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CLUSTER OF EXCELLENCE  
CLIMATE, CLIMATIC CHANGE,  
AND SOCIETY (CLICCS)

# POLITICAL RISKS ENDANGER GERMAN CLIMATE TRANSFORMATION

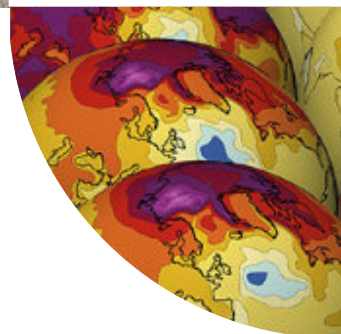
Why the transition could lose momentum

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# CLICCS QUARTERLY

NEWS FROM CLIMATE RESEARCH







## POLITICAL RISKS ENDANGER GERMANY'S CLIMATE TRANSFORMATION

To limit global warming, Germany aims to become climate-neutral by 2045. Though technologically and economically feasible, from a political and social perspective the transformation is at risk of losing momentum – as Prof. Stefan Aykut shows in a new study. He and his team examine key factors for a low carbon shift: social drivers that can either hinder or support the climate transformation. In the first edition of a new series, the team took a closer look at the role of German, European and global climate policy, as well as of climate protests and climate lawsuits.

**Last year, Germany significantly reduced its greenhouse-gas emissions, but your latest analysis of the German climate transformation yielded some sobering results.**

**Stefan Aykut:** Last year, for the first time, it looked like we were on the right track to achieving our climate targets. Germany's greenhouse-gas emissions were ten percent lower than in 2022! On the one hand, this is thanks to the expansion of renewable energies. At the same time, less energy was generated from fossil fuels and there was less energy demand from the business sector and consumers alike. However, some of these trends are the result of crisis-based effects; for many of the reductions achieved to date, there's no guarantee they can be maintained in the future. With current measures and regulations, becoming climate-neutral by 2045 doesn't seem plausible.

**What exactly does that mean?**

**Aykut:** Our study shows that the political measures adopted to date won't suffice to achieve the climate transformation in the long run. Political risks are growing: implementation conflicts are becoming more frequent, and there is growing public support for right-wing populism and

extreme right parties, which categorically reject climate protection measures. Just now, the results of the European elections confirm this trend. Moreover, German and European debt policies and fiscal decisions limit flexibility when it comes to making climate-friendly investments. But focusing on a balanced budget is problematic in times when, in fact, massive investments are needed in order to drive the required transformation.

**That could worsen tensions and conflicts in the political world and society ...**

**Aykut:** We can see this, for instance, in the resistance to the heating law last year or the farmers' protests against the reduction of subsidies for agricultural diesel. Ill-crafted or badly communicated climate measures can trigger implementation conflicts, which in turn lead to polarization. At the same time, social movements and civil society organizations are confronted with shrinking spaces for engagement. We see climate protests being criminalized, financing possibilities for NGOs restricted and even freedom of the press curtailed. This creates new obstacles to securing the urgently needed broad societal support for the climate transformation.

**What does social support for climate protection look like at the moment, and what about the climate movement?**

**Aykut:** The climate movement has become more diversified and can draw on extensive societal solidarity networks. The majority of Germans continue to fundamentally support climate protection. But the climate is no longer top on the list of concerns, and conflicts concerning the implementation of very specific climate policy measures are bound to multiply. As such, the passive support for climate protection shown in surveys is often insufficient to achieve political decisions in support of climate protection.

**Where do you see successes for climate protection?**

**Aykut:** In the courts, we can see a trend toward progressive jurisprudence when it comes to climate law. For example, the European Court of Human Rights ruled in favor of a group of elderly Swiss citizens who claimed that insufficient climate protection violated their human rights. But the courts alone can't achieve the climate transformation. Accordingly, hope lies above all in combining positive dynamics in politics, civil society and jurisprudence, which can be mutually reinforcing and spur on climate protection.



## LOCAL PERSPECTIVES LARGELY IGNORED

In Brazil's Amazon region, social, economic and political changes have put increasing pressure on the land and exacerbated inequalities. Accordingly, there is a growing academic interest in vulnerable communities' struggles for social and ecological justice. Yet the voices of Brazilian researchers, local and regional actors are seldom heard in the international academic discourse. Instead, the majority of the literature focuses on authors from the Global North, as an analysis of 36 academic articles, conducted by Carlos Tello and Prof. Martina Neuburger shows.

The authors determined that the citations used reflect established power relations. In addition, they confirmed that certain interest groups and communities – often, the dominant players in the Amazon region – are underrepresented. This reflects a hierarchy in knowledge production that reinforces dominant forms of knowledge. As a result, the perspectives and experiences of groups that are often affected by social, economic and ecological injustices are suppressed further: indigenous



peoples, local communities, farmers and rural producers, who have been historically and socially marginalized. These groups often lack political power, making them vulnerable to exploitation. "In order to avoid there being a monopoly on the truth, it's important to shift our focus to those whose perspectives have been ignored," says Carlos Tello. "Only then can we achieve a comprehensive grasp – for example, of the challenges and impacts of climate change in the region. Consequently, if our goal is to answer the question of which futures are possible and plausible, these perspectives have to be suitably included in the debates."

<https://www.erdkunde.uni-bonn.de/article/view/2970>



## ARE BANS ON PESTICIDES EFFECTIVE?

Due to health risks, the pesticide chlorpyrifos has been banned in the EU since 2020. Not only is the substance dangerous for humans; its use also negatively affects biodiversity, e.g. bees and other pollinators. But how effective are bans like that? Luisa Gensch looked into this question. In a study, she assessed the risks for human health and the environment in connection with pesticides in the EU. To do so, she investigated more than 50 pesticides, 14 of which were banned between 2018 and 2023.

Her calculations reflected e.g. the toxicity for various organisms and how long the respective substance produces an effect in the soil. She also looked into how the use of alternative pesticides could affect the risks. Her conclusion: imposing a ban on these 14 pesticides reduced the risks for human health and the environment by 94 percent. "Farmers might also use alternative substances in a different way, or in higher doses, which would limit this positive effect," says Gensch. "Nevertheless, the study shows that, in general, bans on individual pesticides produce substantial positive effects."

<https://doi.org/10.1016/j.envpol.2024.123836>

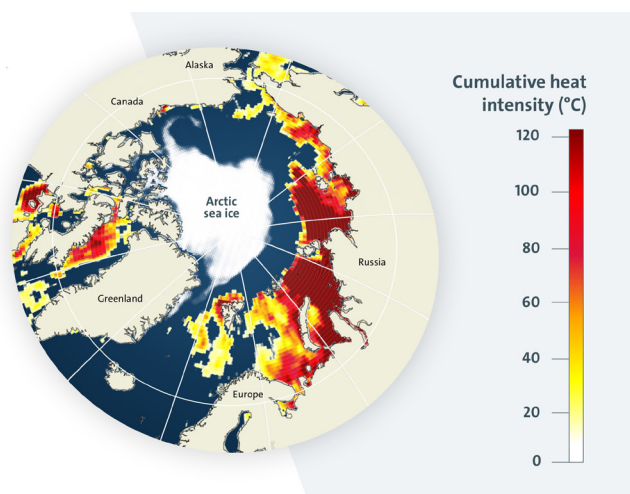
# ARCTIC OCEAN FREQUENTLY TOO WARM IN FUTURE

Marine heatwaves will become a regular occurrence in the Arctic in the near future and are a product of higher anthropogenic greenhouse-gas emissions – as shown in a study just released by Dr. Armineh Barkhordarian from Universität Hamburg's Cluster of Excellence for climate research CLICCS.

Since 2007, conditions in the Arctic have shifted, as confirmed by data recently published in the journal *Nature Communications Earth & Environment*. Between 2007 and 2021, the marginal zones of the Arctic Ocean experienced 11 marine heatwaves, producing an average temperature rise of 2.2 degrees Celsius above seasonal norm and lasting an average of 37 days. Since 2015, there have been Arctic marine heatwaves every year.

In the study, Barkhordarian also proves for the first time that heatwaves are produced when sea ice melts early and rapidly after the winter. The most powerful heatwave to date in the Arctic Ocean was in 2020; it continued for 103 days, with peak temperatures intensity that were four degrees Celsius over the long-term average. The probability of

such a heatwave occurring without the influence of anthropogenic greenhouse gases is less than one percent, as calculated by Barkhordarian's team. By doing so, they have narrowed down the number of plausible climate scenarios in the Arctic. According to the study, annual marine heatwaves will be the norm.



*The 2020 Arctic marine heatwave and Arctic sea ice concentration for September 2020*

<https://www.nature.com/articles/s43247-024-01215-y>

## NEWS IN BRIEF

### NEW FORMULA FOR “SERVICES” PROVIDED BY NATURE

Governments around the globe are looking for new approaches to assessing the benefits and value of ecosystems, and to make the consequences of destroying the environment more visible in political decision-making processes. An international team of researchers led by Prof. Moritz Drupp has proposed a new assessment approach in this regard. <https://uhh.de/cliccs-ecosystem-value-en>

### BREAKTHROUGH IN MODELLING

Shelf seas are a complex transitional zone between the two largest CO<sub>2</sub> sinks in the global carbon cycle: the land and ocean. For the first time, a team led by Dr. Moritz Mathis has now succeeded in seamlessly modelling and investigating these seas.

<https://uhh.de/cliccs-breakthrough-in-modeling-en>

### NEW UNESCO CHAIR IN HAMBURG

UNESCO and Universität Hamburg have now created a UNESCO Chair “Societal Climate Change Research and Resilience”, headed by Prof. Beate Ratter. Ratter is an expert on small islands and works with the local populace to develop sustainable climate change adaptation projects.

<https://uhh.de/cliccs-unesco-chair-en>

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