceans, which surround all continents, seem to be particularly well suited for applying a global perspective:

> (…) one thing to note about the ocean is [that] it covers 70 percent of the surface of the Earth. It feeds 3 billion people, and for most of those people, the ocean provides their only or their main source of protein (…). Last little fact is that 80 percent of the world's global population lives within 60 miles of the coast. About three-quarters of the major cities, the big mega cities, are on the coast. So what happens when the ocean warms? Heat makes things bigger; it expands water, so we're getting sea level rise. So as that sea level rises, we have big issues with whoever is living next to the coast. So on the Pacific Coast, there's several tribal communities that are going to have to move inland (…) we've got coastal flooding happens when you have high tides, plus you get these massive storm surge, and you can get flooding into communities in the coastal areas. (…)
>
> Now, what happens to fish when they are in warmer water? Fish like to stay where the water suits them, so (…) they migrate to areas where it's a little cooler. And so, in temperate areas, you're seeing more tropical and subtropical fish moving into temperate areas and [being] harvested. And in the tropics, though, we're just gonna see fewer fish. And that's where a lot of the folks that depend on fishing for food resources live. So that's a very large impact in food security. (P17, LS3:79-88)

Presenter 17 also gave a more local example of sea-level rise consequences on the North American continent. Some other speakers also talked about the warming's effects observable on other territories of the United States outside of Washington State. The central focus of these remarks was health consequences for Americans. Speakers listed several climate-associated risk factors for these health hazards: warmer and more humid weather, an increase in weather-related disasters, heat weaves, an increase in the season

length of allergenic plants, and the spread of mosquitoes carrying serious diseases (as weather suitable for them will expand affected areas throughout North America).

While talking about mosquitoes, Presenter 12 juxtaposed other regions in the U.S. with Washington State, showing prognoses according to which the local state will remain safe from disease transmission. However, she brings the distant places closer to home by pointing out that the presence of diseases in other states also means a risk for Washingtonians:

> You can see here that Seattle very much could have a climate suitable for this mosquito, but just because we have the mosquito doesn't mean we'll have the disease (…). And when you take that into account, you can see on the right-hand figure for suitability for transmission we're in the clear, which is, right, it's great news. We're in the clear; we don't have to worry about this. But we already know there's more mosquito days per year. We've got data from San Francisco showing the increase in the number of mosquito days. And on the right is a headline from 2017 that this mosquito was found in Toronto, Toledo and Detroit. There's now breeding colonies of this mosquito that far North. So we're not safe, for the end of the century, in being protected from having diseases like dengue fever. The question now is when, not if. (P12, LS2:86)

Presenter 12 also addressed the higher frequency of extreme weather events on the US-scale, presenting them from the perspective of additional costs which they produce:

> One of the things that NOAA, the National Oceanographic and Atmospheric Administration, follows are billion dollar disasters. These are the billion dollar disasters for 2020. (…). And, of course for us on the West Coast 2020 was characterized by wildfire. (P12, LS2:73)

The increasing frequency of natural disasters in the U.S. was also discussed during a breakout-room discussion in the second deliberative session. Charles from Richland mentioned the rising frequency of tropical cyclones, which had not been brought up by any of the presenters: "I've been noticing the increase of natural disasters, like (…) this hurricane season. (…) you know, we went through the alphabet and (…) the storm of the century now is almost like every other year" (Charles, DS2:411). Charles expressed his continuing interest in weather events happening in distant locations (hurricanes only hit the East Coast of the U.S.[12]), and how he has been making personal observations about their occurrence and connecting them to climate change[13].

I will demonstrate how current and future impacts were presented and discussed for the local area of Washington State in Section 3.2.1.

[12] Continental United States Hurricane Impacts/Landfalls 1851-2021, https://www.aoml.noaa.gov/hrd/hurdat/ All_U.S._Hurricanes.html [15.06.2022].

[13] Research has not confirmed any detectable impact of climate change on hurricane activity in the Atlantic Ocean so far. However, the intensity of tropical cyclones (but not their number) is projected to increase in the future due to anthropogenic warming, the accompanying sea level rise and higher atmospheric moisture (Knutson et al. 2021).

3.2. Climate change is our local problem

This overarching theme presents the local perspective on climate change, i.e., how speakers talked about the impacts of global warming that are or will be observable in Washington State, the state's share of responsibility for causing it, and its obligation to address it.

3.2.1. Climate change will have negative impacts in Washington State

This theme describes climate change as a phenomenon causing local negative impacts in the local region, i.e., Washington State and, to some extent, the neighboring states.

In contrast to consequences observed globally or in other places, the ramifications of climate change for locations within Washington State were extensively covered during the Assembly. Speakers discussed the impacts of global warming on the natural systems, the frequency and severity of natural disasters, human health, the economy, and energy production and availability.

The most direct consequence of the changing climate is the shift in local weather conditions, which will impact the natural and human-made systems in various ways. In the case of Washington State, the change will likely mean generally higher temperatures and less precipitation. Presenter 18 described how these local weather changes and other processes lead to a heightened wildfire susceptibility of Washington's forests:

> So in the future, we're expecting increasing air temperatures, we're expecting less summer rain, (…) we're expecting the snow to melt off earlier, and this is all going to lead to drier fuels and drier forests. And so, we have these longer fire seasons and more extreme fire hazard. We're expecting more fire to occur. (…) These are our projections for the middle of the century and (…) overall in the Northwest; if our temperature average annual temperatures increase by about two degrees Fahrenheit, we're looking at about two or three more times annual area burned. (…)
>
> We also know that climate change affects insects. (…) We've had mountain pine beetle infestations, and attacks, [it] is a part of our forest ecosystems for centuries. But the warming we've seen with climate change has actually favored mountain pine beetle. It's able to actually increase its reproductive rate in some places, (…) the warmer temperatures have allowed it to expand its range to areas where it hasn't occurred historically. (…) And again, we know that drought and makes our tree species more susceptible to insect, outbreaks and disease, and mortality, and then we also could have some interactions with fire. (…) (P18, LS3:137-44)

The combination of factors described above is expected to change the composition of the local forest ecological communities (P18, LS3:144). The speaker also described what changes are expected in the forest landscapes of Washington, referring to listeners'

common experience of how the local forests have looked within their lifetimes, and making distinctions between various local areas:

> So you go into a forest in Washington State, say on the West side of the Cascades, you kind of know what you expect to see. I'll see some hemlock, some fir; there'll be some huckleberry. That's an ecological community. Maybe there's some deer. (…) We've always had changes in our ecological communities, but with the pace of climate change happening now and how quickly species are moving, we expect to see pretty different communities emerge in the future. We might have very different-looking forests; we might have very different alpine communities. Like up here, (…) we have trees moving into alpine meadows. On average, there is much less uncertainty around what that might look like West of the Cascades. We'll probably still have evergreen forest; conifer forest might be a little bit different than what we've had in the past. There's more uncertainty on what's going to happen East of the Cascades, like in the Columbia Plateau. [There are] questions about how much grassland versus shrub versus forest might be there. We could have some pretty dramatic changes; we don't know exactly what those will look like yet. (LS3:41-3)

Beyond characterizing the developments concerning plants in ecological communities, as well as coastal and sweet water habitats (P16, LS3:51), Presenter 16 also described factors leading to changes in the habitats of animal species. Illustrating the impacts of climate change with examples of a few locally occurring species can be recognized as a strategy for making a more powerful impact on the listeners. Using the examples of animal species that are important symbols of local identity (salmon), or are especially emotionally affective ("adorable" pika or "iconic" wolverine), combined with a dose of anthropomorphism, is meant to produce a stronger sense of connection and concern for their fate than more abstract statistical data would:

> (…) here in Washington, we have these adorable critters, pika, that live way up in alpine habitats up at the tops of mountains. The only place to go is up, so they have a really hard time adjusting their ranges because, at the edges of their range, you'd have to go down [the] mountains and back up and (…) travel across the landscape. It's very difficult for them to do that, so we're seeing at the southern edges of their range (…) these guys are starting to disappear.
>
> (…) We've lost about 25 percent of our snowpack in the Cascades since mid-20th century, we've lost a lot of ice. And some species really need this snow and this ice. Species like wolverine (…) they are amazing creatures; they can travel huge distances, they are so hardy, and they are just sort of icons of our remote, rugged landscapes in Washington. But they need (…) a lot of snow, and they need it in the spring, and they dig into the snow, and that's where they have babies, and that's where they raise them. And so spring snowpack, in particular, is disappearing in the Cascades because it's getting warmer earlier, it's melting earlier, and these guys are losing their habitat. And by the end of the century, there's really dramatic reductions in our spring snowpack in Washington, and it doesn't look that great for wolverine and their ability to stay in our state past the end of the century. (P16, LS3:38-47)

Natural disasters are a type of impact particularly often connotated with climate change, possibly due to its dramatic media representations. Several presenters have mentioned

that climate change results in a higher frequency of extreme weather events, referring in particular the local experience of wildfires.

> (...) As was mentioned earlier, we have an increase in wildfires. We have more wildfires in the West, and we have more acreage that's burned. (...) it's important to note that climate change is about increasing the chances of extreme events. It's like weighting your dice, (...) you can still have years where you don't have wildfires, and then other years where you do, [it] is just that we increase the frequency of those extreme events. (P14, LS2:138)

Predictably, the types of natural disasters that pose the highest risk to the local area would receive more attention from those who live there, especially if the local population has already been experiencing these impacts. Understandably, wildfires were, therefore, the subject of great attention throughout the Washington Climate Assembly. The relevance of these events was already evident during the Inauguration Session, as one of the main facilitators expressed his personal motivations for co-organizing the Assembly, where he mainly highlighted the experience of the previous year's wildfires:

> (...) So many of you may be wondering, and we've gotten this question a lot, why Washington and why now? And so, there's a lot of reasons why there is both for the state and also for each of us individually. And so I'm gonna be speaking at least for myself. I know over at least 2020, it was the second warmest year that we've ever seen on record. 2020 was also the worst wildfire season we've ever had in the state, and many of the warmest years and the worst wildfires we've seen have been over the past five years. (...) (F2, IM:37)

Also, during the last learning session, one of the presenters addressed recent wildfires as a common experience of Washingtonians:

> As many of you are aware, the climate impacts really cannot be understated; a lot of us personally, whether through the smoke or housing, felt the wildfires this summer. (...) (P44, LS7:53)

In addition to wildfires, the Eastern part of the state experiences other life-threatening weather conditions. As listed by Presenter 53, who is herself a resident of that region:

> (...) A lot of the communities in Eastern Washington are actually flood plains, and so we have a lot of infrastructure that is going to have to be relocated because of frequent flooding. We're having incredible blowing snow events that are shutting down highways, a lot of rain [or] snow events that are causing extreme precipitation and flooding. Heat is going to be a major concern in the future for Eastern Washington. On the East side, there will be fifteen to fifty days with a heat index above 100 degrees; on the West side, only one to eight. (P53, LS7/1:12)

On the coastline, the main danger comes from the ocean. Many places impacted by sea level rise in the state happen to be lands of indigenous communities, whose cultures are closely connected to their specific coastal locations. One of such cases was described by a member of the Lummi Nation:

> (…) in these unprecedented times, we don't have to look far. I look right down here at Lummi shore. And if you ever get the chance to come out to Lummi and drive around what we call the Horn, the big peninsula here, you could see the king tides come all the way up to our beaches; we have no more beaches out here. So if you want to see climate change in action, on the move, you can come out to the reservation and see it (…). (P8, LS1:170)

Another topic discussed during the Assembly was how climate change influences the health of Washington residents. For example, Presenter 48 demonstrated how the specific consequences for individuals can vary greatly, depending on many factors determining both the risk factors, e.g., wildfires, drought or intense rainfall, and vulnerabilities of different populations:

> So what does the evidence say about climate change and its impacts on health? (…) climate change will increase the frequency, severity, and duration of weather-related hazards in ways that will amplify health problems we already are trying to deal with as a society and here in Washington and also introduce new ones. Everybody is vulnerable to the health risks of climate change, but some people are disproportionately vulnerable. (…) For example, climate change will increase the length of our wildfire season. (…) More exposure to poor air quality could increase our health burden (…) from wildfire smoke, and some of those health effects are fairly mild, but some are very serious (…). Certain populations are at greater risk during those events: folks with underlying health conditions, like cardiovascular disease or asthma, as well as the old and the very young, who still have developing respiratory systems. (P48, LS7:148-50)

One particular environmental risk for health was, of course, posed by wildfires. Presenter 14 spoke of the complexity of interactions between the weather, natural systems, human-built systems, and health. In her presentation, she demonstrated that it is not only wildfires that can directly affect health, e.g., by causing serious air pollution, but also how other related factors can multiply the negative effects on public health:

> So we have an increase in wildfires, and this increase in wildfire leads to air pollution in the form of fine particulate matter and a variety of other toxins that are extremely harmful to human health. And this leads to increased morbidity, which means new and worsening health problems and hospitalizations, and mortality (…). And high temperatures are also often present at the same time as wildfires. And this also has a direct effect on health (…) and can worsen the effect of air pollution on health. So when you have the kinds of conditions that lead to wildfires, like those that involve strong winds, you also can knock over a power line, and with those conditions (…) you can then get wildfires, or wildfires can also lead to infrastructure damage. And either way, you get a power outage (…). The power utility companies will turn off the electricity to specific areas that are at high risk of wildfire to limit damage to life and property (…). These public safety power shut-offs basically prevent the wildfire; like when a power line falls down, you don't get a wildfire, but it does lead to a power outage, which also results in morbidity and mortality (…). (P14, LS2:135-7)

Presenter 48 spoke of similarly complex mechanisms concerning intense rainfall runoff and drought (P48, LS7:151); how these climate change-related events can pollute drinking water sources and damage infrastructure. Other risk factors for human health

discussed by speakers (mainly during the learning sessions) included: the spread of waterborne and vector-borne diseases, extreme weather events and how they can affect air and water quality, as well as lead to power outages and what disruptive consequences these can cause throughout society.

A presentation addressed the relation between climate change and mental health during the first learning session, where Presenter 10 described mental health issues related to climate change as experienced by various social groups worldwide (see Section 3.1.3). Bringing up an example of a local tribal community, Presenter 48 pointed out the mental health consequences of losing access to local places that once were close:

> Climate change threatens the places we live. (…) The lower picture is the lower village of Taholah, part of the Quinault Indian Nation, which has already (…) taken incredible actions to begin a managed retreat process to deal with the fact that some of many coastal areas are becoming more inundated during high storm surges. It's important to note the kinds of health and well-being effects that happen when we face these kinds of losses. That can range from, obviously, direct disaster and injury but also mental health impacts from not being able to access or be in the places we once were able to be in. (P48, LS7:158)

Another important field of human activity, which would inevitably experience some consequences of the changing climate, is the economy. The impacts on the local economy discussed during the Assembly were mostly anticipated for the fishing industry:

> (…) our shellfish are so important for our economy, for our indigenous communities, and their culture and livelihoods. And so we're seeing this affecting oysters, crabs, all of the shellfish that are so important in Washington. (…) They can't develop their shells as effectively as our ocean gets more acidic, and so that's affecting their populations pretty dramatically. (P16, LS3:53-4)

Interestingly, most of the examples discussed of climate change posing a threat to the local economy also involved aspects of public health. As in the following example, when climate change-related mechanisms jeopardize the safety of certain food products for human consumption, the livelihoods of the producers are also under threat:

> (…) 2014 to 2016, we had the Blob[14] out in the Pacific, and temperatures got three degrees higher than normal. Three degrees Celsius, which is a lot for a fish that's used to being in 10-degree water. What happened there is that we had fisheries collapse in many different areas; they were just disasters. Chinook [salmon in] the Fraser River, sockeye [salmon] didn't show up for a few years, cod in Alaska… And then also we had (…) a tremendous algal bloom. (…) It's a harmful algal bloom; it contains domoic acid, [which] creates permanent memory loss. And so crab fisheries were shut down, and the coastal (…) crab fishing economy lost 97 million dollars that year. You know, clam fisheries were shut down, so that impacted everyone on the coast, all the fishing communities. (P17, LS3:90-3)

[14] For more details, see, e.g.: https://earthobservatory.nasa.gov/images/87513/the-demise-of-the-warm-blob [25.06.2022].

In another intersection between these fields, speakers perceived risks to public health as potential threats to the local economy, as people with health challenges will be less productive workers. One example of such considerations came from Presenter 12, who spoke of the increasing number of heat weave days per year in Eastern Washington, and how it would pose a challenge to the productivity of agricultural workers in that part of the state (P12, LS2:84). A participant brought up another example during the first deliberative session, where Cayden from Mount Vernon anticipated that poor air quality would affect human health to the extent that it would have negative consequences for the economy:

> (…) air quality is important because there's so many things that are harming it right now. And it definitely takes an impact on your health, which will probably take an impact on the economy, because you probably won't be able to, like, work as well. (Cayden, DS1:105)

Another risk related to climate change was identified in food production, which may be considered a danger to both the economy and food security. Threats to agricultural production were, in most cases, recognized in the context of wildfires, as in these examples from Eastern Washington:

> [In the] summer, the town of Malden was burned to the ground in a single day. The same day I had a fire start in my backyard. We had extreme winds, and hundreds of fire starts all over Eastern Washington. A lot of farmers have had impacts from farms to their wheat and cattle operations. (…) the Colville Reservation has had a number of incredible fires, (…) they lost twenty percent of their merchant of old timber; the Yakama has also had impacts to their agricultural productivity (…). (P53, LS7/1:14-7)

However, food production was also the only topic where some potentially positive consequences of a warming climate were predicted, both by presenters and some participants. The agricultural outcomes in Washington State might increase due to increased rainfall (F1, IM:90) and warmer temperatures extending the growing season (P53, LS7/1:22; Ryan, DS2:535). The positive effects are nevertheless not reliable, as explained again by the speaker presenting the perspective of rural Eastern Washington:

> The 2015 drought year is (…) [as] climate scientists say (…) what it's like in the future on an average year. And that year (…) Washington farmers lost 700 hundred million in productivity. Washington State produces most of the nation's apples, and in the future, it'll actually be more favorable for producing apples throughout the interior basin. But apple trees are high-value crops that take a long time to be productive, and when you lose your trees, it can be really devastating for farmers. (P53, LS7/1:16)

One of the less-discussed but crucial impacts of the warming climate on the functioning of the state is the significance of the local weather conditions for the state's energy grid. As explained by Presenter 31, climate-related changes in snowpack and precipitation in

Washington State have, somewhat paradoxically, negative consequences for the local renewable energy production:

> (…) hydropower is our biggest source of energy. (…) One of the challenges with climate change is that we're seeing more precipitation in the form of rain rather than snow. And snow is a great storage system for the hydroelectric system. [As] more rain (…) comes down, [it] means the water goes right into the reservoirs, and the reservoirs have a harder time holding it back because they have limited storage. So we like the precipitation coming as snow because it's an automatic storage system. So [climate change] presents challenges for our hydro operators and puts stress on the hydro system going forward; the more our precipitation comes as rain. (P31, LS5:71)

Throughout all the climate change consequences discussed for Washington State, as summarized above, neither participants nor presenters considered a need for state inhabitants to leave their places of residence. The only exceptions were the coastal communities, which would need to move further inland, but no one suggested that Washingtonians would need to move out of the region. The only remarks about how climate change might lead to the displacement of people assumed that some of them might come from other places to Washington State. As in the following quote from a tribal leader, who expressed his worry about how more people coming to the territories of Washington might impact the situation of the indigenous communities:

> (…) We're also concerned about climate refugees, people who may come here when their areas get too extreme. (…) (P1, IM:16)

Presenter 4 addressed the topic of climate-related migration shortly in terms of Washington's responsibility to recognize the status of climate refugees (P4, LS1:79), and two participants mentioned it briefly. Still, no one paid further attention to it within the analyzed material.

3.2.1.1. "Extent of harm also depends on our resilience to warming's impacts" – adaptation to climate change

This subtheme describes why local communities in Washington State need not only to try to limit their contributions to GHG emissions but also prepare for the inevitable consequences of the changing climate.

As determined by the leading question, "How can Washington State equitably design and implement climate mitigation strategies (…)?", the thematic scope of the Washington Climate Assembly was explicitly limited to discussing climate change mitigation measures. Nevertheless, the issues related to climate change adaptation have been present throughout most of the learning sessions, even though this limitation had apparently been communicated to the speakers:

> (…) I know you don't want to talk about adaptation, but the science shows us that we're getting more rain, we're going to have more floods. And so we want to make sure that people don't end up like the little picture on the right, where they're flooded out because of sea level rise or because of flooding. (P41, LS6:170)

Conversations about the expected impacts of climate change on the local area of Washington State, as described in the central theme in the section above, perhaps inevitably called for some follow-up on how the local population can prepare to avoid the most dramatic consequences. As Presenter 11, whose presentation focused on the regional impacts of global warming, pointed out:

> Extent of harm also depends on our resilience to warming's impacts. So some amount of all of those impacts that I just described will happen because we have set that change in motion. They'll be bigger and faster, or later and less, depending on our choices about emissions, but we will expect something. And so our resilience to warming's impacts is shaped by today's actions, again, which are about choices, about how we build our bridges, prepare our farms, grow our communities, or [in] other ways adapt our systems to prepare for these risks. (P11, LS2:54)

At least some of the warming and its consequences are unavoidable; therefore, adaptation is a necessity, and – in contrast to mitigation strategies - the local relevance of adaptation is evident. It is readily visible from the perspective of Presenter 43, a planner from a local county:

> (…) The first plan was a climate adaptation plan (…) that really helped us dive into the science and understand the vulnerabilities to, say, our transportation network, our utilities, water, public health, our ecosystems, the risks that we might face specifically in Thurston County, and we develop some adaptation actions around that. And then, following up on that plan, (…) we just wrapped up (…) a planning effort to look at climate mitigation, how can we reduce our own contributions to climate change. (P43, LS7:35-6)

As apparent from the description of this local approach, a climate adaptation plan for the county was developed in the first place, suggesting a corresponding order of priorities. While the county's mitigation efforts will inevitably have a limited impact on the global climate, the changing climate will potentially have immense consequences for the county. As the local public officials are directly responsible for the functioning and safety of all the named local utilities, preparing for the changes and trying to avoid the worst outcomes are their primary concerns.

This asymmetry of impact is especially clear in the case of the indigenous communities, and the crucial role of adaptation efforts was especially prominent in their perspective. Firstly, they have often experienced climate change impacts already, as they tend to live in places susceptible to, e.g., sea-level rise or forest wildfires. Secondly, because they often maintain especially tight connections to specific locations and are willing to go to great lengths to be able to live there still or maintain access to these places:

> (…) the challenges for Swinomish, as well as other tribal communities, are this: that protecting treaty rights and cultural sovereignty is at most important, that connection to the reservation in homelands requires response and limits our options because we don't seem to be going anywhere since we are indigenous to this place, (…) that mitigation efforts are well beyond our tribe's contribution, and then there's a great need for preparation to adapt. (P54, LS7/1:43)

Due to these challenges, indigenous tribes have been at the forefront of conscious adaptation efforts, including developing adaptation plans:

> (…) we have lots of issues with our natural resources and climate change; not just our natural resources but our infrastructure, utilities, people's houses, people's roads are under threat from sea-level rise, storm surge[s]. (…) many tribes have climate adaptation policies and action plans, and Swinomish is one of those. (P54, LS7/1:76)

In the earlier comment, Presenter 11 outlined the interconnectedness between mitigation and adaptation efforts: we must prepare for the impacts, but their severity will depend on how much greenhouse gases we continue to emit. Some other presentations included recommendations that made it evident that mitigation strategies can bring adaptive benefits as well, like in the case of improving the health of soil with the initial goal of increasing soil carbon sequestration:

> (…) soil health strategies really support resilience of our agricultural systems to climate change. And I would say that the natural resource-based parts of our economy, agriculture, and forestry, are quite vulnerable to impacts of climate change as we move forward. So that's one sort of nice thing is that there can be this complementarity between the mitigation and adaptation. (P3, LS1:61)

Some strategies can even be simultaneously supportive of mitigation, adaptation, and other goals, e.g., those of social and environmental justice, as expressed by Presenter 4:

> (…) I think there is hope for meaningful climate action because the climate system is connected to other spheres of life and resources, including forests, fossil fuels, water resources, land, and so on (…). I think it is good news that it is possible to take back the commons at the local scale in these spheres, which are critical for climate mitigation, adaptation, or both. This may be an indirect but still effective way to mitigate effects on the atmosphere or to cope with the effects of climate change in ways that support distributive and participatory justice, recognize and validate the power of communities over the commons, the means of production, and thereby also make structural changes. (P4, LS1:93)

Presenter 19, who spoke mainly about forest health and resilience as an interested party presenter, also expressed her optimistic view on adaptation. She believes that humanity can benefit from introducing more balance in its relationships with the natural environment:

> Culturally we've been thinking of climate change adaptation as a punishment, as a step-down, but I see it as progress. I'm a health care practitioner, and I treat people with physical and emotional issues. Living more in tune with the environment may be something our society needs to be healthier in both body and spirit. (P19, LS3:158)

Forestry is a field that illustrates particularly well how it is not always possible to draw a clear line between mitigation and adaptation strategies, and that has often been present throughout the presentations and the deliberation within the Washington Climate Assembly.

I consider the conversation regarding forests of Washington State to be a part of the adaptation subtheme, as increasingly intense and dangerous wildfires have not only been a part of the expected consequences of climate change (see section 3.2.1.) but have already been experienced by Washingtonians. A considerable part of the Assembly learning sessions was dedicated to the topic of forest health.

On the one hand, some attention was paid to the necessity of strategies allowing better control over the scope of wildfires. These strategies would aim to avoid dramatic consequences for biodiversity and habitat loss, as well as the risks wildfires pose to humans, including health risks related to air pollution. The conclusion from the presentations on the topic was clearly an adaptive one: wildfires are unavoidable, both because they are a natural occurrence in the life cycle of a forest and because of the changing climate. Nevertheless, we can work on preventing the most dramatic scenarios. E.g., as expressed by Presenter 19:

> We're beginning to experience negative side effects, such as wildfire and tree die-off, and we have to accept that the forest is changing. But there are things that we can do to help it happen with less disastrous consequences. (P19, LS3:163)

These presentations were followed by expert recommendations on viable strategies and participants' questions regarding specific forest management practices and their application for limiting wildfires. I will not discuss these in further detail here.

On the other hand, the need for protecting and restoring the forests was considered from the climate change mitigation perspective, i.e., to increase the forests' capacity for carbon capture. From this point of view, wildfires were considered not for the threats they pose to humans and ecosystems but as a danger to the carbon storage function of forests.

> (…) these larger wildfires are expected to reduce the ability of our forests to store carbon, and so this is also a concern. And so the more we can do to restore our forest, (…) the more we can do to remove these extra fuels to restore more natural fire regimes, the more resilient our forests will be and the more carbon they'll be able to store. (P16, LS3:45)

Presenter 18, however, pointed out that the values of forest health and its potential for carbon storage do not necessarily go hand-in-hand, which complicates the former utilitarian considerations:

> (…) there's some trade-offs between forest health and carbon storage, and in some cases, the actions we take to reduce risk of fire to communities, continue to provide wildlife habitat and

> keep our fire hazard down overall is not necessarily going to be a good thing for carbon in all types of forests. (…) (P18, LS3:147)

Beyond forestry, other topics that received significant attention regarding adaptation needs were agricultural systems, flood mitigation, and health. Agriculture was often discussed in relation to the previously mentioned complementarity between carbon sequestration and improved resilience, e.g., as recommended by one of the presenters: "promote land management practices that capture and sequester additional carbon, while producing nourishing food and increasing the resiliency and profitability of (…) land" (P6, LS1:151). Another intersection of agricultural practices and adaptation, in this case regarding water and flood management, was that decisions made about which varieties of plants to grow affects water retention in soil and the risk of flooding:

> (…) There are farmers planting perennial wheat, which has much deeper roots than annual wheat and is a great way to help us mitigate for floods because it allows the landscape to absorb more water. So there are now initiatives to try to help farmers become a part of the climate solutions and for food security and soil health, which are major issues for Eastern Washington, as most of our food is produced for export. (P53, LS7/1:20)

Human health is another field that the changing climate has already been affecting. Therefore, as Presenter 12 argued, there is no reason to postpone adaptation efforts aimed at reducing the climate-related health risks, especially as the strategies required are already known:

> Climate change is affecting the health of all Americans, and it's already happening now. And something that we need to take into account when we think about where our investments need to go, [they should be used] to protect human health and wellbeing into the future. (…) So, on the one hand, we have lots of uncertainty about what's going to happen with the change in climate; on the other hand, there's a lot we already know, and there's a lot we can base decisions on. And there is no reason to delay action to protect our health from a changing climate (P12, LS2:70-2).

3.2.2. We have an obligation to do our part

Section 3.1.2.1. dealt with the idea that responsibility for causing global warming and the obligation to address it is global but unevenly distributed between different countries. In this section, I will present how the responsibility to act was understood from the perspective of Washington State.

One of the rationales explaining why the state should take up action to mitigate further warming of the climate was, as expressed by Presenter 4, that it should be accountable to the rest of the world and act in line with the international goals:

> (…) Washington is part of the global community (…), so it is also imperative that our actions at the state level are compatible with broader ethical imperatives and accountability to the rest of the world (P4, LS1:70)

Presenter 4 assigned special moral responsibility for actions leading to the change of climate to the United States, referring to its role as "a key promoter of neoliberal economic policies at home and around the world" (P4, LS1:90). These policies, when applied to nature, had led to "transforming open access resources and resources managed as a commons into private property (…) through deregulation, commercialization, marketization and commodification" (ibid.). In this way, the U.S. had strengthened the economic tendencies leading to the climate crisis. Its conduct regarding international climate negotiations up to now was also mentioned, which had (in part) led their efforts to fail: "the Kyoto protocol (…) has failed in large part due to the bullying behavior of the U.S. which has insisted on acting as a free rider despite its tremendous responsibility" (P4, LS1:88). Being a part of the United States, Washington State should, by extension, recognize its share of this political and moral responsibility.

Similarly, in a broader sense, Washington is a part of the Global North, which historically caused the current situation and continues to emit large amounts of GHGs. The state should recognize it, and taking up the responsibilities neglected by the country it is a part of, think about "how to repay our climate debts to the Global South at a time when the U.S. as a country has absolved itself of such responsibility" (P4, LS1:76). These claims were followed by a call to action for Washington State to change the country's course: "as a state in the most powerful country in the world (…) we should also push for accountability to those who are rendered vulnerable by actions within the U.S. and in the wider world" (P4, LS1:103).

Other speakers also expressed the hope that Washington State could motivate both other states and the federal government to take appropriate climate action. To support these expectations, Presenter 42 named several past climate initiatives in which the state successfully played a leading role, e.g.:

> (…) Washington has been one of the first states to kind of lead and pass a legislation towards a clean energy economy. (…) Seattle has been one of the first cities to enact a green building policy, and this has been followed by [other] cities (…). [A]part from the policies and initiatives that Washington has taken, Washington has encouraged other states in the nation to join some of the goals (…). Washington has been a co-founder of the Pacific Coast Collaborative, (…) the U.S. Climate Alliance (…), the International Alliance on Ocean Acidification (…). [These] are some of the alliances where Washington has led the initiative. (…) So [Washington] definitely has led the world and the United States (…) moving forward greenhouse gas reduction policies (…). (P42, LS6:192-6)

During the deliberative part of the Assembly, one of the participants also expressed the belief that Washington could lead by example. In this case, the reason for the potential leader's role was the relatively high availability of renewable energy, which would simplify employing more sustainable strategies:

> (…) we have plenty of power here in Washington State, but not every state does. So we, Washington State, seems to be in a prime location and have the ability to be the example for the rest of the nation if we choose to be. (…) (Rupert, IM:95)

Another reason proposed for taking up a leading role was the shared values of Washingtonians. Presenter 4 expressed the expectation that Washington, being a politically progressive state, can influence the rest of the United States to realize their responsibilities and act in the right way: "my hope is that the leadership of progressive states such as Washington may inspire the rest of the country to act as a responsible and cooperative member of the global community" (P4, LS1:89). Presenter 29 came with a similar message of hope that Washingtonians would start an initiative that would put the necessary pressure on the federal government. He posited that these shared values were posited as a requirement for such an initiative. However, he did not specify what these values were:

> Does it make sense to do this at the state level? (…) I say yes, for these reasons. For one, it honors the urgency of the problem. Here in Washington, we have values which say we really need to address the carbon problem, the climate change problem. We see that the federal government is not doing it, and so (…) it matches our values to come in here and put a price on carbon and address it. [It] puts pressure on federal government when lots of states begin doing this (…) (P29, LS4:190)

Another way of understanding the accountability towards the rest of the world was to take responsibility for the local area as a part of the global community and execute the own fair share of the joint task. One way of doing it is to translate the global emission reduction goals onto the local scale, as explained by Presenter 42:

> This is the global emissions pathway that the IPCC report spoke to as to where the world needs to be. And in terms of Washington, (…) [it] is trying to follow pathway two, where it wants to reduce around 45 percent of its emission in 2030, and then 95 percent of its emissions by 2040. (…) we want to ask ourselves how does Washington fit in into larger Paris climate goals. (…) we can kind of see that in terms of goals, Washington State is trying to mirror the Paris agreement goals. It wants to limit temperatures to 1.5 degrees; it wants to cut greenhouse gases in fossil fuel, transportation, and electricity. (…) (P42, LS6:188)

What is meant here by "limiting [global average] temperatures to 1.5 degrees" is to follow the exact values of an averaged global pathway, not necessarily more.

Another rationale behind taking responsibility for climate action in the state was to take care of the own local area in more general terms, which Presenter 20 expressed as follows:

> (…) living responsibly and using place-appropriate technologies within the confines of what our region can sustain. Optimally, it means that we are not only living sustainably but are restoring and enriching the systems on which we all rely. This can be summed up as: find your place on the planet, dig in, and take responsibility from there. (P20, LS3:259)

The belief behind the motto at the end of the quote is that if everyone took good care of their surroundings and the local resources that sustain their lives, the whole planet would be in a better condition. Coming from Presenter 20, who is a popularizer of bioregions, it is an approach that intrinsically favors a closer relationship between peoples and their local areas. In more practical terms, he also stresses the higher accountability that comes with local actions, as well as uses the pragmatic arguments of dividing the global task into local chapters:

> Bioregions as interconnected ecosystems and communities with shared cultural affinities become leading frameworks to help us break down large intangible goals to a local level with specific deliverable metrics. For example, even if some worry that our timber industry might be harming the planet, by supporting locally sourced timber from Washington, we have more control over how it is cut, the supply chain and that workers are paid living wages, and [we] can more easily change policies we think are bad, than when random hardwoods are imported from Asia. (P20, LS3:268)

3.2.2.1. "Our duty and accountability as First People of Washington[15]" – indigenous notions of responsibility

A strong and distinctive feeling of responsibility for the local surroundings was demonstrated by speakers who represented the indigenous tribes living in Washington State or spoke of the challenges climate change poses to them or of indigenous worldviews.

Washington State's indigenous communities are often on the frontline of the climate change impacts and are experiencing these threats firsthand. This vulnerable position forces them to, firstly, implement adaptation strategies to avoid or alleviate further damage, and secondly, provides them with a sense of urgency to mitigate further warming of the climate. Presenter 53 described the recent events on some of the reservation lands and the tribes' mitigation efforts:

> (…) two tribes, the Colville and Yakama, are two of the largest landowners in Eastern Washington and have already done a lot for climate mitigation. In part because they are experiencing these impacts, (…) the Colville reservation has had a number of incredible fires,

[15] Presenter 1, IM:10

> that they lost housing, they lost forests, they lost twenty percent of their merchant of old timber. The Yakama has also had impacts to their agricultural productivity, and (…) the Spokane tribe has had terrible fires that harmed their housing developments, etc. So tribes are already taking action, the Colville, Umatilla, Spokane, and Yakama tribes all have solar projects, and I think there's more coming with other tribes. (…) Tribes are really taking the lead on in the Interior Columbia River Basin on climate change to try to save fish and the resources that they care about the most, and they're entering the renewable energy world in a big way. (P53, LS7/1:17-23)

In the quote above speaker made a connection between the locally experienced impacts and engagement in climate change mitigation. As she suggests, the tribes' motivation is to try to "save fish and the resources they care about", i.e., to avoid further negative consequences for their own local areas. Their close dependence on the natural resources makes active restoration work a necessity for the tribes, but also, as Presenter 1 (IM:10) put it, their "duty". The speaker described several ways in which indigenous communities have been making an effort to protect their local environments from various types of pollution and destruction:

> (…) our treaty rights are very important to us, and we use them to help protect our treaty resources, which are all the things that we're fighting for: clean water, robust salmon runs, healthy beaches, clam beaches, things like that. They're very important to us for cultural, spiritual, and economic reasons. So we work a lot on habitat restoration, stopping pollution, oftentimes we have to take local governments to court for sewer overflows, we work on shoreline protection and monitor permitting to make sure that we don't turn Puget Sound into a parking lot. We try to prevent the Sailor Sea and the Puget Sound from becoming industrialized. We re-seed beaches to try to bring proper habitat and production to our beaches, and we invest in hatcheries to try to replace the salmon runs that have been lost through mismanagement over the decades. So, as we continue to do these on a local level and on a regional level, we're really concerned about what climate change and the climate crisis, which is creating more acid in our waters, will do to our hard work. (P1, IM:21)

Presenter 1 highlighted several ways in which, even before climate change, the local natural systems have been under environmental strain due to the modern use and attempted industrialization of these areas. These were, however, local developments, which could, to some extent, have been confronted and remedied by local tribes and initiatives. Climate change, on the other hand, cannot be directly addressed locally in the same way. Moreover, it can both make the so far proven local conservation solutions insufficient and undermine past efforts and results.

Beyond the motivation to preserve their own livelihood and resources, the native tribes' sense of responsibility to act on climate change is also deeply rooted in indigenous worldviews. On the one hand, as explained by Presenter 54, it comes from the close relationships between the people and other parts of nature:

> (…) We understand that we are of Mother Earth. We have the same DNA, the same fluids, liquids, and minerals, and that we are place-based as indigenous people, so we are all indigenous to the Earth. For example, we happen to have ancestors from this place we call Swinomish, which is the people of the salmon. We are river people, we fish the river, and we fish at the mouth where the Salish Sea meets the river. Skagit [River] has five species of salmon, unlike any other river, so we have a vested interest in protecting what we feel is our sustenance and our medicine. (…) (P54, LS7/1:35)

On the other hand, a considerable role in defining one's duties and place in the world is played by the indigenous perspective of "seven generations", which was mentioned on multiple occasions throughout the Assembly. The principle of seven generations means, among other things, that one must not think only about what matters in their own current lives but also secure the interests of lives lived in the future. In the context of sustainability and climate change, as ancestors to the next generations, people must secure safe living conditions and liveliness of natural resources for those who will come after them. As explained by Presenter 1:

> (…) And so we like to think about (…) seven generations back and seven generations forward. So we try to bring on (…) our ancestral traditions about how (…) our ancestors thought we should live our lives and then how we think about how we live our lives and how those affect the next seven generations. So we have to think about sustainability and investing in the long term, and that may mean we have to sacrifice, and I think that that's important. I don't think sacrificing for the future is good; I don't consider it a compromise, but we have to balance that with being able to provide for ourselves and our families too. Because there's enough here to sustain us, but we just need to be able to leave something for the next generation (…). (P1, IM:17)

This general theme described the notion of Washington State's obligation to act to mitigate further warming of the climate. The next theme is somewhat related, as it ascribes to Washington State the responsibility for certain acts causing additional GHG emissions but extends it to matters happening outside of the state's territory.

3.2.3. We carry responsibility for some things happening far away

Most of the conversation around greenhouse gas emission sources in Washington, which will generally not be covered in this thesis, was focused on direct emissions within the state. These were usually represented as statistical data in the form of so-called GHG emissions inventories. However, I will present in this section the theme I recognized throughout the learning and deliberative sessions of the Assembly of how various speakers problematized Washington State's share in emissions happening in other places.

Several of the presenters talked about the ways in which Washington is, in some ways, responsible for emissions that are not visible in direct emissions inventories, e.g., in the

field of energy production. The state is considered to have a very "clean" energy production system, i.e., causing low carbon dioxide emissions, particularly due to a high share of hydroelectric power. However, as stressed by Presenter 39, Washington is also the site of a considerable part of regional fossil fuel transportation infrastructure. The infrastructure presently existing in the state, and especially the planned further development projects, make it possible for much higher emissions to happen in other countries without adding much to the state's direct emissions statistics:

> (…) We have a clean electricity system relative to other states. It's getting cleaner all the time; soon, we'll be 100 percent powered by renewable energy. We don't produce any oil or gas in the state, (…) [and] we don't mine any coal. (…) So what really matters from a climate perspective is not just what we do with the greenhouse gases that we emit inside Washington State, but how we allow our infrastructure to be used and developed to transport fossil fuels to other places because that's a much, much bigger deal. It's almost an order of magnitude bigger than the actual emissions in this state. (…) (P39, LS6:65-9)

In this case, Washington State is neither the site of production nor of the consumption of fossil fuels. Nevertheless, Presenter 39 argued in his presentation that Washington's contribution to preventing further warming should be to address its indirect role in fossil fuel use and stop the further development of the fossil fuel infrastructure. Otherwise, Washington will only keep up the appearances of a climate-friendly state without confronting its true role in the continuous global GHG emissions:

> (…) if we decarbonize the entire state's economy (…) and we made everything in our state carbon-free, but we left the refineries running, what they would do is continue to take that crude oil, refine it into product and sell it to the rest of the world. (…) the risk that's in front of us right now is that they'll continue to operate, and we'll look like we're carbon-free. This is what British Columbia looks like. They look like they're low carbon, but in actual fact British Columbia, and Washington could do this in the future, is a major purveyor of carbon to the rest of the world. (…) (P39, LS6:132)

Another type of emissions, which result from activities happening in the state, but are not visible in its emissions inventories, are emissions related to consumption. Although all inhabitants of the state consume various products and services regularly, their choices and consumption patterns bear no effect on the place where they live. This point was made by Presenter 3 in the first learning session, who used an example of a consumption-based inventory from another state:

> (…) this is an inventory that was done by our Southern neighbors in Oregon, and it's what's called a consumption-based inventory. So instead of asking the question (…) what are the emissions by different sectors of our economy, it's asking the question what are the goods and services that are consumed by our citizens and what are the emissions associated with those activities (…) 34 percent of those emissions occur in the state of Oregon, whereas (…) almost two-thirds of them occur either in other states in the U.S. or in other foreign countries.

> The other thing you can notice here is (…) that the food and drink that we consume accounts for a much bigger portion of emissions than (…) the emissions from agriculture. And this might lead you to think more broadly about what kinds of mitigation strategies might really be impactful; for example, you know, reducing food waste is (…) an important piece of the picture in terms of reducing greenhouse gas emissions associated with food production. (P3, LS1:55)

Interestingly, in this last example, the speaker's conclusion did not include any appeal to the individual consumer's responsibility to choose other products nor more systematic ways of changing the situation. She did not suggest, e.g., the need for more sustainable local agricultural production to satisfy a higher share of demand for food products as an alternative to importing them. Instead, her suggestion was limited to reducing the local emissions related to food waste, i.e., the end-phase of these products' lifespan. Despite pointing out the flaw of only paying attention to the direct emissions of one's own state, she recommended a solution that still primarily focused on direct emissions in the final location.

Also discussed during the Assembly was the trend of offshoring production operations of Western companies to developing countries, for which Washington State, as part of the U.S. and the developed world, carries some responsibility.

Probably the most direct consequence of using products manufactured overseas, which both presenters and participants expressed their concerns about, was the unsustainability of shipping various goods from distant locations. Using the example of agricultural products, Presenter 24 argued that increasing local food production (in this case, in cities) would help to lower the shipping-related emissions: "(…) urban agriculture, in a way that could complement Washington's agricultural economy, could reduce transportation emissions for shipping food" (P24, LS3:405).

During the second Deliberative Session, it was mentioned that "the true cost" of international shipping of various products was higher than the current market prices reflect. The original author of this problem formulation is unknown, as it was discussed in a previous group discussion and reviewed by one of the facilitators: "(…) there was a concern [about] the current manufacturing practices [that] the cost to produce and ship goods does not reflect the true cost (…)" (F3, DS2:245). What was likely meant here is that the emissions and other environmental consequences of shipping have been treated as externalities, which are not included in the market prices of this service but are nevertheless real, even though non-fiscal, costs being carried by the environment.

Other issues related to offshoring, but associated more specifically with the production process happening in other countries, can be divided into three groups: the consequences

of this development for total global emissions, for Washington's economy, and for the distant production sites.

First, the trend of Western companies moving their industrial operations to developing countries was considered for its impact on global GHG emissions.

The concern about the excess emissions resulting from industrial production in developing countries was brought up in the question asked by Prajesh from Issaquah, previously quoted in section 3.1.2. He argued that the expanding production operations of Western companies in countries like India or China cause an increase in emissions in these nations.

Another angle voiced on this issue was that other states and countries have lower standards for GHG emissions than Washington State. Charles from Richland drew a parallel between international climate agreements and labor practices in the offshoring destinations. He argued that if a country does not even respect child work protections, which he understood as a more obvious ethical standard for the production of commodities, then they will not respect GHG emission limits either:

> (...) somebody made the comment earlier about going to other countries, and I'm not really sure how it really fits in with climate change, but I worry about child labor laws in foreign countries. And if they're not going to respect that, you know, I could think about how much pollution they must be producing. (Charles, DS2:789)

A third example combines the aspects of potential consequences of 0ffshoring both for global emissions and for Washington's economy. Presenter 27 described how the discrepancy between emission standards in different countries could, paradoxically, lead to increased emissions. In his view, by advancing stricter climate policy measures, Washington could not only miss the goal of such decisions, which is to limit emissions but actually lead to an increase:

> (...) The paradox I was getting to was [that] we have some industries within the state that produce carbon at a very low carbon intensity because of the clean energy (...). As they move out of Washington State, (...) production then is increased elsewhere, in areas that might have a higher environmental cost in terms of less clean energy grid. That's (...) what's called the leakage argument. So by closing down factories in Washington State, which has a clean energy grid, you actually might increase global emissions. (...) (P27, LS4:102)

The reason for that increase would presumably be that because of stricter climate policies, some businesses would move out of state. They would continue their operations (or even increase production) in their new locations, where emission laws would be less strict and energy production generally more carbon-intense. As a result, the total amount of emissions would increase. Several possible incentives might motivate businesses to

move; for example, due to the higher costs they would need to carry to meet the new, stricter requirements, or their activities might be prohibited in the state. However, the speaker does not clarify what exactly would force those businesses out of the state in this example. It remains an assumption that this would happen if Washington legislators decided to raise emission standards[16].

Finally, speakers also expressed their concerns about what consequences offshoring has for its distant destinations, not only concerning greenhouse gas emissions. Presenter 50 problematized it from the perspective of global economic inequality and the exploitation of lower labor costs in developing countries. While underlining the ethical implications of such business strategies, he recognized them as characteristic of the capitalist economic system:

> (...) This is a system that continues to profit off the impoverishment that it has wrought on the underdeveloped world by exporting labor overseas to cut costs at the cost of lives and livelihoods. (P50, LS7:193)

Another consideration mentioned in both Learning Sessions and during deliberation was how the external costs of production or resource extraction are often carried by the local communities. On the one hand, this serves as another argument against the continued use of natural gas, besides the GHG emissions it causes, as in this presentation:

> (...) Unfortunately, the climate and safety issues with gas are not the end of the story. Two-thirds of the methane gas that's used for residential and commercial cooking and heating in this country is sourced from fracking, which results in devastating environmental consequences for local communities. If you were to follow the main North-South gas trunkline (...), Northward, you find yourself in the midst of Canadian fracking hot spots. Fracking leads to tremendous contamination of the environment and results in residents of some surrounding communities being able to light water on fire. (P59, LS7/2:66)

On the other hand, some technologies used for transitioning away from fossil fuels utilize resources that also require mining and thus have negative environmental consequences for the extraction sites. During the second Deliberative Session, one of the participants brought up the example of lithium, needed for batteries in electric cars, as reviewed by Facilitator 4 from the previous group's session: "The local environmental impact (...) [on] locations where renewable materials are sourced from. So for example, like lithium mining, where that's coming from?" (F4, DS2:732). Although lithium is a non-renewable mineral, the participants certainly had in mind materials needed for using renewable energy. However, during the Assembly's learning sessions, no presenters touched upon broader sustainability issues related to certain low-carbon technologies. They expressed

[16] I cover further related examples in sections dedicated to potential side-effects of climate policies on Washington State's economy (see, sections 3.5.2 and 3.5.3).

their concern about this topic which has seemingly remained in the background of the conversation about electrification. By asking the question, "where that's coming from?" they underscored a desire to shed light on this often-overlooked aspect of renewable energy sources.

One of the presenters brought in economic and political aspects of importing resources from distant places. By enlisting the benefits of energy transformation, i.e., producing energy from low-carbon sources and more locally, he pointed out the costs related specifically to crude oil, which can be avoided in the future:

> (...) the results [of clean energy transformation] in their region are calculated to be an awful lot of savings, you know, billions of dollars in reduced fossil fuel imports to the region, thousands of new jobs doing clean tech things, putting up solar (...), jobs that [are] local, not offshore sending your money to, you know, OPEC countries in the Middle East, where we have to fight wars to keep access to the oil. (...) (P28, LS4:170)

It is hard to say what the Presenter's exact intended message regarding these wars that "we have to fight" was. It could have been a slightly sarcastic remark on the USA's engagement in the Middle East region and the motivations behind such political decisions or a strictly pragmatic statement.

This argumentation was consistently formulated from local, American, or Washingtonian perspectives. First, through potential green developments for the local community. Second, saving "your money" and ensuring its local circulation. And third, American access to fossil fuels requiring continuing military activity, with all the costs this entails.

One more relationship between Washington and distant countries mentioned several times during the Assembly was the export of various types of waste to other countries, particularly China. Presenter 23 described the issue, outlining both the perspective of the receiving country and the local dependency on this exchange:

> What happened a couple years ago was [that] China said: no more, we're not going to take the waste of the world. And this was a very good thing for their own environment and their own circular economy, but it has caused a recycling crisis in the rest of the world, particularly here in the Pacific Northwest, because about 60 percent of our material was going to China. That's recyclable plastics, papers scrap, metal, etc. (P23, LS3:365)

In a later Learning Session, one of the participants used the example of waste export to illustrate an issue with the transfer of responsibility for environmental concerns, which I will describe in the following section as a separate sub-topic.

3.2.4. We need to stop moving the responsibility

This section presents the subtopic I recognized within the discussions about Washington State's responsibilities exceeding the state's borders. On several occasions, speakers talked about the notion of shifting responsibility to other places and that this should be avoided. This idea carries certain hidden assumptions – that it is either immoral or ineffective for emission reduction to move the responsibility instead of solving the issue. However, speakers have used and applied it in several different senses.

The first sense had to do with GHG emitters physically moving their operations to other places, which would lead to a reduction in Washington State, while the total global emissions levels would not change. For example, the policy option of banning certain industries from the state was discussed as a possibility for fossil fuel infrastructure, e.g., refineries. In the question asked by Jacob from Ferndale, "just moving the problem" meant limiting the number of refineries in Washington State, which would make the companies owning them move to other states to continue their operations and GHG emissions there: "(...) how do we ensure that by cracking down on refineries in Washington State, [we] just don't [make them] move their facilities elsewhere in states with less regulation on the industry, therefore just moving the problem and the money they bring to our state?" (Jacob, LS6:129).

A similar concern was expressed by Jacob during the second-to-last deliberative session. Participants discussed in a small group which elements of collectively developed draft recommendations should be removed: "yeah, taking out 'considering progressively higher taxes for higher emitters'. I think that could just end up moving our problem and we need to keep those businesses here, we just want them to do the right thing" (Jacob, DS5:501). What is meant here by "moving our problem" is that businesses that emit too much greenhouse gases would move out of Washington State and continue their high emissions, instead of staying in the state and "doing the right thing", i.e., reducing the emissions. Here, again, the participant assumed that businesses would surely leave Washington State if the state decided to introduce any form of progressive taxation or higher fees on produced emissions.

A different sense was employed by Presenter 3 while referring to consumption-based emissions inventories. Such inventories assess the emissions caused by what was consumed by the inhabitants of a state, while the commodities were often produced in other countries and therefore typically accounted for in the direct emissions statistics of those countries.

> (...) [O]ur economy is very highly linked to the rest of the globe and the rest of the country. (...) [W]e have to keep that in mind [that] if our actions to mitigate climate change merely move sources of emissions outside of our state's borders, we haven't really done much. So we need to be mindful of achieving true reductions in greenhouse gases, not just moving them elsewhere. (P3, LS1:56)

The speaker hinted that moving production to other states does not decrease the actual emissions, as discussed earlier. However, through the link to the consumption-based inventories and the rest of her comment, she also pointed to a responsibility that goes beyond own state's borders and a need for solutions towards "achieving true reductions", which take into account the context of international interdependencies.

Lastly, the expression of moving the problem was used in a non-geographical sense, even though the speaker made a comparison with a geographic transfer. Miles from Mill Creek revisited the topic of waste export to draw a parallel to transferring the responsibility for emissions: "(...) Doesn't cap and trade just transfer the responsibility rather than actually reduc[e] the emissions? Like sending our garbage to China, it doesn't go away; you just transferred [where] the problem is." (Miles, LS4:206). The answer given to this question by Presenter 28 offers more context of what kind of responsibility transfer can occur in the case of cap and trade, especially as the participant's comparison pointed toward a different meaning:

> (...) No system I've seen allows simple transfer of all responsibility. Most of them set a limit on how much you can buy your way out of, and it's typically down in the single-digit percentages of your compliance obligation. If you need to reduce ten tons of emissions this year, you're not going to be able to buy your way out of all ten. You might be able to buy your way out of one and usually less than that. (P28, LS4:208)

As we can see, the speaker recognized Miles's question as a criticism of cap and trade mechanisms as a way to buy indulgences for emission restrictions. Miles expressed the concern that the model would not lead to an actual reduction of emissions and that buying additional emission rights would require less effort from the companies than making their processes less carbon-intensive. This form of responsibility transfer would mean that companies would free themselves of the responsibility for GHG emissions by simply paying enough.

3.3. We need to design climate policies that will be good for us in Washington State

This overarching theme describes what aspects of potential climate policies were considered to have the most critical implications from the local perspective of Washington State. It does not include what specific climate mitigation policies were

discussed during the Washington Climate Assembly, but rather what effects they could cause for the state in addition to generally reducing the state's GHG emissions.

It contains three themes. The first stresses the value of strengthening the local communities and accurately responding to their needs, the second states that climate policies should not cause high costs to the state, and the third recognizes that climate policies can benefit people living in Washington State.

3.3.1. We need policies to be more community-oriented

During the analysis, I recognized a distinct theme throughout the Assembly's sessions that was particularly noticeable during the deliberative parts: It seemed to be a universally recognized value among the participants that the desired climate policies should empower local communities and be attuned to their needs.

The community orientation from the title of this theme was expressed by presenters and participants in three main ways. First, a robust local community was recognized as an intrinsic value that should be supported. Second, participants expressed a firm conviction that local communities ought to have a substantial role in the decision-making process regarding the policies they will be affected by. And third, climate policies should be accustomed to the considerable differences between various parts of the state. I will discuss the first two aspects in this section, while the description of the third one will follow as a separate sub-theme.

It was frequently acknowledged throughout the Assembly meetings, although often implicitly, that community and cooperation are values worth pursuing. A common justification was that they make us generally stronger and more resilient against whatever challenges might appear. An example was given by Presenter 21, who belongs to an indigenous community:

> I come from nations and people[s] who have lived through many changing times in this world and many changing times in what government structure, economic system, was at play. But ultimately, we get to hold each other and grow strong communities, resilient communities, because all of us are here based on ancestral teachings and understandings, and tribes, and experiments that have got us to this moment together. (P21, LS3:341)

During a group conversation about what the individual participants appreciate about their local place of residence, which took place during the first deliberative session, three participants in the breakout room mentioned the "tight-knit communit[ies]" of their towns (Nicole, Kelly, DS1:12-18). For example, Erin described in detail what a community means to her in practice:

> My name is Erin, and I live in Spokane Valley, Washington. I guess what I really like about my community is that through this whole COVID thing, people have really gotten together in different aspects of helping others in the community and making sure that everyone's taken care of. It's kind of nice to see, even though we live in a sort of biggish city compared to some other cities, to see that community come together. (Erin, DS1:12)

This understanding of community as a local group of individuals actively taking care of each other and feeling the responsibility to provide for everyone else's safety was also illustrated by Presenter 50, as he described his vision of a better, post-capitalist and post-individualist society:

> (...) it's trying to think about how we decentralize the nature of industry so that communities have power over it. (...) it's not about individual people trying to grow their own food (...), but doing it in a way that allows communities to support each other (...). And so, when you're thinking about disabled folks, elderlies, other vulnerable populations... It's about making sure that the communities (...) have rich and robust connections, so that community members can look out for one another and can be aware, like, 'oh, my neighbor three houses down can't really walk, so I'm gonna make sure that I get groceries for them from our local (...) food co-op (...). And trying to address it in that way that allows us to think more about community-based approaches over the individual nature of capitalism. Because capitalism really is all about my individual profit, my individual needs (...), and trying to prioritize those over the needs of everyone else around me, right? (P50, LS7:280)

The value of community was also reflected in the more specific policy deliberations, where it was considered a benefit of any given policy proposal if it had the potential to strengthen the local community. Interestingly, this included not only the emotional aspect of feelings of connection between people but also the ability of infrastructure to facilitate such relationships.

Dora from Bellevue illustrated this with the example of the geographical closeness of places that people need to visit regularly. She expressed her hope that city zoning would enable short distances to such everyday places in all parts of the city and could help build local communities centered around them:

> (...) I think the goal of this zoning would be to increase the likelihood of shorter travel distances for people. So having people living a bit closer to, you know, grocery stores, or their businesses, or maybe having those (...) spread out more evenly throughout residential zones. (...) I think, in turn, that not only incentivizes (...) alternative forms of transportation, like just biking or cycling, when things are closer, but that closeness, I think, could have a side effect of helping create more tight-knit communities and stronger support circles for people, who (...) are struggling disproportionately from climate change. (Dora, DS3:190)

Other examples of how policies were considered to potentially strengthen the local communities, in these examples in a more material way, were community energy projects and local jobs. Community energy projects, e.g., solar panels owned by local communities or neighborhoods, were discussed throughout the sessions as an alternative to the usual

form of ownership by individual households (e.g., P33, LS5:205-18; DS3:374). Furthermore, as in the example brought up by Presenter 30, it was considered an additional benefit when local communities would have more control over the local energy production and the jobs created around such projects[17]:

> (...) I'm particularly interested in exploring distributed energy resources, both to relieve the pressure there on the utility scale, but more importantly, to enable energy independence and to have local communities have more control over their energy destinies and be able to give people (...) jobs in communities and have those jobs be driven by the communities. (P30, LS5:60)

The second central aspect of a desired strong community orientation of future climate policies was that local communities should participate in the decision-making. Presenters and participants delivered several justifications supporting strengthening the role of communities in such processes.

First, it was promoted by several presenters, who talked about participatory justice (e.g., P4, LS1:77-103; P20, LS3:286; P30, LS5:191), and generally recognized by the participants that everyone who is going to be affected by some policies should have a say about them. In Holly's from Kenmore words: "(...) It seems like when you don't have all the interested parties at the table, then their interests are not going to be represented fairly" (Holly, DS3:419). This need for an appropriate representation applies especially to indigenous tribes, as their right to prior and informed consent to various developments impacting their lands and resources has not always been respected. This was a concern expressed, among others, by Presenter 54, who is herself a member of the Swinomish Tribe:

> Our community engagement concerns are that many negotiations continue without meaningful participation by tribal nations or indigenous people and that free, prior, and informed consent is needed. And tribes should have appropriate representation at the table, wherever that table is, and a need for genuine and effective engagement of the rights or stakeholders in the development and implementation of policies. (P54, LS7/1:40)

Especially stressed by several speakers who spoke of tribal sovereignty and treaty rights was an appropriate engagement at the development and implementation stages of policies rather than after policy decisions are made. This suggested that being asked for consent after policy decisions had already been made is a common experience for tribal communities.

The second argument for a stronger local engagement in policy making was that policies implemented by higher governments without consulting the local communities are not always attuned to their needs. Presenter 40 brought up an example of how the

[17] I discuss other examples related to local employment in sections 3.5.2 and 3.5.3.

governmental agency structure leads to pieces of information about local communities falling between the cracks and that this could be avoided by bringing the communities closer into the process:

> (...) What happens to often [in] a government is [that] agencies work in their silos, they're not talking to each other. It impacts small community organizations, who get reached out by these different agencies [that] ask them to educate them on things, like environmental justice, and we get overburdened with that work. We think there's a lot of information sharing that they can benefit [from] by sitting at the same table, learning from each other, and learning from community. (P40, LS6:97)

Local communities would know their needs better compared to a distant government - several speakers expressed this conviction throughout the Assembly process. The most assertive stance, expressed, e.g., by Miles from Mill Creek, stated that the locals should not only be participating in the decision-making conversations but also have the last word about developments planned in their direct neighborhood:

> What we talked about is the idea that if we decided that we were going to put a reclamation factory in a small area, that only those people [who live there] should be able to vote on it. Where Bob, you know, who lives 20 miles away, shouldn't get to vote on it because Bob doesn't care; it's not in his neck of the woods, right? It's those people that are going to be impacted that they should be able to vote on something that's localized. (Miles, DS1:251)

A proposition suggesting a more balanced approach between the decisions made locally and those met on higher levels came from Nathan from Vancouver. What he put forward would still grant the local communities the ability to decide about their own crucial needs, but within the framework of broader statewide priorities:

> But if there were clear statewide goals, and then there [were] kind of pots of money that were given to different parts of the state, that could have like a representative body of the folks who live there, to make the decisions that work best for their community, to reach those statewide goals... (...) I think that the problem is that if you have it all come from the top, (...) there's not going to be solutions that actually work for that group of people in that state. (Nathan, DS2:148-9)

Beyond social and participatory justice, Presenter 49 pointed to a more practical aspect of strengthening the role of local communities in decision-making concerning climate policies that will affect them. He emphasized that local acceptance and support are necessary for the durability of certain policy solutions:

> (...) Environmental justice really is a compassionate approach because it makes an effort to ensure that everybody lives in a healthy environment and that local communities can determine what the projects in their communities look like. (...) having community support is critical to (...) sustaining these policies over the decades that we will need in order to (...) achieve these deep carbon reductions. (...) (P49, LS7:177).

Speaking from the perspective of local administration, Presenter 43 stressed another aspect relevant for a successful translation of statewide goals and standards onto the local level. She argued that because local communities are where the policies will be carried out, local compliance and implementation faithful to the original policy goals are critical for the actual outcomes:

> (...) one thing that I want to kind of emphasize is that local government is where the rubber meets the road. When we're talking about many things, but including climate policy, you guys (...) make recommendations to the legislature, (...) and those recommendations come down to local government. But something that's important to remember is that things happen at our local level, and those climate policies can succeed or fail based on how they really get interpreted when you get down to the local scale (P43, LS7:32)

3.3.1.1. Policies should be attuned to the specific circumstances of local places

Another way the participants and speaker thought policies should be community-oriented was to consider the differences between locations and their specific circumstances. This subtheme reflects the awareness of the speakers of how diverse the geographical and social conditions are within the state and that these differences will often require different policy solutions.

The implication of this theme is in agreement with approaches of bioregionalism and climate justice, represented by several speakers, who often explicitly stressed that climate solutions should be place-specific. This focus is evident in the following examples defining the concept of climate justice, as explained by Presenter 13:

> (...) climate justice insists on a shift from a discourse of just greenhouse gases and melting icecaps into a civil rights movement. The people and communities most vulnerable to climate impacts are at its heart. (...) So when we're thinking about learning to accelerate just climate action, we're actually looking at a complex system. (...) we don't want to just learn for learning's sake, and we want to think about how that's connected to place, this specific set of locations and circumstances, cross-cultural and intergenerational. (P13, LS2:108-9)

And outlining the essential motivation behind the idea of bioregionalism by Presenter 20:

> (...) bioregionalism is really interesting in that it's not just around physical sciences; it's very much a cultural implementation and (...) creating a sustainable culture for everybody living here, and really looking for those place-based solutions. (...) (P20, LS3:452)

Considering the variety of local circumstances, Debra from Seattle expressed even a somewhat self-critical reflection about the Assembly process. She worried that formulating uniform recommendations for the whole of Washington State bears a risk of imposing solutions that may not reflect the perspectives and actual needs of some parts of the population. Such a risk would follow from those making the decisions not knowing

these (local) perspectives themselves. More specifically, she addressed the divide between lifestyles, classes, and economic positions of residents of Eastern and Western Washington:

> (...) I also feel like in the state of Washington, there's such an East-West divide, (...) on the West it's very urban, and then, you know, two hours away you're in a whole different climate, whole different world, whole different mindset, it could be a whole different state. (...) it's a whole different way of life (...). I live in Seattle; I'm very sensitive to the port and that whole economic driver. But if you go to the East of Washington, (...) it's very agriculturally based; it's a little more blue-collar (...). I only bring this up because we were just talking about it, you know, about agriculture and how to treat the environment, and not abuse the environment, and rotating crops, and yada yada yada. (...) They just have completely different issues [in the East], and I think that's why the divide is so critical because we're trying to recommend things for the entire state. They're really quite different from one another, East and West. (Debra, DS2:622-6)

Rosemary from Cheney pointed out how indigenous communities, even though they tend to be treated as a uniform group, have varying interests because of their particular geographical characteristics:

> **Holly/Kenmore:** Yeah, I would like to see the tribal representatives have a seat at the table, an equitable seat.
>
> **Rosemary/Cheney:** And not just from one tribe, because you've got your tribes that are out [by] the ocean, and you've got your tribes that are in the desert land, you need a representation of all of them. (DS3:457-9)

A speaker representing the youth climate movement Sunrise described how the recognition that different locations produce different circumstances and needs is also reflected in the structure of her organization and shapes the local strategies:

> (...) local chapters operate pretty much autonomously and independently, so long as their actions align with Sunrise's values and principles. This is more of a strategic reasoning, just because what may work in Seattle, on the West Coast, you know, the priorities that we have here, are going to look different than somewhere in the Midwest or the East Coast. So each Sunrise hub kind of focuses on their own priorities, their own issues that are relevant to their communities, regions, states, etc. (...). (P46, LS7:112)

How these differences can actually be reflected and included in public policies was described in the local example of Thurston County by Presenter 43. Her description suggests that the state's policies already account for the different types of local environments, as well as give local communities the freedom to specify and apply general standards to fit their own circumstances:

> Back in 2011, our region went through a big planning process that we called Sustainable Thurston to develop a vision for what we wanted the Thurston region to look like looking out into the future and how could we preserve a variety of different ways that people wanted to live in the future. So we could have vibrant urban centers but also resilient smaller cities, like Tenino, and Yelm, and Rainier, and protecting our rural areas as well; how can we have the right

> mix of all things to support these different ways of living. (…) So the growth management act might say something like: keep rural areas rural, (…) make your urban areas more dense. The county-wide planning policies would say things like: (…) we want to see an increasing amount of urban density in our urban areas. The county comprehensive plans would say things like: these are where our urban areas are, and these are the types of uses we want to have in certain places. (P43, LS7:34-40)

Some communities need distinct policy foci. E.g., Presenter 5, who spoke about his initiative to create a network of Carbon Conservation Trusts (CCTs), described how different types of actions could be crucial for certain places from a climate mitigation perspective. These would depend on the natural landscape and the typical land use of an area, determining its main potential for carbon sequestration:

> (…) so the work of a CCT will be determined by the bioregion in which they exist. So, for instance, here in our region where we have rich biogenic carbon reserves in the form of our forests and near-shore riparian areas, wetlands [and] grasslands[.] (…) [The] emphasis would be on restoring those landscapes as carbon refugia. In agricultural regions, attention would focus more on farming and agroforestry practices that capture and sequester [carbon]. And in fossil fuel country, the focus would be on securing those fossil carbon reserves (…) and making sure that they stay in the ground, right? (P5, LS1:145)

On several occasions throughout the deliberative sessions, participants brought up the problem of unequal access to certain services in different parts of Washington. While some of these services are quite important from the climate mitigation perspective, they are not available to all Washingtonians. The most frequently named examples were the recycling and composting of waste, which is not regulated statewide and is not accessible in some parts of the state (e.g., DS2:271, 568). Similar considerations were brought up during a discussion about incentivizing telecommuting to reduce the need for driving. Some participants pointed out that some of the more rural or low-income areas do not have adequate access to broadband Internet to make this possible. Therefore, the infrastructure needs to be improved first (DS6:22-86).

Expecting the trend toward electrification of individual cars to continue, Sharon from Renton expressed her concerns about the equity of access to charging stations in different parts of the state. She was unsure of how the infrastructural limitations could be solved in the rural areas, where distances between cities are often very large:

> **Facilitator 3:** (…) Anyone want to address the question of what does inequitable economic development mean?
>
> **Sharon/Renton:** Well, one thing might be, you know, the charging stations for the new cars. They're going to ask for you to have electric cars by a certain time, and (…) I was thinking, you know, here I see them in Bellevue, and I've seen them in Federal Way and different places, but in the (…) Eastern side of the state, (…) where are they going to be putting them, just in the big cities? Or, you know, if you've got a[n] electric car and you're out in the middle of a field (…),

> and your car goes dead... I mean, (...) what is the infrastructure going to be to get them stations? (...). I'm not from Eastern Washington, but I've had friends over there. (...) they're much more spread apart there. I don't know what it would involve, and it seems to me it'd just be a lot more than what we do because we're like minutes away from another big spot. (DS2:200-7)

A similar disparity was observed for the accessibility of sidewalks and bike lanes, which could serve as local alternatives to driving. During a group deliberation about recommending further development of this type of infrastructure, participants discussed what kind of neighborhoods were usually lacking it: "**Facilitator 5:** so number one is 'encourage community connections by building sidewalks and bike lanes' (...). **Sarah/Bainbridge Island:** Well, I think, like, in urban areas generally they're there, but in rural areas, they're not" (DS5:238-54).

Finally, due to a combination of geographic and socioeconomic factors, certain communities are experiencing climate change impacts more severely. These communities might not only have different needs than others but might also lack the ability or the resources to develop policies addressing these needs on their own. Presenter 50 argued that there should be state funds offering support in such cases:

> (...) wealth disparities between communities present a major obstacle to using local actions to create equity. (...) we can't expect all communities to have the capacity and resources to create community-based solutions without some form of intervention. And this is where we find the role of the state, the role of resource redistributor. (...) revenues from [progressive] taxes should support just transition, aligned community-based climate actions in poor and marginalized communities, and these funds should be managed through a democratic and participatory process so that communities can direct them to the solutions that they know they most need (...). (P50, LS7:200)

Throughout the Assembly, speakers underlined the need for policies to focus on these most disproportionately impacted communities. These would most frequently be "lower-income communities across the state, rural communities across the state, communities of color" (P38, LS6:30), as they often contend with intersecting socioeconomic and environmental challenges. Centering these communities would allow policies to address the need to mitigate climate change and the intersecting socioeconomic issues simultaneously. An example of combining mitigation of GHG emissions and related health issues is to support transitioning away from natural gas to other ways of heating households:

> Certainly, to do it equitably, you need to focus on where you have the greatest risk already. I mean, there's significant health hazards from having natural gas in your home for indoor air quality, so to do it equitably, I would think you would need to focus on the communities that have higher environmental burdens, higher health burdens. Focus where you have children paying for it. (P51, LS7:260).

Another similar policy focus would be to target and prioritize these urban neighborhoods, which would mostly benefit from an increase in tree canopy, as they presently have the fewest trees (P40, LS6:102).

3.3.2. We need to avoid high policy costs

This topic consists of speakers' and participants' comments about the importance of anticipated costs of suggested policies for deciding whether they should be implemented. In the first part of the section, I will present three types of potential costs which climate policies could pose to the local communities, as discussed during the Washington Climate Assembly. In the second part, I will introduce three ways of relating to climate policy costs which I identified during the analysis.

First, there were the direct costs local communities would have to cover in order to administer specific policies. Several presenters brought up examples of policies that ended up not being implemented due to their high costs. For instance, Presenter 25 described how, despite the reality of climate change and the necessary mitigation and adaptation actions, the financial aspects set limits to available policy options:

> (...) some of the costs to mitigate the most dire impacts of climate change are expensive, right? So solar photovoltaic panels on your house have come down a lot in price (...), electric vehicles are still more expensive than a normal gasoline-powered car. And (...) this is one of the five proposed nuclear power plants for Washington that never ended up getting built because the cost ballooned really high. So it's not that what you do to avoid the damages or the costs is cost-free in itself, right? So some things you have to think about, are you spending money either (...) on that insurance idea, or to avoid (...) the worst damages, the precautionary principle, or are you trying to level out the benefits and costs... you have to think about the cost of acting as well. (P25, LS4:49)

Several participants recognized the importance of appropriate financial resources for the Assembly's policy proposals during the deliberations. E.g. Marshall from DuPont acknowledged that the costs might be prohibitive despite a will to take action: "it may limit what we can do, because if we can't have money coming in from outside, we may not be able to afford some of the things we want to do" (Marshall, DS4:5).

Both presenters who spoke about different forms of carbon pricing stressed the low cost of administering this type of policy. Presenter 29 stated simply that, "ideally, the carbon price is inexpensive to administer" (P29, LS4:188), while Presenter 28 expressed his conviction in greater detail:

> "(...) it's more cost-effective to do it on a larger scale; you don't want your administrative overhead to eat all the money. If you do this at a small scale, you wind up paying the people to push the pencils, instead of to do the change in the energy system" (P28, LS4:262).

It is evident that the speaker considers any means spent on the administrative labor related to policy implementation to be wasteful unless kept to a minimum.

Second, an oft-considered cost of climate policies was the cost to the consumers. A common concern reflected in participants' questions to presenters was that businesses might raise the prices of their usual products and services. In this way, the consumers would pay any potential additional costs caused by the policies. This was expressed most vividly by Dennis from Tacoma: "will the remedies to climate change be worse than the disease, will it drive more people into poverty with higher costs?" (Dennis, LS2:200). A comment along the same lines was given by a speaker representing the business perspective on climate policies:

> Another sort of issue from the business perspective that is really important is the cost. And these [are] both the costs of businesses, [which they] are paying to operate within the state, and then (…) [the] cost they'll be passing on to consumers. (…) some of these are combined, some of these are a little bit different, but basically, there has not been within consumer behavior on a broad sense of places, where consumers generally have favored higher costs, lower in carbon intensity products. (…) some of these proposals that are being discussed or policy recommendations would drive up the price of these goods. (P27, LS4:88)

The speaker stated first that businesses were concerned about costs of operating in the state increasing due to new climate policies and that they would try to transfer a part of these additional costs onto the consumers. Further, he mentioned an unreferenced finding in consumer behavior, which states that consumers generally choose cheaper products than ones that are less carbon-intensive but more expensive. This remark seems rather to be addressing the concept of green consumerism, which focuses on consumer responsibility to choose more sustainable (and often more expensive) products to promote a shift in manufacturing practices using market forces. However, the options discussed during the Assembly did not address such individual consumer responsibility but public policy proposals. The goal of the suggested policies was often the opposite of what Presenter 27 implied. As in carbon pricing, where a higher carbon intensity of the production process would result in higher prices of the corresponding products, the aim would be to make the more sustainable options more readily available and appealing to consumers. All in all, Presenter 27 seemed to maintain that some climate policy recommendations would result in higher prices and that consumers would not support the implementation of such policies.

The third type of costs, also related to businesses, was less directly financial. A concern recurring throughout the Assembly was that some companies would decide to move their operations to other places if they became subject to stricter climate policies. I discussed this topic previously in the context of policy cooperation between states and countries

and concerning Washington State's responsibility to address climate change (see sections 3.2.2 and 3.4.3). From the perspective of local communities addressed in this section, businesses moving away was considered a potential socioeconomic cost. Statements like "(...) we want these businesses to stay here" (Jacob, DS5:491) were indisputably expressions of local interests. In this context, the main functions of businesses remaining in the state were to secure tax income for the communities and employment for the local population.

Although not exclusively, these considerations usually applied to jobs and businesses related to the production and use of fossil fuels. These concerns were expressed, e.g., in the previously quoted question by Jacob ("how do we ensure that by cracking down on refineries (...), [we] just don't [make them] move their facilities elsewhere (...), therefore just moving the problem and the money they bring to our state?"). Presenter 39 responded by acknowledging the challenges related to the energy transition and underscoring that the right policy solutions should aim to minimize such costs to the local economies and employment:

> (...) So the oil refineries in Washington State, there are four big ones (...), they employ a lot of people at high wages. A lot of them are union jobs, (...) they provide a lot of tax revenue to the communities, and they are actually critical components of our economy right now. (...) So what we want to do is (...) [to] take a gradual transitional approach to dismantling that infrastructure. But you got to do it in a way that takes care of the local economies and the workers (...) because those are big challenges. (P39, LS6:131-2)

Regarding thinking about climate policy costs more generally, the dominant approach followed the logic of economic calculation, in which the default aim is to strive for a positive balance between costs and benefits.

It was visible as a conscious method of analysis from the perspective of local authorities, as demonstrated by Presenter 43: "we'd really need to build up our capacity locally to understand what we needed to do, and understand the implications, including what the various costs and benefits of different climate policy might be" (P43, LS7:37).

From the Assembly participant perspective, R0dney from... implied that in order to make good decisions, it would be key to know the specific costs of policy solutions, and their "objective (...) impact[s], that we would expect to see". He considered it also crucial to be able to present these costs to the policymakers for the recommendations to be successful. As Rodney from Shoreline expressed during the last deliberative session:

> I was gonna say this maybe as feedback for any future assembly that was going to go through a similar process. I think it would be fantastic if there was some sort of way to qualify the recommendations that we're putting together, with some sort of objective range of impact that we would expect to see from implementing such and such a policy and be able to put some sort

> of estimates of the associated cost with that. So that, when all of these are laid out in front of legislators, they would be able to stack, rank, and understand more the cost and benefit from each of these proposals. (Rodney, DS6:720)

A reversed way of understanding the costs of climate change mitigation is not to measure the policy costs but the costs of *not* introducing these policies. This perspective was employed by two presenters: Presenter 12 referred to the statistics of natural disasters happening in the US according to the damage they cause, counted in billions of dollars (P12, LS2:73-4). Similarly, previously quoted (see p. 31) Presenter 25 framed the well-known examples of the latest natural disasters from the perspective of the costs they cause (P25, LS4:31).

The need to express the seriousness of catastrophic events in these terms presents a rather financialized approach to such values as natural environment or human health. It seems that the primary goal of using this frame was to counteract the dominating perspective of the financial costs of climate policies. What becomes apparent is that whether we want to carry these costs or not is, in fact, not an available choice. The speakers suggest instead that the money should be spent on preventing the worst consequences rather than on dealing with them when they arise.

One last aspect of this economic calculation, especially relevant in the case of climate change, is the intergenerational one. As discussed by Presenter 25, it depicts the temporal delay between climate policy decisions made in the present, including their costs and their consequences in the future. The speaker discussed what variables are usually included in studies that attempt to assess and compare the financial cost of specific climate policies and their future benefits or losses. However, he also tried to clarify that there was no single most correct assessment, as such studies vary in what they include in their models. Particularly important is how they calculate the values of non-market benefits, such as health or clean air. Because of these non-monetary values, the economy alone is not sufficient for making decisions about climate policies:

> (...) This is basically a question of do your actions help you now, do they help your children, do they help your grandchildren, and how do you decide as between those places or seven generations into the future, how to value those benefits that come a long time from now. There are a bunch of other challenges in here about whether the economic model has enough information for you to make a good choice about your actions and your particular responses to this. (...) There's a ton of value to good economic analysis, and because we don't have unlimited resources to devote to climate, and we have other priorities too, (...) you're going to need good economic analysis to help you think through your choice. But you might need other tools to help you think through the choice as well, (...) because the economics won't do all of the things that you want it to do. (P25, LS4:51)

As evident from the analysis in this section, additional costs of climate policies were predominantly considered in economic terms. The following section will demonstrate, however, that this was not the case with the potential benefits.

3.3.3. What is good for the climate is also good for us

In contrast to the previous theme, this theme encompasses the local ancillary benefits of climate policies, i.e., the additional benefits unrelated to the primary goal of climate change mitigation, as discussed by various speakers during the Assembly.

All the costs of policies described in the previous section were of financial or economic nature. The ancillary benefits, on the other hand, encompassed both economic benefits, which I will address first, and other types of advantages, which can be described broadly as the quality of life benefits.

The opinion that climate policies do not necessarily only cause costs, but can also be beneficial for the local society, was expressed by several speakers as an explicit rejection of the seemingly dominant narrative about a conflict between climate and economy - that prioritizing either necessarily entails a loss for the other. As reviewed by a facilitator, participants of a group described it through commodity production: “one problem is [that] the conversation around manufacturing is too black and white, or too binary. So it's [that] either you're for manufacturing, or you're for the environment, and if you're for manufacturing, you'd be against the environment” (F4, DS2:756). Others spoke in similar terms about climate versus carbon pricing (P28, LS4:272), economic growth (LS6:212-4), or the economy in general (P1, IM:23).

Potential benefits for the local community included several ways of strengthening the local economy. Presenters proposing policy solutions in their respective fields stressed new employment opportunities in particular. For example: “decarbonizing the building sector results in good local jobs, (...) these (...) tend to be labor-intensive activities for local labor to add in insulation and change out systems” (P32, LS5:92). Significant new employment possibilities were usually predicted in new types of professions closely connected with a transition to a low-carbon economy. They were also often presented in general terms, rather than specifically to Washington State, with the assumption that similar developments would happen there too. This was the case with, e.g., Presenter 23 talking about future benefits of a proposed bill which would introduce the right to repair electronics by independent shops in Washington State: “(...) This is a really big deal for small businesses and creating more jobs, so if you repair an item, you get 13 more jobs than if you than if you recycle them. (...)” (P23, LS3:382).

The importance of workplace creation to the participants of the Assembly during their policy deliberations was well reflected in a group discussion during the final recommendations refinement phase. As reported later by Facilitator 4, the group agreed that the aspect of employment should be relevant for all of the developed recommendations:

> "(...) there was a comment that pretty much across the board, across all of these recommendations, as well as all other recommendations, that the element of equity and job creation for communities disproportionately impacted by climate change is cross-cutting, is overarching, and (...) the point was made, that that's actually relevant to all recommendations, so just note that the last group agreed on that." (F4, DS5:746)

Another opportunity for strengthening the local economy while lowering GHG emissions was seen in support for various forms of local production and the development of markets for such local products. This was particularly the case for local agricultural and forestry products. As described, e.g., by Presenter 35, who talked about a bill proposal for low carbon fuel standard, which would incentivize the use and production of biofuels:

> I see it primarily as a strategy towards reducing greenhouse gases, but it does have other benefits, too (...). One is that it creates new markets for rural economies in Washington for things that are produced on farms and forests. For example, dairy farms produce a lot of cow manure, which can be (...) converted into renewable natural gas, which we can use for transportation. (...) Waste products from forestry... There are parts of trees that (...) when they're cut down, there's not really a market for, we can convert those remaining products into cellulosic ethanol, which is a very low carbon fuel and is very heavily incentivized for this program. So, new markets for rural economies, new economic development incentives for some of the parts of our state that most need those new jobs (...), the ability to produce our own energy in rural Washington rather than import all of our energy from North Dakota, and Alberta, and Alaska, where we get all of our oil from today. (P35, LS5:271-2)

And lastly, several participants suggested the possibility of direct financial benefits from renewable energy projects, which could offer an additional source of much-needed income, especially for tribal communities (DS3:374, 403).

Another approach to the benefits of climate policy was to view them strictly from within the framework of economic calculus but on a grander time scale. In this approach, climate policies were presented as an economically sound choice, an investment in future gains, and lower costs. Presenter 24 summed up this perspective: "(...) a lot of climate action is about long-term thinking, and so there are long-term cost savings. Whether it's reduced energy, whether it is health benefits, whether it is several different things, there are long-term cost savings" (P24, LS3:463). Examples of these long-term savings on the collective scale were, among others, lower healthcare costs (both as a positive side effect of some policies and from the avoided negative environmental impacts; P12, LS2:202),

savings from the electrification of public transport (P31, LS5:145, 282) or lower energy prices from the local energy grid based on renewable sources (P47, LS7:128).

Beyond the economic gains, policies aimed at decreasing GHG emissions were expected to have several positive side effects which could not be measured in strictly financial terms. They included various aspects of health, safety, and other benefits, adding up to a generally higher quality of life.

Throughout the Assembly, speakers named many ways in which climate policies, in addition to mitigating climate change, would lead to a generally cleaner environment. An expressive speech by Presenter 45, a member of a youth climate movement, illustrated well how these values were closely related:

> "(…) climate change is obviously, undeniably one of the biggest crises of our future, and us, as the youth, are fighting this battle for breathable air, clean water, healthy soil**,** which should just be considered rights to any living thing on this Earth. (…) (P45, LS7:82)

Further features of a clean environment, which various climate policies would support, included conservation of critical natural areas, such as wetlands (P41, LS6:166-172), and improved biodiversity and natural aesthetics (P24, LS3:407).

The health benefits of climate-friendly actions included both direct effects of systemic level decisions (e.g., closing down coal-fired power plants) and those resulting from individual lifestyle choices (e.g., walking or cycling instead of driving a car). These choices, however, were usually discussed in the context of public policies which would incentivize or make them more available, e.g., urban planning (P41, LS6:172):

> (…) when you look at the health benefits of mitigation… We heard a lot about transportation. You get people out, walking and biking instead of driving, that reduces blood pressure, reduces your weight, it prevents hospitalizations, it prevents avoidable premature mortality. When you think about reducing emissions from coal-fired power plants, [it is] also a very strong benefit for our health. Around the world, there's seven million people who die every year needlessly from air pollution. (…) If we would mitigate, we would reduce our healthcare costs, we would make our lives healthier, the lives of our family healthier, and overall there [would] be very big benefits for our health. (P12, LS2:202)

The issue of air pollution dominated the discussion of the potentially positive relationship between climate policies and public health, particularly how transitioning from using fossil fuels would simultaneously improve air quality. Air pollution was usually mentioned in relation to transportation and how it could be mitigated both by reducing the traffic ("we would have less traffic and cleaner air"; Rosemary, DS3:135) and by electrifying vehicles or switching to different fuels:

> (…) these alternative fuels also produce less of the other kinds of pollution that harm our health whether that's benzene, which is a carcinogen, carbon monoxide, which is emitted in much

> lower levels from biofuels than gas and diesel. (…) Electricity, of course, (…) has no emissions from the tailpipe of the car, so enormous reduction (…). (P35, LS5:273).

Air pollution was also mentioned in the discussion of moving away from using natural gas (P59, LS7/2:69) and wood (P48, LS7:288) for heating, which would improve local air quality both outdoors and indoors.

Another positive aspect mentioned in the case of many proposed climate policies was safety. This feature applied to a wide range of fields, e.g., the safety of freight transportation (Marshall, DS4:699), the safety of sidewalks, road infrastructure, and public transport, as well as the increased safety of small nuclear reactors (P47, LS7:136). However, it was addressed in most detail in the case of natural gas installations, where safety considerations were one of the main arguments for transitioning away from using this fuel (P59, LS7/2:69).

One positive side effect related to safety was a decreased stormwater runoff. It was mentioned especially in a presentation about green roofs, which are roofs covered with soil and vegetation and aim to increase the natural carbon sequestration in urban centers (P24, LS3:406, 497). Presenter 22 also described water management benefits on a broader scale, allowing better water retention and a higher resilience against both floods and drought. In these cases, the increased resilience would result from regenerative soil health practices, in addition to the primary function of carbon sequestration, along with other local benefits:

> So when we restore the soil carbon sponge, we get a lot of benefits, long and short-term climate benefits, that also are good for communities and our health. For example, restoring the soil carbon sponge cools landscapes; here, you see an example of the same land and the difference in temperature between leaves and bare soil. It also reduces flood and drought, as you saw, holding more water, and means less runoff, so less flooding, and also less drought, because the water is there when plants need it during times of less rain. Reduces sea level rise by holding more water on land, reduces wildfire risks by providing more water for plants, provides abundant clean water and more nutrient-rich food locally for all life, brings degraded and desertified land back to life, reduces forced migration. (P22, LS3:323)

Increasing the vegetation in urban areas, whether by greening the roofs, or increasing tree canopy, was also said to reduce the urban heat island effect (LS3:399, 404).

In the cases of strategies aiming to decrease emissions from transportation, from individual vehicles, in particular, speakers depicted driving less as both a climate change mitigation goal and a benefit for individuals. As noted by Presenter 15, on the one hand, investing in public transport benefits those who have already been using it (who are disproportionately People of Color) by improving mobility, access, convenience, and safety. On the other hand, it could also enable savings for those who would no longer

need to own a car if they had sufficient alternatives to commuting by car (P15, LS2:169). Land use planning and zoning, aimed at decreasing distances between people's homes and other places they visit regularly, would reduce the average vehicle miles traveled. At the same time, it was also expected to improve the quality of life by shortening the necessary commute times and making those places more easily accessible by other ways of transportation, including walking and cycling (e.g., P41, LS6:172-3; Dora, DS3:190). Moreover, Presenter 41 pointed out that changes to city planning, such as increasing city density in combination with good transportation choices, would not only lead to improved air quality but possibly even increase housing affordability (P41, LS6:173).

Finally, recognizing the multiple benefits climate policies can offer to the local communities, Presenter 15 encouraged careful planning aimed at maximizing the positive results:

> (…) we need to focus on investments that help meet the most policy goals at the same time. Things that reduce GHG emissions while at the same time improving mobility and access, reducing stormwater runoff, avoiding [urban] sprawl, and improving local air quality. By holding all these goals together, we'll get the most bang for our buck while avoiding unintended consequences in other areas. (P15, LS2:172)

4. Discussion

In this final chapter, I will summarize and discuss the analysis results presented in the previous chapter in relation to the research question and the theory and earlier findings in Chapter 1. A graphical overview of the themes can be found in Appendix 3.

4.1. Overview of the results

In the final analysis, I included ten themes, which I categorized under three overarching themes. The overarching themes reflect fields that can be described as the global perspective, the local perspective, and policy considerations. I will discuss these separately in the following sections and later draw general conclusions.

4.1.1. Climate change is a global problem

The first overarching theme encompasses ways in which speakers described climate change as a global phenomenon, with impacts observable globally or in distant places, requiring solutions that exceed national borders.

The global aspect of climate change was predominantly described in highly abstract categories, usually as an increase in the historical or future average global temperatures, combined with other statistical figures, e.g., prognoses of future GHG emissions or assessed costs of future damages. Most notably, global temperatures were always expressed in degrees Celsius, and only some of the presenters translated them verbally into the Fahrenheit scale, the customary temperature scale in the US. A few speakers described in general terms some globally observed phenomena related to climate change, e.g., ocean acidification, animal species habitats moving towards regions with lower temperatures, and mental health issues among various social groups. Climate change impacts happening in specific distant locations were only mentioned occasionally, using the most recognizable examples of natural catastrophes. In these few cases, when mentioning impacts observable in other parts of the world, speakers would almost always compare them to similar cases in Washington State.

In terms of policy response, speakers stressed the changing climate as something that exceeds human-made political borders. Due to this (overarching) nature, cities, regions, and countries must join efforts in climate change mitigation. This cooperation is necessary, as no individual effort would be effective in tackling the issue on the global scale, nor would such efforts secure one's own territory and population. This theme also included the notion that climate policies tend to be more effective on higher levels of

jurisdiction, as they help unify standards for several states or regions. In the case of the North-Western region of the US, several examples of regional cooperation were mentioned, especially with a shared energy production grid. Interestingly, even though Washington State directly borders two other American states and one Canadian province, the shape of the local region was somewhat unclear to the participants. Within the theme about the necessity of cooperation in climate policies, I also identified a sub-theme pointing out that the responsibility and capability to address climate change are not equally distributed between all members of the global community. Presenter 4? Named the notion of triple injustice, which summarizes this disparity as follows: "(quote here about that who suffer the most, are the least responsible, and have the least capability to do something about it)".

4.1.2. Climate change is our local problem

The second overarching theme portrays how the changing climate was viewed and presented as a local issue. It includes information and reflections on what kind of consequences it causes or will cause within the state, how the state is responsible for its occurrence, and what responsibility it carries to act.

The present and prognosed impacts of climate change observable within Washington State and its closest surroundings were covered in great detail. The topics discussed ranged from ecological changes, through consequences for the economy, to the risks posed by natural catastrophes to indigenous cultures, the natural environment, human health, and infrastructure. Wildfires, mostly occurring in the eastern parts of the state, but impacting everyone on account of it causing air pollution, received the most attention. Risks faced by coastal areas in Western Washington, especially the local tribal communities, were the sea level rise and ocean acidification. Presenters often appealed to the shared experiences of Washingtonians while discussing various impacts, e.g., how everyone has in some way experienced the wildfires or when talking about the recognizable characteristics of the Washington State's forests. When discussing the changing climate's consequences for the local fauna, presenters addressed the species most relevant to the local cultures, identities, and economy or described them in ways intended to create an emotional connection.

Following descriptions of risks to human health and safety, some attention was paid to adaptation strategies, despite this topic falling outside the scope of the Assembly. Several speakers representing specific local communities, e.g., local counties or indigenous tribes, stressed the necessity of preparing for the unavoidable impacts. Various examples,

especially concerning forest health, made it evident that the division between mitigation and adaptation strategies is not clear-cut, and there is some complementarity between them. Many climate policies can support both goals of limiting GHG emissions and relieving the impacts of warming; some can also support values of social and environmental justice simultaneously. On the other hand, in some cases, prioritizing CO2 sequestration can compromise adaptation goals, as in the case of forest health.

Washington State's responsibility to act on climate change was discussed, among others, as the need to be accountable to the rest of the world. On the one hand, as part of the Global North and the US, Washington was said to have a responsibility to the rest of the world on account of both historical and current policy choices. Some presenters also promoted a more general idea of being responsible for one's own local surroundings as the location where one has the most significant potential for positive influence. In this way, local communities should also follow the international guidelines and do their part of the global task to mitigate further warming. An important motivation for strengthening the state's action on climate change mitigation appealed to Washingtonians' shared progressive values, as well as the belief that the state could, by example, lead the rest of the United States and even the rest of the world in ambitious climate action.

Other understandings of responsibility to act were internalized by indigenous communities, according to the speakers who either personally represented them or described their perspectives as their non-tribal collaborators. In these cases, the motivation to act stemmed from having already experienced direct impacts of climate change, as well as indigenous worldviews. Aspects of the latter that are relevant to this thesis include close cultural and spiritual relationships with other parts of nature and the notion of looking at seven generations back and seven generations forward when making decisions. These aspects make indigenous peoples perceive it as their duty to take care of the surrounding environment, try to protect it from damaging influences or restore it, as well as ensure that future generations will inherit an environment and natural resources in a state that allows them to meet their needs.

During the Assembly, speakers discussed GHG emissions produced directly in the state and unsustainable agriculture and forestry practices as concrete ways of contributing to global warming. Although I have not included these topics in the analysis due to their technical nature, I identified the theme *We carry responsibility for some things happening far away*, which illustrates how speakers recognized the responsibilities of actors from Washington State transcending the state's borders. Activities discussed in

this context included the consumption of products manufactured out-of-state, shipping goods from distant locations, exporting trash to other countries, and being an important site of international fossil fuel transportation to other regions of the world. The practice of businesses offshoring their operations to other locations was considered in particular from several angles: for its consequences to Washington's economy, distant location sites, and total GHG emissions. Moreover, I identified a subtheme indicating that for many speakers, it was relevant to recognize the responsibility for the emissions caused and address the problem in Washington instead of moving this responsibility to other places.

4.1.3. We need to design climate policies that will be good for us in Washington State

Finally, the third overarching theme presents what aspects of policies were considered important to ensure that the solutions would be beneficial for the state.

First, the desired policies should be community-oriented. Ideally, they should strengthen the local bonds between people who live nearby. Moreover, they should be based on principles of participatory justice, i.e., allowing everyone affected by the policies to participate in decision-making. This was especially important for the prior and informed consent principle and its application to indigenous communities. And finally, policies should be sensitive to differences between the particular circumstances of different communities and tailored to fit their needs.

Second, policies should not cause high costs. They should be inexpensive for the community to administer. Other recurring concerns around climate policies were that they might increase prices, as businesses could transfer their additional costs onto the consumers, and policies leading to communities losing tax revenue and local workplaces if companies decide to move to other states. Policy cost was usually considered as part of an economic calculus: they should be measured against the expected benefits of introducing a particular policy. Some presenters, however, introduced the perspective of looking at the costs that will occur if proper climate policies are not implemented. Another way of looking at the costs was the temporal and intergenerational calculation of costs carried out in the present, which would benefit other generations in the future.

Third, potential climate policies were also assessed for additional benefits beyond decreasing greenhouse gas emissions they would bring to the local communities. These encompassed ancillary benefits to the local economy and to the general quality of life. For the former, transitioning to a low-carbon economy was anticipated to create many new

workplaces, including new types of professions and markets for local products. Many speakers also pointed out the long-term savings from investing in renewable energy, electrification, and lower healthcare costs. Other non-measurable benefits were also mentioned, carrying implications for improved quality of life, a cleaner environment, positive effects on public health and safety, reduced urban heat island effects, and shorter and safer commutes.

4.2. Discussion

4.2.1. Local framing

The main observation from analyzing this particular event regarding views of local and distant perspectives is its clear focus on Washington State. In some aspects discussed during the Assembly, the rationale is understandable. Particularly the policy considerations had an explicit territorial limitation set by the jurisdiction of the Washington State Legislature, which was the addressee of the Assembly's recommendations. However, not all aspects had this 'natural' limitation of how it made sense to discuss them – it is certainly not the case with the consequences of climate change.

The occurrence of climate change was either presented as a phenomenon of the global atmosphere and discussed in highly abstract statistical terms or in a strictly localized way. The space that would fall between these levels, i.e., other locations on the planet, was hardly ever mentioned. As it seems from a comment by Presenter 4, "as requested, I'll try to focus on WA" (P4, LS1:70), this focus was a deliberate choice made by the Assembly coordinating team, who was responsible for planning the Assembly's learning sessions' program and communicated to the invited expert presenters.

There can be many reasons for focusing primarily on the impacts observable in one's own state, including practical ones. One, it is obviously impossible to cover all climate change impacts occurring everywhere on the planet. Two, it could serve as a way of learning more about communities living in other parts of the state and how they experience the changing climate. Three, simply to inform the participants on what impacts on their local surroundings to expect in the coming years. Four, perhaps the organizers assumed that people already knew enough about the extent of climate change's threat to other parts of the world. As evident from Figure 1 in Chapter 1, between 15 and 24 percent more Americans anticipate climate change to cause harm to the world's poor and people in developing countries than to their own communities, families and themselves (Leiserowitz et al. 2020). Considering such discrepancy, it would be possible that the

organizers decided that with the limited time they had available for presentations from experts in various fields and interested parties, it was not necessary to tell participants more of what they already knew about from the media.

However, as the findings referred to in Chapter 1 suggest, some reasons may be related to potential framing effects on the outcomes of deliberation. Stronger local place attachment has been shown to affect climate engagement positively (see Vaske/Kobrin 2001; Scannel/Gifford 2013); finding out more about the state, and getting to speak to people from other parts of Washington State, could also potentially strengthen feelings of connection with the area and the people who live there. Focusing on the close environment could also serve to awaken a sense of responsibility for this part of the world. Previously discussed studies have confirmed a stronger feeling of responsibility for the closest areas (see Uzzell 2000) and a higher motivation to engage in environmental action when recognizing a risk for these nearby places (see, Fleury-Bahi 2008). Finally, a possible rationale would be to focus on presenting only the local impacts with the hope that this would reduce the psychological distance to climate change among Assembly participants. If participants realized the immediate dangers climate change poses to their direct surroundings, they would be more likely to develop and support ambitious recommendations, reflecting the urgency of the problem. I want to focus further on this potential motivation.

In the case of a locally (state-wide) organized deliberative event, a general focus on the local context is understandable. It is noteworthy, however, that speaking about impacts in any other place outside of the state seemed to be deliberately avoided. Not even one presentation was devoted to describing the consequences of climate change to the rest of the United States and the world. Keeping in mind that research on the strategy of proximising climate change has so far delivered inconsistent results on its effects (see Chapter 1), focusing exclusively on the local impacts seems risky. If the motivation behind this framing was to facilitate support of more advanced climate policies, then it was not based on research, as such an effect has not been confirmed (see, e.g., Brügger et al. 2015a). From this perspective, it would have been "safer" to include both local and distant aspects of climate change impacts, as some of the experiments on the topic of 'localizing' climate change suggest that the distant frame better predicts support for mitigation policies (cf. Brügger et al. 2015b; see also Shackley 2021 for a similar effect on willingness to engage in pro-environmental behaviors).

Climate change is a phenomenon that has been said to seem psychologically distant on several levels (see Chapter 1). The spatial distance has been particularly relevant in the

context of the local and distant aspects discussed in this analysis. As evident from the themes I identified in the data from the Washington Climate Assembly, the spatial aspect is visible not only in terms of directly experiencing the impacts of global warming. The correlations become complex, especially when combined with the uneven distribution of responsibility, effective action, and consequences experienced. The notion of 'triple injustice' experienced by places and communities which carry the least responsibility for causing climate change, yet experience it to the greatest extent, with the least capability to address it, illustrates well the complexity and asymmetry of this dynamic. One could generally assume that all the factors of responsibility, impacts, and capability to act will not be in perfect balance for any local community, as they are not directly related and are outside of the local control.

As climate change is a phenomenon of the global atmosphere, mitigation policies are essentially aimed at the global effect of decreasing GHG emissions. Mitigation strategies are inevitably local in their execution, but as the theme *Invisible borders cannot stop climate change, so we must work together* illustrated, they must be a joint effort to be effective. At the same time, local symptoms of climate change depend on various geographical and atmospheric factors and are not related to the amount of GHG emitted in that particular place. In this way, no local mitigation effort "pays back" in lessened warming impacts in that place. The local consequences, however, can be directly addressed only by local adaptation measures.

These unclear cause-and-effect relationships between local action and locally experienced consequences make climate change difficult to comprehend from a local perspective because they go beyond the simple calculations of costs and benefits of local political decisions. This might have been the reason why the organizers of the Washington Climate Assembly attempted to simplify the issue and turn it into a local matter, representing it implicitly as a closed system of local emissions causing local consequences – and, in reverse, avoiding further impacts locally if the right emission cutting policies are enacted.

The goal of the Washington Climate Assembly was to develop mitigation strategies for the state. The learning sessions covered the global mechanism of climate change and stressed the need for global cooperation to address its causes. All these aspects are aimed at stopping further global warming. Another focus was the contribution of Washington State to the phenomenon in terms of direct GHG emissions, as well as available strategies for limiting these emissions. Although the direct emissions information and available policies were focused on the state, the goal remains global. At the same time,

presentations about climate impacts were limited by design to speaking exclusively about Washington State. It seems as though this focus was intended to serve as a motivator, as a direct logical link between the local mitigation efforts and local impacts is missing. As response to the information about local impacts participants was presented with, some presenters discussed adaptation measures, even though these were not intended to be covered in the Assembly. In terms of responsibility for climate change, several speakers brought it beyond the physical borders of the state and the greenhouse gases directly emitted within, blurring the clear-cut localized focus.

Although the Assembly's purpose was to develop mitigation policies, which can be linked rather to the global level, the program of the Assembly focused disproportionally on the local level, especially with its educational content on the consequences of climate change. In my opinion, the climate-related experiences of other places around the world were underrepresented due to the strictly localized framing of the program. At the same time, extensive coverage of local impacts could have been addressed by including adaptation measures in the scope of the Assembly's guiding question.

This interpretation is consistent with what Brügger et al. (2015b) suggest concerning applying construal level theory for climate communication. They argue that different levels of mental construals (i.e., proximate or remote psychological distance) should be consistent for whatever phenomena are to be linked in human understanding. Analyzing specifically the case of spatial distance and climate policies, they suggest that presenting people with information on local impacts of climate change could be most effective for speaking about adaptation, while the distant frame might be better suited when addressing mitigation (cf. Brügger et al. 2015b, 13).

I conclude that the organizers tried to boil down the 'wicked problem' of global warming (see, e.g., Grundmann 2016) to a superficial classical 'unity of action' to motivate the participants to recommend more definite mitigation measures. As with the strategy of 'proximising' climate change in general, this strategy carries an assumption that people would start caring about the changing climate more if they felt that it applied to where they live and that it was therefore in their own interest to act. However, existing research confirms no such direct mechanism. One might also ask why we should believe that people living in Washington State would think fighting climate change was only worth the effort when Washington State experienced its negative consequences. Public deliberation, when not used instrumentally, should aim to present a multitude of perspectives and frames, making them available for the participants to use and make sense of. It should also be rooted in the trust that a deliberative process can help citizens

embrace the ambiguity of complex problems without excessively simplifying them and limiting them to simple perspectives. As Blue (2016) argues: “The full articulation of a problem, particularly one that is as complex and multifaceted as climate change, requires a range of different perspectives as a vital step towards developing adequate and robust problem-solving approaches”.

Further research could include interviewing the initiators and the independent organizing team of this CA (and other similar assemblies) on what decision-making processes led to formulating the guiding question and the scope limitations for the learning sessions’ program. In this particular case, it would be interesting to discover their motivations for setting such a strictly local focus on the presentations.

Facing the problem of global warming, the potential motivation to frame the event towards more extensive climate policies would not necessarily be morally wrong. Still, it raises the broader question of who has the power to choose the particular angles of deliberative events and who should have the ability to make such determinations.

Further, even though the final frame of this deliberative event does not seem to have been consulted with research on climate communication, another question concerns whether and how the existing knowledge about particular framing effects should be used in designing public deliberation events.

4.2.2. Adaptation

Despite its preclusion in the leading question, issues related to adaptation also took a considerable amount of attention, suggesting that the strict division between mitigation and adaptation might be difficult to apply in practice while designing policies. Especially from the local perspective, discussing the anticipated climate-related developments, often dangerous to the natural and human-built systems and the local population, would naturally call for subsequently considering the ways of preparing for these impacts and trying to lessen their negative consequences. Otherwise, speaking almost exclusively of local climate change consequences to determine questions of mitigation policies would serve mainly as an intended motivational tool. As opposed to mitigation, adaptation offers a locally organized assembly the possibility to act locally on climate change and more directly experience the benefits of this action.

Moreover, as argued by several speakers quoted in the results section, there is a certain complementarity between mitigation and adaptation, and many climate policy solutions can serve both of these goals. For this reason, especially when employing local public deliberation, it might be beneficial to design climate policies within a common

framework, which would go beyond this division. It might be worth considering applying a public deliberation process with a narrower focus on specific fields in which mitigation and adaptation typically intersect, e.g., urban greenery, agriculture, or forestry.

What would also speak in favor of such an approach is that support for mitigation policies is strongly related to support for adaptation measures (see, Brügger et al. 2015b). As well as the suggestion described in the previous section, speaking of local climate change-related circumstances might psychologically fit particularly well in discussions of local adaptation measures.

4.2.3. Policy considerations

The analyzed case confirmed that although the main goal of mitigation policies is to limit greenhouse gas emissions, what was important for participants in designing policy recommendations for the state, was what costs and benefits such policies will bring to the state and its local communities (see also, Longo et al. 2011). Several speakers also considered these aspects in terms of an economic calculus, where costs of such policies should be minimized and benefits maximized. In considering these costs and benefits, costs were seen exclusively in financial and economic categories. In contrast, benefits included economic advantages and many values relevant for a higher quality of life which are not translatable into monetary values. This qualitative difference suggests that an exact economic calculus weighing costs and benefits against each other is not possible.

The categories of local costs and benefits of mitigation policies were introduced into the analysis deductively, i.e., related to the earlier findings regarding policy support (see Chapter 1). However, while analyzing the material, I inductively identified this third aspect, which was clearly relevant for participants considering climate policy recommendations, and added it to the analysis as the theme *Policies should be community-oriented.* It demonstrates that not only costs and additional benefits were needed in the discussion for participants to consider policies worthwhile. They also paid a considerable amount of attention to how policies should be developed in close cooperation with any local community that would be affected by them, as well as how policies should take into account specific circumstances of various places. This type of consideration might be more difficult to assess using quantitative measures like Willingness To Pay, which is used in studies investigating climate policy support. Nevertheless, it could serve as a starting point for further exploration in research about the local context of climate policies. It also sends a relevant signal to policy-makers

concerning participatory justice and the diversity of needs and circumstances of local communities.

4.3. Further reflections

Washington State's direct contributions to climate change, i.e., sources of direct GHG emissions (especially during the learning sessions) and potential policy solutions to limit these emissions and support carbon sequestration (especially during the deliberative part), received considerable attention and discussion during the Assembly. Despite being logically related to the topics analyzed in this thesis, I decided to exclude these topics from the analysis due to their primarily technical nature. Thus, they carry little relevance to the research question.

As discussed in Chapter 1, place attachment and local identities can play an important role in predicting engagement in local environmental and climate-related initiatives. Initially, I planned to include in the analysis an overarching theme exploring the relevance of places for local communities and their living conditions, people's emotional bonds with particular locations, and how indigenous identities and ways of life are inseparable from the land. However, I decided against it, as I realized that these topics were large enough to warrant a separate, similarly-sized analysis. Moreover, they were not intrinsically related to climate change, except for indigenous communities whose place-based identities are directly threatened by its impacts. Similarly, I decided against including the issues related to climate justice in the analysis, although it was a deliberate focus of the Assembly, reflected already in its guiding question.

A motive that was not related to the research question, but was recurring and visible in some of the examples used in the results section, was how the information about natural catastrophes was predominantly presented from a fiscal perspective. There was no assessment of potential deaths or displacement after such an event, just the overall financial costs. I wonder whether this way of communicating such data is typical for presentations prepared for technocrats and decision-makers and was presented during the Assembly without considering the more popular nature of this audience - or what other reasons might exist. It would be interesting to see the effects on the audience of a financial framing compared to, e.g., a projected number of casualties.

4.4. Methodological considerations

The method I applied for analyzing the transcript of the Washington Climate Assembly allowed me to look for recurring themes throughout a vast amount of data and structure

the results in a simple manner without compromising the rich contents. Based on this experience, however, for future content analyses of similar events (unless they are much smaller, e.g., spread only over one weekend), I would recommend formulating more narrow and closely specified research questions in order to avoid the expenditures of time and effort on coding the complete dataset. On the other hand, especially in the case of a deliberation event aimed to answer a very broad question (such as this one), it might be difficult to prepare a narrow formulation beforehand without knowing how the event will be conducted and which exact topics will be discussed.

I coded and analyzed transcripts from both the learning sessions and the deliberative part and analyzed comments from both presenters and participants, incorporating them into common themes. However, these two groups were clearly not equally represented in the final written presentation of the results. I recognize several reasons why I did not quote the participants more often. First, the presenters were more eloquent and concise in their words and transmitted more information. They are accustomed to public speaking about their field of interest or expertise, so the discrepancy between presenters and lay participants should be expected. I attempted to account for this difference and consciously tried to cite the participants whenever possible. However, there were further reasons of a more procedural nature for why participant comments were challenging to refer to. First, participant deliberations were often based on the information gained in the earlier learning sessions. Therefore, participants often referred to their newly-acquired shared knowledge using keywords rather than more extensive arguments. Second, participants would likely express their opinions more freely when discussing a less technical issue than climate policies. Further, deliberations on a more narrowly formulated Assembly's guiding question might offer better possibilities for participants to discuss specific issues or policies more in-depth and develop more sophisticated argumentations.

Further limitations to a more natural flow of group discussions were possibly posed by the nature of online meetings, e.g., the need for strict discussion facilitation, a higher barrier of speaking up to the group, and the regular use of the chat function. To have a complete idea of participant views in similar research in the future, it might be worth considering including the final recommendations in the analysis, as they offer a summary of the collective work done by all groups throughout the process.

Conclusion

The background for this thesis is the research on how geographical distance in climate communication affects people's attitudes towards global warming and climate policies, especially on the strategy of 'proximising' climate change, i.e., presenting the consequences of climate change for the local environment. This strategy is based on the assumption that it might lead people to consider climate change as less distant and therefore more relevant to them and, in effect, show higher support for climate policies. Although this seems intuitively true, it has not been confirmed by research (see Brügger et al. 2015a). Most studies on this topic have been conducted using experiments and surveys, measuring individual responses and the immediate effects of single framing treatments. To explore the issue in a context that allows people to learn about climate change and then deliberate on it with others, I analyzed what roles local and global perspectives on climate change played during a public deliberation event on climate mitigation policies early in the year of 2021.

Using thematic analysis (Braun/Clarke 2019), I identified themes related to the nature of climate change, its impacts, the responsibility to act to mitigate further warming, and policy aspects relevant to the local communities. On the global scale, climate change was mostly presented in highly abstract terms, i.e., as an increase in the average temperatures of the global atmosphere. As such, it exceeds all political borders and therefore requires a joint global effort to mitigate it. However, the responsibilities and capabilities to address climate change were not allocated equally and were mostly attributed to the Global North. The local scale was clearly the main focus of the Assembly, not only when it comes to direct GHG emissions and climate policies aimed at mitigating them, but also in terms of what the consequences of the warming climate imply for natural and built environments and humans. Speakers acknowledged in various ways that Washington State has a responsibility to address climate change, and some extended the state's responsibility also to events occurring outside of its borders. Some speakers addressed the need for local adaptation strategies. Finally, the policy considerations encompassed what aspects of mitigation policies are important from the local perspective. These should aim to avoid high financial and economic costs, maximize the ancillary benefits for the local communities, consider particular local circumstances and needs, empower local communities in the decision-making processes, and strengthen local bonds.

The main conclusion from the analysis is that the observed event focused disproportionately on the local impacts of climate change by not presenting or discussing what global warming means to humans and their environments in other parts of the

world. Presumably motivated by expecting this 'proximization' of climate change to inspire ambitious climate policy recommendations, this strategy unnecessarily simplified the complex cause-and-effect relationships around climate change. In the present understanding of construal level theory, mitigation policies represent the remote level of psychological distance, as they are aimed toward the cumulative global effort (see Brügger et al. 2015b). As I argue in this thesis, focusing exclusively on the local impacts of climate change while developing mitigation policies builds an incompatibility between psychological levels of distance. Moreover, employing local climate change impacts as a motivation to advance mitigation policies, which do not, in fact, produce direct local effects, creates an artificially closed system between factors that are not directly related. Based on this analysis and the current inconclusive state of research, I recommend that future climate assemblies offer combined information on both distant and local consequences of climate change. The finding also underlines the role of deliberative framing and the need for further research on how citizens' assemblies should be designed and how the decision-making about particular limitations to their learning contents proceeds.

Furthermore, the fact that some of the speakers addressed corresponding adaptation strategies, despite the scope of the Assembly being limited to mitigation, suggests that it could be beneficial to include local adaptation in future local deliberations. The suitability of addressing adaptation measures along with the local climate impacts can also be explained by construal level theory, which suggests that phenomena belonging to the same level of psychological distance should be joined together (see, Brügger et al. 2015b). Based on this finding, practitioners should consider designing local public deliberation events addressing fields that allow complementarity between mitigation and adaptation measures, e.g., urban greenery, agriculture, and forestry.

In the case of policy considerations, the analysis confirmed that the local costs and additional local benefits are relevant for supporting mitigation policies (see Longo et al. 2011). Notably, participants also paid great attention to whether policies are developed in close cooperation with the local communities and how they are tailored to their specific circumstances. This finding suggests the need for further research on the community-orientation aspect of policies and sends an important signal to the policy-makers.

The results of the study contribute to research on climate communication and especially the practice of local mini-publics on climate policies, which can be expected to increase in frequency in the coming years.

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Appendices

Appendix 1: Participant Information Sheet

Participant Information Sheet

Dear Member of the Washington Climate Assembly,
Dear Member of the Washington Climate Assembly Team,

I am a student of the Master's program in Political Science at the University of Vienna, Austria. I am interested in methods of deliberative democracy (particularly Citizens' Assemblies) and how they can help people around the world address climate change. Because of this, I have decided to write my Master's thesis about the Washington Climate Assembly.

I wish to better understand how the participants engage in the conversation about climate policies and which perspectives are most important to them. To do this, I will listen and analyze how you and other Assembly members discuss climate change and possible policy recommendations for Washington State.

Below you will find more detailed information about the project and the procedures ensuring your confidentiality as a participant.

If you are interested in the study results, please contact me by email, and I will gladly send you a copy of my thesis (in English).

I greatly appreciate your participation in the study and contribution to my research. I hope you will have a highly satisfying experience discussing climate policies for Washington State during the Climate Assembly's deliberative sessions.

Thank you,

[Researcher's name]

Project Title and Description

Local and global perspectives on climate change mitigation in a local climate citizens' assembly deliberative process

Researcher: [Name and academic title]
Supervisor: [Name and academic title]
University of Vienna, Austria

Date: February 2021

The research aims to explore how non-expert participants of a locally organized citizens' assembly on climate change mitigation make sense of climate change while deliberating on it, which perspectives they articulate and how it relates to their policy support. The research will be conducted for a Master's thesis in political science.

Procedures

Participation involves the researcher observing and audio recording your involvement in the publicly transmitted learning sessions and the non-public deliberative sessions of the Washington Climate Assembly. The audio recordings will then be transcribed and analyzed in order to answer the research questions.

Participant Confidentiality

All information you provide for this study will be treated confidentially. Your identity will remain anonymous in any report on the results of this research.

This will be done by changing your name and disguising any details which may reveal your identity or the identity of people you speak about.

Disguised extracts from your statements may be quoted in the Master's thesis of the researcher.

Opting out

If you wish for your participation during the Assembly not to be included in the research, you can withdraw permission to use the data within two weeks after the Washington Climate Assembly's last session, in which case your statements will be deleted from the transcript. To opt-out of being included in the research study, contact me by email listed under contact information. Please provide your name and location.

Data Storage and Security

The researcher will retain the original audio recordings until December 31, 2021. The researcher will retain a transcript of participants' communication during the Assembly's sessions in which all identifying information has been removed until December 31, 2023. Afterward, it can remain deposited in a public research data archive to be available for research replication.

You are entitled to access the information you have provided at any time while it is in storage as specified above.

Benefits

You will not benefit directly from participating in this research.

Questions About Participation

Questions concerning the procedures or the research should be directed at the researcher.

Contact Information

[Name and academic title]
Student of Master Programme in Political Science, University of Vienna
[e-mail address]

Supervisor:
[Name and academic title]
Department of Government, University of Vienna

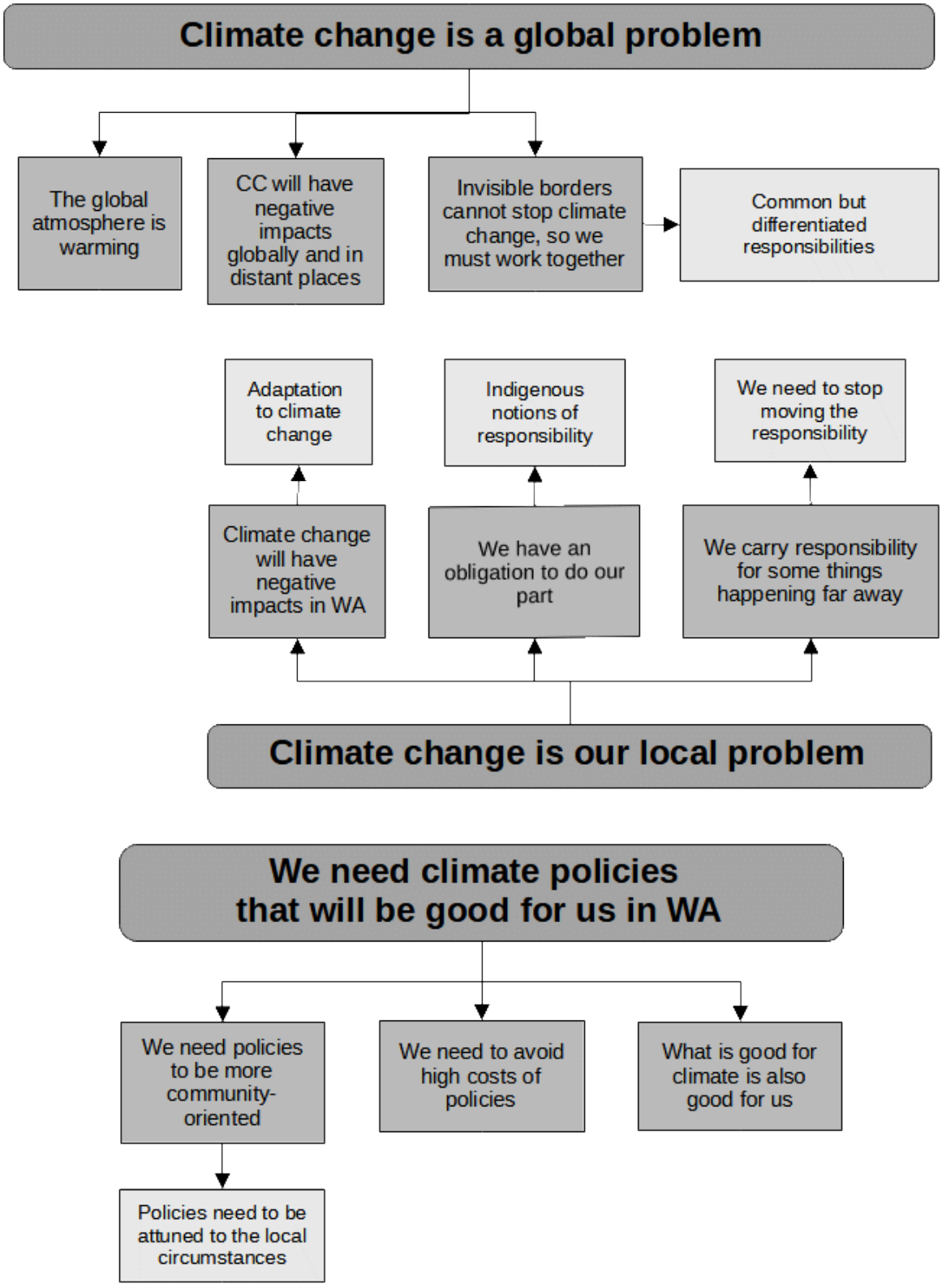
Appendix 2: List of codes included in the analysis

1 CC IS A GLOBAL PROBLEM	0
1.1 global change of temperatures	17
1.2 CC will have a negative impact in other places	0
1.2.1 Global, distant or unspecified area	30
1.2.2 United States	6
1.3 Invisible borders cannot stop climate change	12
1.3.1 atmosphere is a global commons	2
1.3.2 need for regional cooperation	23
1.3.3 some policies are better implemented on a higher scale	29
1.3.4 countries need to keep each other accountable	3
1.3.4.1 responsibility and capability vary	11
2 CC IS IMPORTANT FOR US HERE IN WASHINGTON STATE	0
2.1 CC will have an impact on Washington State	59
2.1.1 adaptation = we need to prepare for the impacts	15
2.1.1.1 adaptation is a progress and a chance	4
2.1.1.2 there is a complementarity between mitigation and adaptation	5
2.1.1.3 we need action to protect health from consequences of CC	7
2.1.1.4 we need to increase the resilience of agricultural systems	6
2.1.1.5 we need to mitigate floods due to rainfall and sea level rise	4
2.1.1.6 we need to mitigate wildfires	0
2.1.1.6.1 there is a trade-off between forest health and carbon storage	2
2.1.1.6.2 we need strategies to control the scope of wildfires	10
2.1.1.6.3 we should be restoring our forests for higher carbon storage	5
2.1.1.6.4 wildfires limit our ability to store carbon	2
2.1.2 people might come here as climate refugees	3
2.1.3 CC will have some positive consequences too	4
2.1.4 CC will mean an increase in natural disasters	7
2.1.5 CC is a threat to the local economy	4
2.1.6 CC will have negative health impacts	32
2.1.7 climate change is a threat to food production	6
2.1.8 CC will have indirect consequences for human built systems	9
2.2 we are responsible to do our part in WA	0
2.2.1 we can have a global impact with local actions in WA	3
2.2.2 we should be accountable towards the rest of the world	6
2.2.3 the US has greater responsibility to address cc than others	4
2.2.4 we can motivate other states and the federal government	7
2.2.5 we should confront our role in CC locally	12
2.2.6 we are responsible for our local area	4
2.2.7 indigenous ppl of WA feel responsible for taking actions too	9
2.2.8 WA has already been doing a lot	8

2.3 we carry some responsibility for developments in other places	2
2.3.1 WA has a share in emissions happening in other places	6
2.3.2 external costs of production are carried by local communities	3
2.3.3 shipping products from other places is unsustainable	5
2.3.4 unsustainable production moved to other countries	7
2.3.5 waste exported to other countries	3
2.3.6 we need to avoid moving the responsibility to other places	5
3 WE NEED TO DESIGN POLICIES THAT WILL BE GOOD FOR WA	0
3.1 what is good for climate, will also be good for us	0
3.1.1 climate action will have economic benefits	0
3.1.1.1 it's not economy versus climate	4
3.1.1.2 benefits of climate action: long-term gains and lower costs	18
3.1.1.3 strengthening local economy	8
3.1.1.3.1 we need more local production in the US	6
3.1.1.3.1.1 we need more local food production	7
3.1.1.3.1.2 creating markets for local agricultural product	4
3.1.1.3.2 financial benefits for communities	2
3.1.1.3.3 climate action will create new jobs	29
3.1.2 climate action will also have health benefits	4
3.1.2.1 improved safety	6
3.1.2.2 improved air quality	26
3.1.3 ancillary benefits: clean and healthy environment	17
3.1.4 climate action will improve our life quality	25
3.2 we must avoid high costs	4
3.2.1 climate action can bring economic risks	0
3.2.1.1 businesses will pass the added costs on to the consumers	4
3.2.1.2 companies will try to avoid climate policies by lobbying or mov	8
3.2.1.3 climate policies can have impacts on employment	4
3.2.2 policy costs can be a decisive factor	3
3.2.2.1 policies should be inexpensive to administer	3
3.2.2.2 some policies are not applied due to high cost	5
3.2.3 we need to think of future costs of our current actions	5
3.2.3.1 we need to consider what the costs of inaction will be	8
3.3 we need more community-oriented policies	0
3.3.1 there are differences between places policies should adjust to	1
3.3.1.1 bioregions describe places with shared characteristics & needs	7
3.3.1.2 Eastern WA is different from the West	18
3.3.1.3 some people have limited access to recycling	7
3.3.1.4 we need to look at CC from the local place perspective	8
3.3.1.5 some places get less investment in needed services	8
3.3.1.6 some places are more exposed to pollution than others	9
3.3.1.7 some neighborhoods are less vegetated	8

3.3.1.8 redlining practices have consequences to this day	8
3.3.1.9 lower income neighborhoods don't have equal chances	13
3.3.2 we need more community	0
3.3.2.1 community and cooperation make us stronger and more resilient	9
3.3.2.2 it's a benefit if a policy is strengthening local communities	8
3.3.2.3 people's jobs should be local and benefiting the communities	2
3.3.2.4 we need to support community-based power generation	13
3.3.2.5 we should support initiatives strengthening community	4
3.3.3 local communities should have a say	10
3.3.3.1 everyone who is affected should participate in decision-making	26
3.3.3.1.1 informed consent-tribes should be consulted before developments	8
3.3.3.2 local communities should have a seat at the table	13
3.3.3.2.1 government policy is not always attuned to local needs	5
3.3.3.2.2 local communities are where the policies are executed	6
3.3.3.2.3 local communities know what works best for them	23
3.3.3.2.4 tribes should have an equitable seat at the table	7

Appendix 3: Themes map



Appendix 4: Abstract in German

Forschende auf dem Gebiet der Klimakommunikation und Aktivist_innen gleichermaßen sind auf der Suche nach erfolgreichen Strategien, um die öffentliche Meinung über die globale Erwärmung zu beeinflussen und die Unterstützung für Klimaschutzpolitiken zu erhöhen. Ein Ansatz, von dem intuitiv angenommen wird, dass er die psychologische Distanz der Menschen zum Klimawandel verringern sollte, ist dessen lokalen Konsequenzen anstelle der weit entfernten oder globalen Folgen darzustellen. Die Forschung zu dieser sogenannten "Annäherungs"-Strategie ist jedoch nicht schlüssig, was ihre Wirksamkeit bei der Beeinflussung der Einstellungen der Menschen und der Unterstützung der Klimapolitiken angeht.

Die meisten Studien haben den Einfluss der geografischen Nähe von Klimaauswirkungen durch die Messung von Framing-Effekten in individuellen Umfrageexperimenten untersucht. Um die Verwendung von nahen und fernen Perspektiven auf den Klimawandel in einem deliberativen Umfeld zu erforschen, analysierte ich die transkribierte Kommunikation der Washington Climate Assembly, eines lokal organisierten Bürgerrates zum Klimaschutz. Mithilfe einer thematischen Analyse untersuchte ich, wie Experten_innen, Interessenvertreter_innen und Teilnehmer_innen über lokale und entfernte Folgen des Klimawandels, entsprechende Verantwortlichkeiten und lokal relevante Aspekte der Klimapolitik sprachen.

Die Ergebnisse der Analyse legen nahe, dass Praktiker_innen und Beauftragte in Erwägung ziehen sollten, Informationen sowohl über lokale als auch über weiter entfernte Klimaauswirkungen zu präsentieren und Anpassungsmaßnahmen zusammen mit Klimaschutzmaßnahmen in den Rahmen künftiger Klimaversammlungen aufzunehmen. Darüber hinaus zeigt die Studie, dass Menschen nicht nur das Gleichgewicht zwischen den lokalen Kosten und dem Nutzen von Minderungsmaßnahmen berücksichtigen, wie es in der früheren Literatur angenommen wurde, sondern auch darauf achten, inwieweit die politischen Entscheidungen die lokalen Gemeinschaften einbeziehen und ihre besonderen Bedürfnisse widerspiegeln.