

Scientific consensus is good, and societal consensus would be great. Recommended direction for communicating climate change based on climate scientists' experience of dialogue with the public

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This study considers how we can improve the science-society dialogue on climate change and potentially **extend scientific consensus into societal consensus** on climate change mitigation and adaptation. Through in-depth interviews, the topic was explored from the perspective of climate scientists engaged in popularising climate science and communicating with the public. The research is part of the author's PhD project on climate science communication (Mytych, 2023).

In the literature, scholars agree that despite the substantial amount of theoretical studies on climate science communication, the climate change knowledge-action gap is widening (Knutti, 2019), making it a field with great potential for improvement. Scientists are still the default and most trusted social actors when it comes to communicating climate change information. However, as some researchers have noted, there is a communication gap between them and the public (Hunter, 2016), which motivated the author's research among this group of communicators. Science communication scholars also clearly distinguish between one-way communication (deficit model) and dialogic and participatory approaches to communicating science. While the latter two are recommended, the former is still commonly practised (Buchci, Trench, 2021; 2014; Cook & Overpeck, 2018; Burns et al., 2008). The author aimed to learn what barriers climate scientists identify and what recommendations they have to improve climate communication practices. The starting point was the reflection on whether the scientific consensus on climate change is a useful tool for climate change communication.

As there are limited qualitative studies on climate scientists' experiences and strategies for communicating climate change to the non-expert public, and as they have mainly been conducted within the framework of one country or one research centre, the author decided to use an in-depth interview approach and selected a research sample consisting of eight American (CS_USA 1-8) and eight Polish climate scientists (CS_PL 1-8). Recruitment was based on snowball sampling, with additional consideration for maximum variation. Participants were asked to evaluate the effectiveness of climate change communication and to share their experiences, strategies, and recommendations.

Based on the thematic analysis of the data, a number of key aspects can be highlighted for promoting the science-society dialogue on climate change: 1. Engaging with the public on more dialogic terms; 2. Relationship and trust-building as fundamentals for effective climate communication; 3. Two-sidedness of communication (including openness to the societal feedback); 4. Embracing local contexts and inclusive communication; 5. Shifting the focus from denial to honest skepticism. Finally, while scientific consensus on climate change is a helpful tool for communicating climate knowledge, it remains irrelevant in terms of mobilising climate action until the broader societal consensus around climate change is built.

In the words of one participant, climate change is "a collective action problem; a political or social problem, more than a scientific and technical one at this point." Thus, acknowledging the scientific consensus is a step in the right direction but not the end goal of communication. Only by building broad social consensus can we encourage climate hope and action.

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