

The project aims to gain academic knowledge about the expertise and strategies of European climate scientists in communicating climate science to the general, non-academic public. This includes learning about the extent of their public presence and experiences in disseminating climate knowledge as well as identifying the main barriers to effective communication they encounter. The complementary but equally important goal is to collect European climate scientists' recommendations for enhancing science-society dialogue on climate change so that the optimization model for communicating climate change knowledge can be proposed.

The literature on science communication (Bucchi, Trench, 2021; Cheng, 2008), including climate science communication (Cook, Overpeck, 2018) and climate change communication (Moser, 2016; Moser & Dilling, 2007), is rich, but the recurring diagnosis that science communication "is important and is not done well" (Treise, Weigold, 2016) remains constant. Therefore, despite the proliferation of theoretical studies, the practice of communicating climate science has not significantly improved, especially concerning the knowledge-action gap around climate change (Knutti, 2019). One must remember that "global climate change is not just a political problem or a communication problem or an oceanic and atmospheric problem. It's all of the above—it's science meeting society," states Prof. Dietram Scheufele, life sciences communication expert. For this project, the emphasis is placed on scientists meeting and communicating with (other) society members.

The literature review also revealed that although scholars have studied climate scientists in the context of communicating climate change to non-expert audiences, the quantitative approach dominates. At the same time, qualitative research has mainly been conducted within the scope of one country or research center. Given, on the one hand, that climate change is a global challenge and perhaps even "the most critical challenge to have confronted human social, political, and economic systems" (Dryzek, Noorgard, Schlosberg, 2012), and, on the other, that barriers to the dissemination of climate change knowledge may differ regionally, a more comprehensive and comparative approach seems beneficial to identify both effective and ineffective practices of climate science communication to audiences in Europe. Furthermore, the literature distinguishes between one-way transmission (information deficit model) and, currently more endorsed, dialogic, and participatory approaches to science communication; however, climate change as a "wicked problem" poses specific communicative difficulties that should be addressed and incorporated. Thus, the author aims to focus directly on processes relevant to communicating climate change information.

To achieve these goals, the author plans to interview 25 European climate scientists using an in-depth interview method and analyze the data obtained using software designed for quantitative and qualitative analysis. Working with in-depth interviews based on semi-structured questionnaires not only helps to explain, better understand, and explore the opinions, behaviors, or experiences of the research subjects but also, unlike structured interviews, allows the researcher to probe deeper into the participants' responses, follow up on relevant points, and explore unexpected avenues of inquiry. The recruitment process includes a variety of techniques: convenience, snowball, purposive, and maximum variation sampling. This will ensure that the selected participants represent a wide range of perspectives related to the research topic, thereby strengthening the inclusiveness of the study. The author plans to work with the grounded theory method, which requires creating categories from the data and examining the relationships between these categories (Charmaz, 2014).

The project's expected impacts will stem from inreach (academic) and outreach efforts. Recognizing the shortcomings of climate science communication, the author will collect and analyze recommendations from climate scientists, as well as consult these findings with social and science communication scholars, to inform the basis of an optimization model that focuses primarily on climate change communication by scientists. The results will be disseminated through research papers published in journals (e.g., *Environmental Communication*) and conference presentations. The recommendations and model may be further circulated as a handbook to guide good practice for climate science communicators. Finally, an academic book proposal based on in-depth interviews with climate scientists and their perspectives on the science-society relationship may also be of interest to a broader, non-academic audience. As a result, the project will not only fill the research gap (the academic value added) but also stimulate a broader discussion on climate science communication and, hopefully, a move from climate change to climate for change.