

# What does the average Norwegian think about climate-related issues?

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Using a new method, researchers discovered that so-called climate sceptics are more ambivalent about climate issues than previously assumed.

Researchers have worked across academic disciplines to better understand what the average Norwegian thinks about climate-related issues.

They discovered that the so-called climate sceptics have far more nuanced views than the often heated debate in the media between the different camps in the climate debate may indicate.

## Open-ended questions = interesting answers

According to Professor Kjersti Fløttum from the University of Bergen, they were excited about the public's response to the question: What do you think when you hear or read the term climate change?

“It was the very openness of the question that attracted us,” says the professor of French enthusiastically. “The fact that our survey gave people the opportunity to provide us with ideas and emotions in their own words.”

The survey was conducted in 2013 and the researchers received 2,115 responses to the question of what people think when they hear or read the term climate change. The survey gave no definitive answers or options to tick off a box in a questionnaire. Instead, every person had to formulate what she or he thinks and feels about climate change. The responses to the survey have provided the researchers with completely new insight.

“The manner in which we ask the question makes it easier to bring out nuances. For example, we see that more of those who otherwise say that they have doubts about whether climate change is man-made have the proviso that some of the changes are due to human influence when they are given the opportunity to answer in their own words. Climate sceptics are more ambivalent than what previous surveys have demonstrated,” says researcher Eivind Tvinnereim from Uni Research Rokkan Centre.

## What the researchers' results showed

The results showed that people's associations with climate change can be divided into four topics: Weather/ice, future/consequences, money/consumption, and causal effects.

By combining the results with other variables, connections were found such as those who expressed more concern were also found among those who placed most emphasis on future consequences, while those who were less concerned typically placed more emphasis on causal effects.

In addition, there was a tendency among older respondents to associate climate with weather and melting ice. Younger respondents on the other hand placed emphasis on the future and personal or social issues.

### **Combining quantity and quality**

The process used by the researchers combined the quantitative Structure Topic Modelling method from the social sciences with the more qualitative approach generally found in humanistic disciplines.

“What is particularly exciting about this collaboration is how we have combined the quantitative and qualitative aspects and thereby obtained new and research-based knowledge,” says Fløttum who heads the Linguistic Representations of Climate Change Discourse and Their Individual and Collective Interpretations (LINGCLIM) project, which examines how language and rhetoric influence the climate debate.

The respondents to the survey provided their answers via the internet, something which made it financially and practically possible to reach the broadest possible selection of Norway's population.

### **Praise for research partner**

“The method that was used as a basis for the study is something Tvinnereim is an expert on. At the same time, there was a need for more semantic and qualitative analyses. This is where the linguistics and knowledge from LINGCLIM was essential,” Fløttum explains.

She believes that the dynamic between the different academic communities that were involved in the survey was decisive for the remarkable findings that are now published.

### **Long-standing commitment**

Fløttum has long been interested in how language and rhetoric influence what we think about climate change.

“The most important thing I have learned is that the diversity of opinions and attitudes that are found are precisely that – diverse! There is so much diversity in this. This is based on people’s interests and values and their value systems. That has been the most surprising aspect of these research findings. Obviously I knew from the start that there are differences in the climate debate, however now I know that these are more nuanced than those believing and those not believing in human-made climate change and we can document this scientifically,” she says.

“But the debate has changed since. What are people talking about now? There is less talk about causes, because there is a majority who support the UN's Intergovernmental Panel on Climate Change (IPCC) and who believe that human activity plays a major role in the cause of the temperature increases. Now the discussion is more about what we can do. It is about finding solutions and how to achieve the reforms that are being discussed. Also, new arguments have entered the debate. I believe there has been a major shift in the past four-five years.”

### **A more democratic debate**

With regard to the actual use and choice of language, she is uncertain about whether the shift is as definitive as the change in the overall debate. However, Fløttum sees a promising trend as discussions becoming more democratic and inclusive, with an increasing number of diverse voices being heard.

“Some words that have not been used before and which are being used more often, such as ‘reform’ and

‘green’ and ‘the green shift’, are clearly more common now than they were only five years ago,” she says.

“What is interesting in terms of language is that a word such as reform and an expression such as the green shift give rise to a debate. What does this actually mean? These words and terms serve to contain a multitude of opinions and this is something linguists love to do research on. If nothing else, to determine how the words and terms can be assigned a different meaning dependant of the speaker.”

 [Kjersti Fløttum from the University of Bergen and Endre Tvinnereim from Uni Research Rokkan Centre are challenging the commonly held view about the attitudes to climate change among so-called climate sceptics. \(Photo: Ingvild Festervold Melien\)](#) [6]

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[Endre Tvinnereim and Kjersti Fløttum: Explaining topic prevalence in answers to open-ended survey questions about climate change. Nature. June 2015. doi:10.1038/nclimate2663](#) [16]

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