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

CLIMATE TARGETS

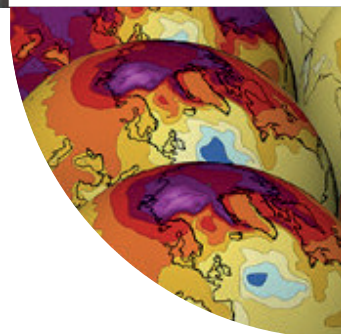
CAN COMPANIES PULL OFF THE TRANSITION?

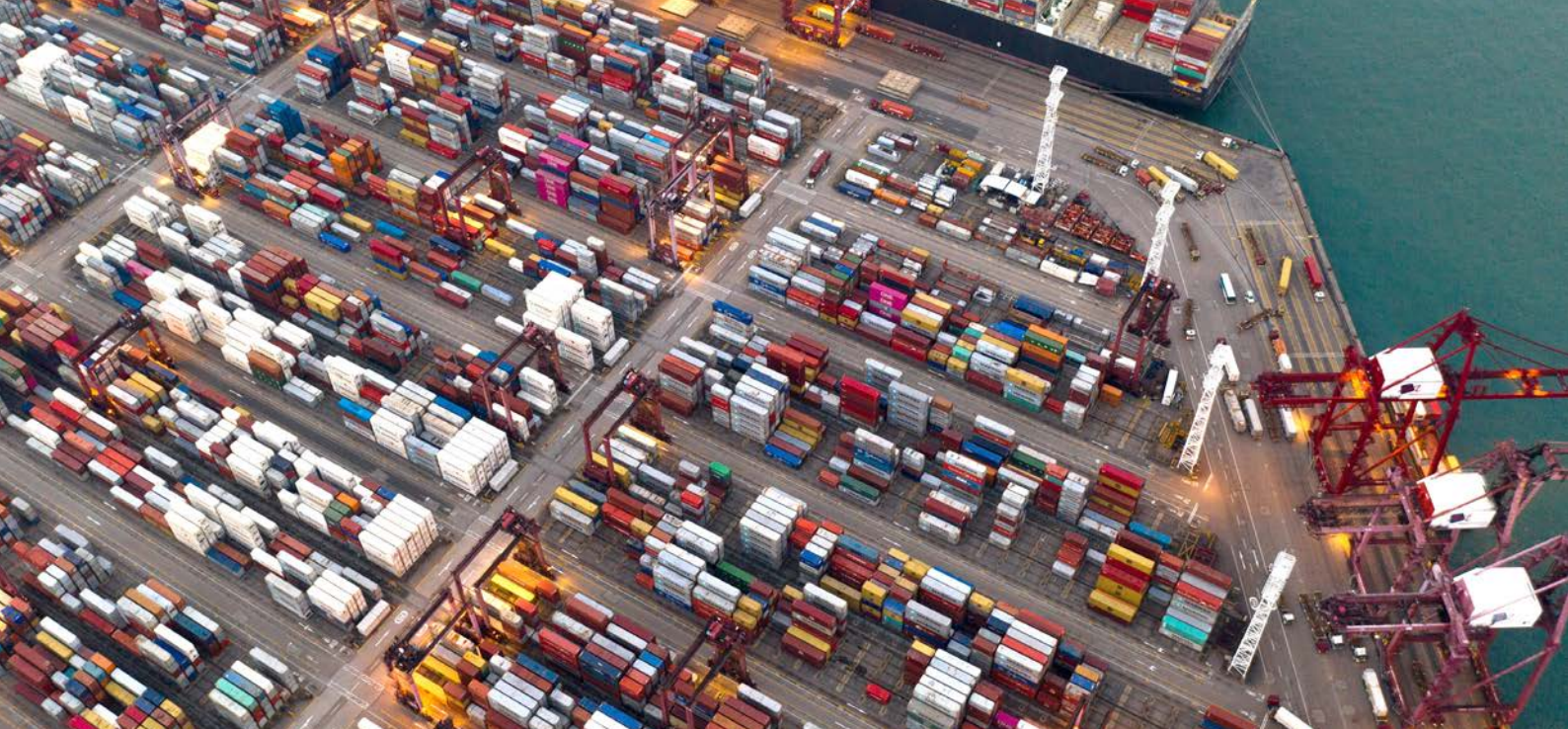
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CLICCS QUARTERLY

NEWS FROM CLIMATE RESEARCH





CLIMATE TARGETS: CAN COMPANIES PULL OFF THE TRANSITION?

Professor Anita Engels and her team are investigating the decarbonization of business. Twenty German and international companies accepted the researchers' invitation to a dialogue.

Ms. Engels, why are companies such an important part of climate protection?

Companies and especially major conglomerates are pivotal actors: the way that goods are produced, and that services are provided – energy-intensively, on the basis of oil, gas and coal, or using renewables – is ultimately a decision that each individual company has to make.

There's quite a lot going on. Even the aviation industry is looking into alternative drive systems.

True, but the landscape is varied. Everyone's talking about climate protection and sustainability, but most often only superficially. In other words, they look for ways to conserve electricity and raw materials, but aside from that, virtually nothing changes. We want to know to what extent companies and conglomerates are willing to fundamentally change directions, that is, to change their product range or stop offering certain services because they're simply too CO₂-intensive, as is being done in oil exploration and some segments of the logistics sector. These corporate decisions are long-lived and have the potential to lastingly

change the amount of greenhouse gases emitted.

But at the end of the day, companies' goal is still to make money?

True. But at the same time, money is one of the most effective motivators for sparking change. When investors start pulling their capital out of the fossil sector because they no longer consider it to have a future, it affects entire sectors. Perhaps not surprisingly, we found that companies especially take action when the money stops flowing or new political regulations are looming.

Do the companies put all their cards on the table?

Working closely together and trusting one another are essential. The people we talk to are often responsible for sustainability and climate goals at their company. Being in close contact with the scientific community is beneficial for them; we learn from one another. Plus, they're interested in the examples we provide from countries like Japan, the USA and Brazil. Needless to say, the details are always rendered anonymous.

What changes are you seeing?

In some sectors, you can see a shift in the fields of business, for example in consumer goods manufacturing. That's an encouraging sign. But it remains to be seen whether these fields will globally and permanently shift toward decarbonization. Our project will continue for several years, with regular meetings and workshops. By the way, one particularly interesting aspect is how these trends spread along the supply chains that connect companies.



Prof. Anita Engels is a social scientist with a focus on e.g. the climate protection strategies pursued by globally operating companies. She has been the Speaker of the Cluster of Excellence "Climate, Climatic Change and Society" (CLICCS) since June 2022.

INVOLVING CLIMATE INITIATIVES

Prof. Stefan Aykut has been studying UN Climate Change Conferences (COPs) since 2008. In 2021, the sociologist traveled to Glasgow with seven colleagues to examine the political and social dynamics on site. At a conference with 40,000 participants, a lot happens at the same time. The team documented what went on in different areas, using common methodological standards.

“Today, the COPs involve more than just negotiations between countries,” Aykut summarizes. “Activities by companies, cities and social movements are also important.” Glasgow was the first COP after the main dispositions of the Paris Agreement entered into force, and it was focused on implementing its goals. Alongside country submissions, we saw sectoral initiatives by private and subnational actors. Such initiatives can be important drivers of implementation, and climate conferences offer a variety of opportunities for networking and initiating concrete measures. Nevertheless, implementation still lags behind. The challenge is to formalize these initiatives



and make sure they live up to their promises.

In the negotiations, country delegates discussed how to shape a fair transition to a low-CO₂ society. The countries of the Global South face droughts, flooding and other extreme events, and require financial support to adapt, compensate for climate-related losses and adopt climate-friendly development pathways. At the COP 27 in Egypt this November, which will take place in a very difficult geopolitical context, these topics will once again head the agenda. <https://uhh.de/q2fmb> (PDF)

Edge of a salt marsh, dotted with common glasswort, in Westerhever, Germany



COASTAL PROTECTION — INSPIRED BY NATURE

Flooding, storms, and erosion: climate change is impacting coastal regions and endangering the people living in them. What are referred to as Nature-based Solutions can facilitate climate impact adaptation, effectively combining and balancing engineering, nature conservation, and human beings' need for natural landscapes.

Prof. Peter Fröhle and Philipp Jordan analyzed the potential of such solutions. To do so, they assessed seven ecosystems and their services for coastal protection, the environment, and societal benefits: for example, mangroves' aerial roots dampen waves before they can reach the shore, reducing the destructive forces of storms and tsunamis. Reef systems consisting of corals, crustaceans or oysters can also be effective breakwaters. On beachlines, dunes protect the hinterland from flooding. Salt marshes, which form natural transitional zones between the ocean and land, can buffer flooding. Using these ecosystems as Nature-based Solutions for certain regions can support coastal protection and nature conservation alike. Intact ecosystems, backed by targeted support, can effectively and sustainably complement existing coastal protection.

<https://link.springer.com/article/10.1007/s11852-021-00848-x>

HOW WILL GERMANS EAT IN 2050?

Cutting greenhouse-gas emissions by 65 percent – according to its climate protection laws, Germany has to do so by 2030. And agriculture is meant to contribute more than a third of the reduction. This could be feasible if Germans are willing to make real changes to their eating habits. But what will be in German shopping carts in the future? Dr. Livia Rasche took a closer look.

“For the first time, we gained an impression of how realistic stakeholder groups not involved in politics consider the planned measures to be,” says the environmental researcher. 25 key institutions from three groups were surveyed: farmers’ associations and other federations (private); government offices (public), and agricultural institutes (academic).

With the aid of a complex agricultural model, the stakeholders’ estimates were analyzed and converted into future CO₂ emissions. The outcome: all three groups believe the climate



goals can be met if Germans can change their diet.

Whereas private stakeholders are a bit more skeptical, their academic counterparts are more optimistic that Germans can change what they eat and reduce food waste. In concrete terms, they would need to eat 50 to 60 percent less meat and 20 percent more vegetables, while also reducing their total caloric intake.

<https://link.springer.com/article/10.1007/s11625-022-01212-0>

NEWS IN BRIEF

FOUR HEADS ARE BETTER THAN ONE

The CLICCS Synthesis Team is now complete: the four experts, including two new additions and hailing from very different fields, are now working intensively on the next *Hamburg Climate Futures Outlook*.

<https://uhh.de/cliccs-synthesis>

PUTTING URBAN TREES TO THE TEST

Urban trees don't have it easy: they have to contend with compacted soils and sealed surfaces – not to mention climate change. This September, a conference jointly hosted by Universität Hamburg and Hamburg's Presidential Department of the Environment, Climate, Energy and Agriculture Authority (BUKEA) brought together experts from the scientific community, administrators and practitioners to discuss the latest findings and trends. <https://uhh.de/cen-stadtbaeume> (PDF in German)

CLIMATE CHANGE IN TAJIKISTAN

In recognition of her outstanding dissertation, Dr. Isabell Haag was awarded the 2021 Wladimir Köppen Prize by the Cluster of Excellence for climate research CLICCS. In her thesis, she combines the few available sources of observational data with local knowledge in order to devise sensible adaptation measures. <https://uhh.de/cliccs-koeppe-haag>

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