

Bridging perspectives

Citizen perceptions of municipal climate communication and local climate action

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Abstract

This article explores how citizens perceive and respond to municipal climate communication in Denmark, with particular attention to audience segmentation and different attitudes towards climate communication. We applied a qualitative thematic analysis and identified four themes – Everyday life, Attitudes towards green transition, Consequences for daily life, and Communication from the municipality, which we used to investigate personal, social, and institutional dimensions of climate-related behaviors. Data were generated through interviews with and observation of individuals representing various demographic groups, which allowed us to compare citizen responses to municipal climate communication with the audience segmentation framework outlined in Maibach et al.'s (2009) Six Americas model. Building upon this framework, we introduced Six Danes, a Danish adaptation that reflects local political, socio-economic, and cultural dimensions. Our findings highlight gaps in municipal communication and suggest ways to tailor communication to different citizen segments.

Keywords

Climate communication, municipalities, segmentation, citizen perception, climate behavior, Six Danes

Introduction

In Denmark, a small country with six million inhabitants (Danmarks Statistik, 2024), climate and sustainability are not new phenomena in the public debate (Danielsen, 2015; Grønning & Nielsen, 2024). In his dissertation, “Climate on the agenda” [Klimaet på dagsordenen], Oluf Danielsen analyzes the public climate debate in Denmark during the years 1988-2012, based on a data collection of selected newspapers. In Danielsen’s introduction, *Silent Spring* by Rachel Carson (1962) is emphasized as being the starting point for the dissemination of climate questions in the public debate of late modernity (Danielsen, 2015, p. 9). More recently, according to Stubager and Møller Hansen (2021), climate was at the top of the political agenda for all age groups in Denmark in the run-up to the 2019 Danish general election. After the election, several initiatives emanating from the wish to become “climate neutral”, as well as activities to promote the UN’s Sustainable Development Goals (SDGs), were initiated at the political level. Moreover, according to the latest IPCC report (IPCC, 2023), not only technological solutions but also social and political factors determine whether climate action is successfully implemented. Ninety-six municipalities have developed climate action plans aligned with goals in the Paris Agreement (Lind & Hansen, 2024), reinforcing the importance of local engagement in climate initiatives. As part of this commitment, many Danish municipalities have obtained DK2020 certification, which obligates them to actively reduce CO₂ emissions through strategic climate action plans (KL, 2024). Climate manifested itself on the agenda at a national, regional, and local level, and more initiatives, public support, demonstrations, and other reactions were also registered, at a local level. In the autumn of 2025, city and regional council elections will be held in Denmark. It is expected that climate will be a significantly hot topic in these elections. Within this setting, this article studies how Odense Municipality’s climate communication is perceived by its citizens. In November 2023, a majority of the City Council’s parties entered into a political agreement on a new green mobility plan. We followed the municipality’s work in the initial phase of their climate project – where broad citizen involvement was a key priority – and we focused on one specific residential area in the northernmost part of central Odense, Skibhuskvarteret (Skibhus district). We decided to talk to local stakeholders of the mobility plan – that is, parents, students, teachers, and business owners in the Skibhus district.

In positioning this article within the broader field of environmental communication and with a focus on media dimensions (Eskjær, 2021), it is essential to understand how citizens perceive and respond to these messages. Drawing upon Maibach et al.’s (2009) *Six Americas* framework, which segments the US population based on their attitudes towards climate change, this article adapts and applies this model to a Danish context, developing a Six Danes framework. By comparing citizen responses to municipal climate communication with this audience segmentation model, we aim to uncover the factors shaping different levels of climate engagement.

Based on observations and in-depth interviews, we analyzed and discussed whether and how alternative arguments – such as economic benefits, health, and social norms – can effectively promote climate-friendly behavior (Weder et al., 2021). Data on citizens' climate behavior was collected during 2024. Using a qualitative method, we aimed to uncover how this kind of communication was implemented and how it was perceived by the citizens. Our research question is: How do citizens perceive and respond to municipal climate communication in Odense, and how can audience segmentation inform more targeted communication?

This short introduction is followed by a description of the context (case) of Odense Municipality, after which we present the theoretical frame for our article as well as details about our data collection (materials and methods). Then we present the thematic analysis, from which we identified and discussed the six personas, which we name The Six Danes. After this follows a brief discussion about how to implement communication approaches in municipalities, and, finally, we present our conclusion.

Presentation of context (case): Odense Municipality

The Odense Municipality is one of 98 municipalities in Denmark and is located on the island of Funen within the Region of Southern Denmark. With 200,000 inhabitants, Odense is Denmark's third largest city (Odense Kommune, 2024). Approximately one in twelve inhabitants of Odense is a university student. Twenty-one percent of the inhabitants are pensioners (Odense Kommune, 2022). The city is often described as an active outdoor and "cycling city", with 250 playgrounds and 560 kilometers of cycle paths (Visit Odense, 2024). 101,249 homes were occupied in Odense Municipality in 2021, and in 2023, 44 percent of families in the city of Odense had one car and 12 percent had more than one car (Odense Kommune, 2024).

In November 2023, a majority of the City Council's parties entered into a political agreement on a new green mobility plan. Unlike previous plans, climate considerations became the core foundation of mobility planning, with explicit communication about climate action embedded in various initiatives. The six focus areas of the agreement were: 1. Speed, 2. Public transport, 3. Non-road, 4. Climate-friendly urban areas, 5. Electrification and parking, and 6. Carpooling and car sharing (Odense Kommune, 2023). The agreement was based on an interdependent, twofold objective. The political intention, as stated in the mobility plan as the first objective, was to create a "cohesive and vibrant city with a thriving city center – where 25 percent more people live and move around in 2030 in the city center." And the second objective was to "reduce CO₂ emissions from transport by 46 percent [... and] create a climate-neutral city by 2030 at the latest" (Odense Kommune, 2023). According to the official statement from the Municipality, citizens and businesses contributed to the design of the mobility plan: "We give high priority to the fact that the citizens, together with Odense Municipality, have the opportunity to talk together about

how we together find the best solutions in Odense's new, green mobility plan" (Odense Kommune, 2023).

In addition to the Municipality's website and the mobility plan itself, the Municipality uses both digital and analog forms of communication, for instance, via signs and posters around the city as well as via social media platforms such as Facebook, Instagram, and LinkedIn. Moreover, the local newspaper, *Fyens Stiftstidende*, published several articles on the subject. Below, see four examples of the Municipality's branding communication, including the messages "Climate neutral 2030" and "Give Odense a green future."



Example 1: The Municipality's website, www.odense.dk/klima.

Theoretical framework

Since the 1970s, the subject of climate change has become an important, high-profile, and highly politicized topic involving science, policy, culture, psychology, environment, and society. Confronting climate change is essentially a collective action problem that directly impacts how people live, work, play, and relax in modern life, and it shapes everyday lives, lifestyle, relationships, and livelihoods (Boykoff, 2019). Therefore, there is a rapidly growing need to communicate about the impact and adaptation to climate change, given the unfolding climate realities across the globe. In spite of this, communications research specifically focused on adaptation is still in its early stages (Moser, 2014). More recent studies, such as Eise et al. (2020), highlight that while progress has been made in climate communication, there remains a critical gap in adaptation-focused communication research, particularly in localized policy implementation and citizen engagement.

In order to be effective, climate communication must start with considerations about the audience. Citizen perception plays a central role in climate communication, as people interpret climate communication differently depending on their beliefs, experiences, and socio-economic backgrounds. Understanding these perceptions is important for munic-



Example 2: The Municipality's Facebook profile, Odense Kommune.

palties aiming to foster climate engagement at a local level. Audience segmentation and consequent message alteration have been part of marketing and associated communication strategies since the 1950s (Slater, 1996; Smith, 1956). Audience segmentation activities, as they relate to climate change communications, have proliferated over the past decade (Leal Filho, 2019). For instance, audiences may be imagined, targeted, (un)intended, or identified through a timely analysis of audiences. Both researchers and practitioners must increasingly pay attention to differentiated audiences as key components of the deliberate development of effective communications.



Example 3: Advertising in the local newspaper, Fyens Stiftstidende.



Example 4: Various analog promotion material from the Municipality.

Research about audiences and climate has focused on audience segmentation. One example of this is the report on climate communication named *Global Warming's Six Americas*, from 2009. The project conducted a class analysis of the US public to create perspective segmentation based on survey responses about climate change (Maibach et al., 2009). The survey questions yielded six categories of responses, defined as "dismissive," "doubtful," "disengaged," "cautious," "concerned," and "alarmed." Since its inception, The Six Americas project has tracked how members of the public perceive their own concerns, beliefs, and motivations with regard to climate change and global warming. This categorization was first applied in the US context but has since been tested in the Chinese (Wang & Zhou, 2020), Indian (Thaker & Leiserowitz, 2014), European (Kácha et al., 2022), and German (Metag et al., 2017) contexts as well.

Other scholars have stressed the importance of integrating the perceptions of audiences into the production of environmental communications (Hansen, 2015). In this regard, municipal climate communication requires an understanding of how different citizen segments perceive, interpret, and engage with climate messages. Municipalities must therefore ensure that the communication aligns with citizens' lived experiences, values, and concerns. Moreover, not all citizens think in the same way and do not interpret a given message in the same way as their friends or family members. Therefore, there is a need to tailor messages to different audience segments. In this respect, a substantial challenge that remains to be investigated is understanding how well the research on segmentation translates when applied to different local contexts across the globe. The current research on climate change communication addresses this challenge by implementing local climate initiatives and exploring public opinion on climate change in Denmark using segmentation analysis and by identifying cultural and political factors that underlie the commonalities and differences among various audience segments of the Danish public (Lind et al., 2023). Communicating "climate" and "climate research," however, is not a straightforward task (Markowitz & Guckian, 2018; Moser, 2010). Individual risk assessments and decisions about appropriate action are complicated by the inherent complexity of climate change as a phenomenon (Nisbet, 2009). Beyond issues of understanding, people also respond differently to climate messages, depending on their existing knowledge and attitudes (Lord & Taylor, 2009). As emphasized by Lind et al. (2023), there is a need for further research that focuses on interviewing members of the different segments, as this kind of research could help further the understanding of what set the groups apart.

Moreover, it can be productive to combine segmenting and climate communication with the media dimensions by Eskjær (2021) to facilitate an understanding of the diverse ways in which media interact with the environment and the varying needs and perceptions of different audience segments. Eskjær's three dimensions cover: Media in the Environment, Environment in the Media, and Communication in and with Nature. Each of these three dimensions can be used as an analytical frame to analyze different aspects

of how media interact with the environment and how the different audience segments respond. For example, focusing on Media in the Environment can facilitate an understanding of the impact of media production and consumption on the environment and how much pollution media use brings with it. These perspectives help us understand the environmental footprint of media activities that the segments have. The second dimension, Environment in the Media, analyzes media's representation of nature, climate, and the environment in media. In this way, it can be examined how the different segments react to media content which focuses on climate change and their attitudes toward climate communication material. And lastly, with the third dimension, Communication in and with Nature, it is possible to determine communicative and pre-linguistic connections between humans and the natural world, which reveal perspectives on what nature means to the different audience segments and how they interact with nature. By integrating these three dimensions of media, climate communication can be analyzed and tailored to effectively reach and engage different segments.

This article adds perspectives on how to tailor climate communication to different audience segments in the future and discusses how campaigns could be optimized. Therefore, we introduce theories on framing in relation to climate communication. Our use of framing refers to words, phrases, or images that make a subset of the potentially relevant considerations about a particular attitude or object that is salient to an audience, such as a candidate, policy, or issue (Druckman, 2001). For example, a communicator could highlight the economic, environmental, public health, or safety effects associated with climate change, thereby providing an "interpretive storyline that set[s] a specific train of thought in motion, communicating why an issue might be a problem, who or what might be responsible for it, and what should be done about it" (Nisbet, 2009, p. 15; see also Moser, 2010).

In summary, climate change communication is a multifaceted challenge that requires a nuanced approach that integrates audience segmentation with a clear understanding of how media impacts and represents the environment. The Six Americas framework demonstrates the importance of tailored communication to engage diverse public segments effectively. By incorporating Eskjær's three media dimensions – Media in the Environment, Environment in the Media, and Communication in and with Nature – into The Six Americas framework, we seek to enhance our understanding of the environmental impacts of media, the representation of climate issues, and the intrinsic connections people have with nature. Framing plays an important role in climate communication, with themes on economic, health, or social lenses resonating with varied audiences. As highlighted by existing research, balancing explicit climate messaging with broader, relatable themes is crucial to avoid alienating audiences while promoting meaningful commitment and action on climate change.

Materials and methods

The data for this article were collected from 18 semi-structured interviews with parents (5), one teacher and several students from the local school (5), local business owners and staff (4), pensioners (2), and representatives from a local climate activist group (2). All interviewees were residents in Odense Municipality (see Table 1: Overview of Interviews). The local school in Skibhus district plays a central role in the Municipality's mobility program. At the time of the interviews, the local school was attended by 696 students. All interviews were arranged by direct or indirect contact through the local school, through local public meetings about the mobility program, and by visiting local businesses and talking to the owners and staff in person (e.g., the local business owners and staff).

Our samples are drawn from these groups because we wanted to explore how different groups of local citizens perceived the situation and the communication from the Municipality. All participants provided written consent. Most of the interviews were conducted individually; however, one interview with a business owner and his staff was held as a double interview, and the youngest children were interviewed with consent from the parents. All interviews were conducted by the first author. The data were collected during January-December 2024.

A semi-structured interview guide was used, ensuring a balance between consistency and flexibility, allowing participants to express their views in their own words. Interview questions were inspired by the SASSY (Six Americas Short Survey) questions (Maibach et al., 2009; Maibach et al., 2010). However, the original survey items were carefully adapted to fit a Danish municipal context, ensuring cultural and policy relevance. Sample questions included:

- "Tell me about your everyday life- does climate change matter to you?"
- "What do you think about the campaign 'Give Odense a green future'?"
- "What do you think about the municipality's green mobility plan?"

The interviews were transcribed verbatim, pseudonymized, then coded manually. The transcripts were coded in two phases: first, an initial open coding, including notetaking, abstracting, and comparing; and second, checking and refining in an abductive process following Kozinets's (2015) approach. This process led to the focus on four themes, which was a main structure for our interviews: 1) Everyday life, 2) Attitudes toward green transition, 3) Consequences for daily life, and 4) Communication from the Municipality. In the second phase, a deductive thematic coding of the data was performed, guided by the following subthemes, which were based on The Six Americas: Alarmed, Concerned, Cautious, Disengaged, Doubtful, and Dismissive. Rather than assigning informants to predefined audience segments based on survey responses, participants' placement within The Six Danes framework was evaluated through open-ended questions. This approach allowed the interviewees to articulate their perceptions, concerns, and motivations without being constrained by a fixed response format, offering a more nuanced understand-

ing of climate engagement. All quotations in this article were translated from Danish into English by the authors.

Group	Name (pseudonym)	Gender	Age	Exposure	Location
Parents (5)	John	Male	34	45:00 min	At a local cafe
	Bent	Male	49	91:15 min	At the university
	Torben	Male	40	74:14 min	Home visit and walking
	Jens	Male	36	48:12 min	Online
	Marie	Female	45	55:28 min	At home
Teacher (1)	Andreas	Male	44	43:43 min	At the school
Students (4)	Nicoline	Female	25	58:24 min	At the university
	Sara	Female	25	56:30 min	At the university
	Anna	Female	13	52:55 min	At the school
	Storm	Male	13	20:08 min	At the School
Local business owners and staff (4)	Lis	Female	29	61:47 min	At home
	Anne	Female	65	65:04 min	In the shop
	Søren	Male	62	71:04 min	In the shop
	Rene	Male	49		
Pensioners (2)	Jan	Male	57	59:06 min	At home
	Rebecca	Female	67	76:34 min	At home
Local climate activists (2)	Henrik	Male	33	104:46 min	At the university
	Mads	Male	45	63:49 min	At the university

Table 1: Overview of interviews – all names are invented.

Thematic analysis

This thematic analysis presents the diverse perspectives and behaviors related to climate change among individuals under the following themes: Everyday life, Attitudes towards green transition, Consequences for daily life, and Communication from the Municipality. The analysis highlights the personal, social, and institutional dimensions of climate-related attitudes and actions and emphasizes the complexity and multifaceted nature of climate change communication and behavior, as outlined in the theoretical framework.

Everyday life

Climate change is not just a distant challenge – it is woven into the fabric of daily life. From shifting transportation habits to evolving public awareness, individuals experience climate

initiatives in ways that shape routines, choices, and perspectives. One of the local climate activists, Henrik, illustrates how external climate events can change public awareness: *"Since the very hot Summer in 2018, I have become aware and opened my eyes to the climate crisis."* His statement reflects Eskjær's (2021) dimension of Environment in the Media, where dramatic weather events and media coverage of the climate crisis create awareness.

Henrik talked about climate anxiety and the psychological impact climate change can have on individuals: "Personal challenges tied to it [the theme] in climate anxiety and discomfort." In the same vein, Sara expressed a sense of powerlessness: "There are so many tipping points, and so many powerful people that I cannot control," which reflects the collective action problem inherent in confronting climate change, as discussed by Boykoff (2019).

Other interviewees expressed viewpoints that show varied personal responses to climate initiatives. A 40-year-old father, Torben, told us about his willingness to accept costs: "It's perfectly fine if it costs more, also for the private consumer", and a 13-year-old student, Storm, demonstrated general indifference: "I don't really care about it, and my family doesn't really care about it either." These responses align with the audience segmentation approach advocated by Leal Filho (2019), which emphasizes the importance of tailored messages to engage different segments effectively. Another parent, Bent, told us about his commitment to cycling. His statement – "We actually no longer own a car. We just have a shared car" – reflects an actionable change in behavior that supports sustainable transportation.

Hereby, it reveals how individual attitudes and behaviors towards climate change are shaped by a complex interplay of psychological, socio-economic, and practical factors. The personal narratives underscore the importance of developing nuanced, targeted communication that resonates with diverse audience segments and addresses their specific concerns and motivations.

Attitudes towards green transition

The green transition in Odense highlights diverse motivations, concerns, and levels of engagement among residents. Some citizens, such as Henrik, are deeply committed to reducing their carbon footprint: "I cycle and don't have a car. I don't think I'll ever get one. Maybe a shared car." Others, such as parent Bent, showed intertwined practical and economic considerations: "It must be practical first and [it has to be] economic, but the climate also became important later on."

Both Henrik's and Bent's statements demonstrate how climate behavior is driven not only by ecological awareness but also by practical incentives, reinforcing the need for municipal communication that makes climate-friendly choices both accessible and convenient. Municipal climate policies play an essential role in shaping public attitudes toward the green transition, particularly in how alternatives and consequences of inactive behavior are communicated. Henrik emphasized this point: *"The municipality should*

clarify what the alternatives are if we do not act." This statement relates directly to Eskjær's (2021) dimension of Media in the Environment, underscoring how communication about sustainability must go beyond abstract goals and present concrete choices and consequences. Similarly, 25-year-old student Nicoline took a practical approach to minimizing environmental impact: "I walk and cycle in Odense. When I go to Sjælland, I take the train. I don't have a car." Nicoline's statement reinforces the importance of sustainable transportation choices. Opting for bicycles and public transport not only reduces CO₂ emissions but may also inspire others to adopt similar practices, which reflects a growing awareness of climate change and personal responsibility (Nisbet, 2009; Moser, 2010).

Parent Marie added a perspective by highlighting the health benefits of reducing car traffic: "I think it should be just as much about not exposing [people] so much to car exhaust [fumes] and noise." This underscores the importance of integrating health considerations into climate communication strategies to garner stronger public support (Boykoff, 2019). Marie's emphasis on a comprehensive approach contrasts with student Storm's preference for the status quo: "They [his parents] find it a bit of a hassle that the road is closed. They just want to be able to keep driving through."

Mads's and Anne's insights on multiple solutions and ambitious plans – "There were three options when we got to the core of the matter" and "It is an ambitious project" – reflect the complexity required to implement effective climate strategies. These discussions help us recognize how the different segments want to prioritize resources and to address the diverse concerns and motivations of different public segments (Metag et al., 2017; Thaker & Leiserowitz, 2014).

Consequences for daily life

Climate initiatives directly shape everyday experiences and socio-economic conditions, influencing how citizens react to new policies and engage with communication on climate change. While some citizens expressed frustration and skepticism, others demonstrated personal engagement and behavioral shifts. Within this theme, Marie's criticism of human behavior was particularly salient. She stated: "People are lazy dogs that take the easy way out. We need to be pressured, just like with alcohol and cigarettes." Her statement reflects the necessity of structural incentives in driving behavior change, aligning with Eskjær's (2021) dimension of Media in the Environment.

Rene, who was employed in one of the local shops, expressed concern for his job due to the climate initiatives in his local area of the Municipality: "It's my job you're messing with. I'm unskilled. [...] I can't just go out and find a new job." He was afraid that the ban on cars in the local area would reduce the number of customers and thus potentially close the store where he worked. His statement highlights the socio-economic implications of climate policies, which underscores the need for communication strategies that address economic stability and security.

Søren's statement reveals a deep personal connection to nature and environmental degradation: 'I know people who dive in Lillebælt and say it's completely ruined.' This aligns with Eskjær's (2021) dimension of Communication in and with Nature, where firsthand experiences of environmental harm become powerful forms of climate communication. Such encounters can evoke stronger emotional and psychological responses than abstract statistics, offering potential entry points for engagement through experiential communication strategies. Similarly, Marie connected her environmental values to personal action: "I have always had respect for nature and can't stand seeing people throw garbage." Her statement illustrates how direct interactions with nature can inspire pro-environmental behavior, reinforcing the importance of place-based and experiential narratives in climate engagement. When municipalities frame climate communication through personal experiences, rather than solely relying on technical data, it can enhance relatability and foster stronger public support.

Marie emphasized making driving less attractive as a key strategy in climate communication: "We make it much more difficult to drive cars so that you drive much less." Marie's approach, which involves introducing barriers to driving and making driving in the city inconvenient, encourages behavior change towards more sustainable transport options such as cycling and public transport.

Other statements expressed by the interviewees show the need for a mix of approaches and achieving a balance between assertive measures and gradual changes. For example, shop owner Anne and pensioner Jan stated: "You can get people a bit more out of their comfort zone [...] it should be a bit more aggressive without feeling like coercion" and "Start soft and then go harder [...] avoid burning bridges." Following this approach, climate communication can be developed gradually so it is both inclusive and impactful and addresses the specific concerns and motivations of diverse public segments in a soft and hard way (Hansen, 2015; Lind et al., 2023).

Communication from the Municipality

Henrik, the local climate activist, pointed out a lack of genuine dialogue between the municipality and the citizens: "It's more about public hearings than citizen involvement." His critique reflects Eskjær's (2021) concept of Environment in the Media, which explores how climate communication is framed in public discourse and its effectiveness in mobilizing action. Like Henrik, some citizens feel excluded from meaningful decision-making, creating a disconnect between policy ambitions and public buy-in. Anne expanded on this concern, noting that current communication practices can polarize rather than unite: "The way it is done now also contributes to polarization among citizens."

Parent Bent noted that the mayor's opening of meetings led to ideological discussions, which distracted attention from the formulation of proposals for concrete action. Bent's observation suggests a demand for clear and focused communication to avoid diluting

the message, which is in line with Hansen's (2015) emphasis on effective audience segmentation and messaging.

Anne, the local shop owner, pointed out that the process may have been too fast, which potentially created resistance. Rene's desire for more direct engagement from the Municipality stresses the importance of involving citizens in the decision-making process to build trust and support for green initiatives (Lind et al., 2023). These considerations about pace and form of communication relate very well to the different segments.

Pensioner Jan highlighted the need to think broadly: 'We have climate goals, but also other goals. We want more safety in the neighborhood and more well-being.' These statements underscore the importance of taking a comprehensive approach to sustainability and integrating various dimensions regarding quality of life (Eskjær, 2021). The challenges of effective citizen involvement and communication in urban development and climate initiatives have to be targeted towards the different segments, so the process of involvement and messages fit to what the segments find important. Henrik also criticized the municipality's mixed priorities: 'They call it a green mobility plan and say it is about climate, but it is just as much about urban development and activity in the city center.' His perspective highlights the need for clear, targeted communication that addresses both the environmental and socio-economic dimensions of urban planning (Lind et al., 2023).

In summary, this thematic analysis connects individual experiences and attitudes towards climate change with wider theoretical concepts. By exploring the personal, social, and institutional dimensions of climate-related behaviors, we can develop nuanced and targeted communication strategies that effectively engage diverse audience segments. This approach ensures that climate communication is inclusive, impactful, and addresses the specific concerns and motivations of different public segments. Through this analysis, we underline the significance of integrating psychological, socio-economic, and practical factors into climate communication to drive meaningful climate action.

Discussion

In this discussion, we present the different perspectives on climate change and sustainability that have been put forward by citizens in Odense. The individual narratives reflected six distinct personas (Jansen et al., 2022), which we name The Six Danes: Alarmed Vera, Concerned Erik, Cautious Freja, Disengaged Emma, Doubtful Lars, and Dismissive Anders. The variety of personas highlights the complexity and breadth of responses to climate initiatives and environmental concerns that were presented in the local context of our article. Our identification of these six personas contributes to a recent international wave of audience segmentation models seeking to understand differences in local attitudes toward climate change. The identification of such characteristics allows researchers and communicators to determine which audiences are most relevant to target and how to best communicate with these audiences.

Alarmed Vera – the engaged advocate in climate action

Vera exemplifies the alarmed segment, characterized by a deep concern about climate change and a strong commitment to sustainability. Within Goldberg et al.'s (2021) taxonomy, Vera mostly falls under the active alarmed category – she is not only aware of climate challenges but also takes concrete steps to address them in her daily life: “I consider myself an ordinary citizen participating in community offerings and activities.” As a highly educated young woman who primarily cycles as a mean of transportation, she embodies a low-carbon lifestyle and actively participates in climate-related discussions and initiatives. Vera's philosophy is rooted in knowledge, integrity, and the environment: “I believe high taxes on resources are necessary to get people to reduce their consumption. People are most motivated by price.” Her participation in social communities and her sense of connection with nature through personal and social activities highlight her holistic approach to sustainability. Communication aimed at Vera should focus on creating meaningful connections between people and nature and highlight the importance of community-based solutions. This can be related to Eskjær's (2021) dimension of Communication in and with Nature.

Vera's frustration is evident in her critique of municipal climate communication: “The Municipality's communication often places the responsibility on citizens, which can be frustrating. We need clearer guidelines and concrete actions from the authorities.” While alarmed individuals are proactive, they require institutional support to translate their motivation into impact. Goldberg et al. (2021) highlight that some in the alarmed segment become *inactive* due to discouragement, especially when faced with political inertia. Vera believes that local adaptation and citizen involvement are crucial for successful climate initiatives: “Each district has its own ways of tackling problems, and it's important to involve citizens' input to create effective solutions.” Vera's perspective shows a dedicated and holistic approach to climate initiatives.

To engage the alarmed audience segment, which includes people like Vera, it is important for municipalities to focus on science-based solutions and concrete actions that can be addressed at both individual and societal levels. Informing these audiences about new climate initiatives, supporting their active participation in local communities, and advocating for policies that promote sustainable lifestyles can be highly effective.

Concerned Erik – the overwhelmed but willing supporter

Erik represents the concerned segment as identified in Maibach et al.'s (2009) Six Americas model. Erik supports having proper climate policies and actively doing things for the climate, but he also feels exhausted by the constant reminders: “I support having proper climate policies and doing many things, but I'm also a bit tired of hearing about it all the time.” He expresses feeling that the climate discussion sometimes becomes diluted and loses its seriousness: “I'm one of those who do too little, to be honest.” Erik sees himself

as a person with good intentions and environmental concern who can feel overwhelmed by constant climate reminders. The media coverage of climate can be related to Eskjær's (2021) dimension of Environment in the Media, and we can see that it is not unimportant how the climate is communicated to him. He prefers clear, serious messages and concrete actions that do not get lost in superficial campaigns. Climate change campaigns can help increase awareness and motivate action among the concerned segment (Raducu et al., 2020). Erik has an interest in community-led climate projects – such as neighborhood cycling programs or local sustainability forums – which can serve as micro tipping points, enabling concerned citizens to transition from passive observers to active participants (Moser & Dilling, 2007).

To engage the concerned segment of citizens like Erik, it is essential for municipalities to deliver clear, consistent and meaningful communication that focuses on concrete actions and results that demonstrate a real impact on the climate and avoid information overload, which can seem overwhelming. By respecting the need of this segment for honest and clear communication, and by highlighting successful and practical initiatives, effective communication from the Municipality can strengthen these citizens' commitment and willingness to support climate action.

Cautious Freja – the pragmatic but hesitant participant

Freja exemplifies the cautious segment and is moderately engaged with climate issues but often struggles with psychological barriers that hinder consistent action. Her perspective highlights both a willingness to contribute and a sense of personal limitation, shaped by social anxiety and everyday concerns: "I have social anxiety. I don't feel there's realistically anything I can do personally." This reflects a sense of powerlessness but also a willingness to participate and contribute where she can, which could be related to Eskjær's (2021) dimension of Media in the Environment. Freja highly prioritizes safety and has noticed that many people tend to be lazy, which affects their transportation choices: "I think safety should be a priority. Many people are a bit lazy, like teenagers, and get driven around."

Freja actively tries to cycle but she often finds reasons to go by car. With respect to climate engagement, she has a pragmatic approach and believes everyone should contribute what they can: "I think everyone should help a bit and do what they can." This statement aligns with Nisbet's (2009) framing theory, which argues that environmental communication must resonate with existing values and priorities. For individuals like Freja, framing climate efforts through health and safety – rather than purely ecological concerns – can increase engagement.

To engage the cautious segment of people like Freja, it is vital for municipalities to adopt a positive and pragmatic communication approach, using strategic framing to make climate action feel accessible and relevant (Bolsen & Shapiro, 2017). Highlighting

successful local initiatives that Freja is already involved in, and demonstrating how small, practical actions can have a meaningful impact, can help this segment feel more empowered and motivated to contribute.

Disengaged Emma – the passive spectator in climate engagement

Emma represents the disengaged segment – she acknowledges climate change as a problem but does not view herself as an agent of change, often due to psychological distance, information fatigue, or competing life priorities (Metag et al., 2017). Emma is a student who finds climate challenges burdensome, as she has other problems in life that she thinks are more important to her. It is essential for her that the burden of solving climate change should be on governments and corporations, rather than individuals. She often feels that climate problems are beyond her control: “It can feel like something out of my hands, something bigger than what I can do.” Emma believes that her personal efforts will not significantly impact the climate crisis: “I have felt really bad watching documentaries because I feel powerless.” This engagement with climate in the media negatively affects her mental health and makes it difficult for her to participate actively in climate action. It illustrates how Eskjær’s (2021) dimension of Environment in the Media emerges in the her case. Emma feels overwhelmed and detached from the climate challenge, despite recognizing its importance.

She appreciates when climate action opportunities are integrated into her daily routines, making it easier and less stressful to participate. Climate-friendly default rules ensure that sustainable choices are the norm, reducing the burden of decision-making (Sunstein & Reisch, 2021). Emma’s perception of her own powerlessness and stress related to climate change make it challenging for her to find ways to contribute to climate action.

To engage with the disengaged segment, which includes people like Emma, it is essential for municipalities to create accessible, supportive, and less stressful ways to get involved in climate action. This can include small, concrete actions and a positive approach that enhances their sense of control and agency.

Doubtful Lars – the traditionalist resistant to change

Lars represents the doubtful segment, characterized by skepticism toward climate initiatives and resistance to changes that affect daily life. According to Jost et al. (2004), this resistance can be understood through system justification theory, which explains how individuals often defend existing structures – even when they are problematic – because change is perceived as destabilizing.

Lars displays a clear resistance to change, and he prefers things to remain as they are instead of embracing the potential improvements of climate related incentives. Lars states: “Yes, it would be nice with bikes, but I just want things to stay the same. So, I don’t

think things should change.” He adds, “I think drivers don’t need anything better, and I think it’s fine as it is.” Lars is also skeptical about much of the information presented about climate change and questions its credibility: “A lot of information is used that you can’t really verify.” He challenges the use of what he perceives as unreliable or questionable in the climate debate: “Using this in the climate issue is absolutely insane.” Lars’s skepticism toward climate change information points to a broader distrust in the data presented and its sources, which relates to Eskjær’s (2021) dimension of Environment in the Media. For Lars, honesty is crucial, and he wants climate information to be transparent and not manipulative: “It should just be honest. Don’t try to impose something on residents in the name of climate. There should be honesty about things.” He is very opposed to what he sees as the imposition of climate initiatives, which reflects his general resistance: “We have been very opposed to it.”

To engage the doubtful segment, like Lars, it is necessary for municipalities to ensure that all climate communication is as clear and transparent as possible and to take people’s credibility concerns seriously. This can help build trust and possibly reduce resistance to climate change measures.

Dismissive Anders – the economic skeptic resistant to climate initiatives

Anders represents the dismissive segment, and he is skeptical of climate change, disengaged from sustainability discussions, and primarily concerned with economic stability. Anders works in a small business and is deeply worried that climate initiatives might threaten his livelihood: “We are just a small, cozy business [...]. We can’t handle it.” His concerns reflect a common theme among dismissive individuals: Climate initiatives are perceived as threats to livelihoods rather than opportunities for growth. Individuals like Anders, who experience direct financial stakes in policy changes, are more likely to oppose climate initiatives, viewing them as personal risks rather than societal benefits. As a result, they may feel motivated to protest against climate initiatives (Leiserowitz et al., 2021).

Anders believes that the government’s focus should be on supporting small businesses like his, rather than imposing new regulations that could put him out of work: “I’m a security addict, I feel secure where I am, and next is the economy because I need to make a living. I need butter on my bread and a little extra.” He values practical solutions that can offer immediate benefits to his business, rather than long-term promises that may not come to fruition. Anders’s story shows a person who is highly concerned about the immediate economic consequences of climate initiatives. By showing how small changes in business operations can lead to financial savings and security, he may become more open to participate in climate initiatives. Related to Eskjær’s (2021) dimension of Environment in the Media, communication should not explicitly focus on climate but rather focus on topics that are more implicitly related to the climate.

To engage the dismissive segment, which includes people like Anders, it is essential to address their concerns directly and show how climate initiatives can lead to economic stability and security rather than threaten them. Gradual exposure to non-threatening information and framing sustainability as an economic advantage can increase openness (Meshes et al., 2022). This can help bridge the gap between their needs and the demands of climate action.

Implementing approaches in municipalities

The findings from our thematic analysis and segments can be used by municipalities to develop tailored communication strategies that effectively reach and engage different audience segments. By leveraging framing techniques and indirect communication, the municipalities can address the varied motivations and concerns of their citizens (Guenther et al., 2024). Additionally, engaging in continuous dialogue with the community, providing clear and actionable information, and showcasing the tangible benefits of climate actions can help foster a supportive environment for sustainability efforts.

The Six Danes framework differs from The Six Americas by placing a stronger emphasis on local engagement. The implementation of climate plans by municipalities plays a central role, as citizens are more likely to participate in initiatives that are directly rooted in their local communities rather than in national strategies (Lind & Hansen, 2024). Unlike The Six Americas, where attitudes and communication are often the primary focus, The Six Danes framework balances perspectives on both perceptions and behavior. Hine et al. (2014) highlight that audience segmentation should account for both psychological and behavioral dimensions. Integrating these elements into The Six Danes could refine its framework and better capture the diversity of climate attitudes, leading to more adaptive communication strategies. Kácha et al. (2022) point out that the presence of a comparable Dismissive segment in Europe remains uncertain. In the Danish context, this uncertainty is echoed by Lind et al. (2023), who demonstrate that political orientation influences the degree of climate consensus. This supports the argument that, in some cases, the dismissive and doubtful segments in Denmark could be merged into a single category, as they are both less represented and share similar characteristics (Carman et al., 2024). When applying The Six Danes framework in practical contexts – such as by municipalities or media organizations – the number and structure of segments should be carefully assessed to ensure relevance and applicability.

Doing climate change communication with varied focus on “climate” has a significant impact on different audience segments. Evidence from research as well as from practitioner experiences supports the notion that being explicit about climate change may alienate rather than appeal to target audiences and constituencies (Marshall, 2015; Vezirgiannidou, 2013). There are advantages to using climate communication in a more implicit way. Addressing climate change impacts the ways in which people live, work, and

interact in modern society (Boykoff, 2019), but in our study, a significant number of informants prioritized other topics, e.g., health, over climate. In light of this, and according to the informants' statements, the informants seemed more likely to change their lifestyles and behavior if climate communication focused on other topics besides climate. This aligns with the findings of van der Linden et al. (2015), who highlight that emphasizing the public health impacts of climate change can generate positive emotions and engagement.

In this contemporary environment, it is seen as a miscalculation to always choose communication approaches to climate change that explicitly mention climate change (Boykoff, 2019). Conversely, it is seen as a mistake for communicators to succumb to worries and antagonisms and thus avoid explicitly mentioning "climate change" for fear of backlash. This has also been demonstrated in research by Feldman and Hart (2018) and Hampton and Whitmarsh (2023), which shows that framing low-carbon policies in terms of air pollution or energy security instead of climate change can increase support within certain political segments. While some communication strategies may work in tandem – such as combining economic incentives with health benefits – others may pose challenges when addressing differing audience expectations. For instance, explicit climate messaging may resonate with the alarmed segment but overwhelm the doubtful segment, necessitating adaptive and segmented approaches to sustain engagement across groups.

Integrating our findings with Eskjær's (2021) media dimensions – Media in the Environment, Environment in the Media, and Communication in and with Nature – makes it likely to better tailor climate communication strategies to diverse audience segments. By examining the environmental footprint of media activities, the representation of climate issues in the media, and intrinsic human-nature connections, it is possible to create more effective communication approaches that resonate with the unique perceptions and priorities of different segments. In our study, most of the informants had little awareness of the media's climate footprint and the CO₂ emissions associated with their use of various media platforms. Furthermore, we observed differing opinions among informants regarding the extent to which the media should cover climate issues in the daily news. Notably, individuals in the alarmed group were in favor of seeing more climate content, whereas those in the doubtful group felt exhausted and would have preferred less climate-related content in the media. Hence, we have been able to use Eskjær (2021) as a lens to nuance the segments and enrich them with perspectives on their media use and attitudes towards climate coverage in the media. This can be further understood through Chater and Loewenstein (2022), who argue that focusing on individual-level solutions in climate communication may limit broader systemic engagement. This article also emphasizes the need for continued research to understand the socio-economic and cultural factors influencing each segment's engagement with climate change communication.

Conclusion

This article enhances our comprehension of the interplay between media, public perception, and climate communication by analyzing how different local citizens in a Danish municipality perceive and respond to climate initiatives. These perceptions are important to effectively influence climate-related behavior. Our findings underscore the importance of audience-centered approaches in environmental communication, thereby contributing to the broader discourse in environmental communication and media studies.

Our analysis highlights the complexity of individuals' attitudes and behaviors related to climate change. We organized our findings across four main themes: Everyday life, Attitudes towards green transition, Consequences for daily life, and Communication from the Municipality. By exploring the personal, social, and institutional dimensions, it became clear that climate behavior and communication require a nuanced approach that addresses the specific concerns and motivations of diverse audience segments. Our article introduces The Six Danes – a locally adapted segmentation model inspired by The Six Americas – illustrating how diverse perspectives shape engagement, resistance, and adaptation in response to climate initiatives. This framework includes Alarmed Vera, Concerned Erik, Cautious Freja, Disengaged Emma, Doubtful Lars, and Dismissive Anders to underline the complexity and breadth of responses to climate initiatives and environmental concerns in a local context. The individual statements reveal the diversity of experiences and responses to climate challenges, and in many cases, the informants transformed their concerns about climate anxiety and economic stability into practical solutions such as cycling and car-sharing. Our analysis underscores the need for tailored communication strategies that inspire action while accounting for psychological, socio-economic, and practical factors.

Communication from the Municipality revealed challenges with citizen engagement and message reach. Effective dialogue demands clear, inclusive, and focused strategies that build trust and ensure meaningful involvement. Structural measures such as incentives and restrictions can encourage sustainable behavior, but they must be balanced with gradual adaptation to avoid resistance. Our article also emphasizes the importance of integrating broader perspectives such as health, safety, and quality of life into climate goals. Ambitious targets can motivate action and strengthen public support for sustainable solutions, even if the solutions are not fully achieved.

In summary, this article introduces The Six Danes as a segmentation framework that enhances our ability to tailor climate communication and behavioral interventions within municipal settings in Denmark. However, developing integrated strategies that align segment-specific concerns with long-term sustainability goals remains a key challenge for both researchers and policymakers. By refining targeted engagement models and testing communication effectiveness, future studies can strengthen the intersection between citizen perception, municipal action, and behavioral climate change strategies to create more inclusive, practical, and impactful climate communication approaches.

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