

Climate change affects us all. It confronts humanity with problems that we can only overcome together – if at all. Year after year, representatives from hundreds of countries have, therefore, been struggling to adopt uniform directives and globally effective measures at international climate conferences. Their implementation poses major challenges for developing countries in particular. At the same time, other actors – like cities – are taking the initiative and making their own climate policy. Political scientist Prof. Harald Fuhr and his team investigate how administrations in nation-states deal with this climate policy pressure – both top-down and bottom-up.

US President Donald Trump had been in office for four months when he decreed a return to the age of coal. At the same time, he announced he would be reversing the Clean Power Plan of his predecessor Barack Obama, which was to be the US' contribution to achieving the goals of the Paris 2015 Climate Agreement. Trump's actions triggered a storm of indignation worldwide. Many Americans also rejected Trump's renunciation of international climate protection agreements, and some are even fighting back. California, for example, has long pursued its own climate policy and is willing to push back against Trump's - in court, if necessary. With Los Angeles and San Francisco, two major cities are active in the renowned C40 (Cities Climate Leadership Group), which aims to jointly promote climate protection independent of national government and adminis-

The city network **C40 Cities Climate Leadership Group** – established in 2005 – started as a group of 40 cities with more than 3 million inhabitants each, whose goal is to reduce their greenhouse gas emissions. By early 2017, the network had grown to 90 cities on six continents, comprising one twelfth of the world's population and 25% of global GDP.

http://www.c40.org/



trations. Others are following suit: After Trump's withdrawal from the climate agreement, over 300 US cities totaling 65 million citizens committed to the Paris agreements.

"Climate protection is no longer the task of individual countries but the result of international agreements, which, in turn, have to be implemented at the national level," says Harald Fuhr, Professor of International Politics at the University of Potsdam. "For some time, however, we have been able to observe new actors at the sub-national level." Regions – such as states like California – and especially cities are getting involved in finding specific solutions to climate issues. "This exerts pressure on national administrations from two sides – top-down and bottom-up."

### Top-down and bottom-up pressures are changing national administrations

In the DFG project "Carbon Governance Arrangements and the Nation-State: The Reconfiguration of Public Authority in Developing Countries", Fuhr, his team, and colleagues from the Technische Universität Darmstadt are investigating how administrations deal with this pressure. Do new national administrative structures emerge when global climate agreements are to be implemented at the national level? Will local administrations be strengthened if regions or cities create their own climate policy? And how do you bridge the two levels? "We are ultimately interested in how the coexistence of global, national, and local actors affects authority and administrative structures and what concrete political action results from them," says Fuhr.

The researchers are working on two climate policy initiatives: They are investigating the implementation of the global forest protection initiative Reducing





REDD+ (Reducing Emissions from Deforestation and Forest Degradation) is a program that supports developing countries in sustainably conserving their forests as carbon stocks. A key element of the program are performance-based payments for measurable and verifiable emission reduction based on forest protection measures. This is to give forests a greater financial importance when economic decisions are being made and to make forests a more financially attractive carbon stock.

🗷 http://www.un-redd.org,

Emissions from Deforestation and Forest Degradation REDD+, which offers developing countries financial incentives to avoid deforestation. This is a challenge for national administrations, as Fuhr explains: "It must be ensured that the forests in such regions are preserved, yet the process has to be monitored and coordinated at the national level." The researchers are, therefore, interested in how national administrations are able to implement the global guidelines – and whether they are changing, for example, by establishing new structures.

Fuhr and his team are also looking at large cities that engage in the C40 city network. They are pioneers and their experiments – if successful – will set a precedent. There are three main reasons for cities to become activists in the fight against climate change, all of them related to population development, explains Dr. Thomas Hickmann, who supervises the project together with Prof. Harald Fuhr and Prof. Markus Lederer from the Technische Universität Darmstadt. First, cities are making their own climate policy simply because they can. "The importance of cities is increasing, primarily because they are growing." In 2008, the world's urban population exceeded 50% for the first time, and in 2050 it will be two thirds. Cairo already has as many inhabitants as Scandinavia. "Cit-



ies are developing into global players," says the political scientist. "As a consequence, what they do - also as political actors – is becoming increasingly important." Second, the increasing number of inhabitants also increases environmental impact, such as smog, and waste, and ineffective infrastructures. Because residents and political stakeholders of cities are feeling the problems in their own backyards, the pressure to solve them is growing. And third, cities - almost traditionally – are not only the cause of environmental problems but also as the place where solutions for them are created and tested. "Both technological and political innovations are being developed in cities in particular." The researchers are interested in the influence of this innovative potential on administrative structures. Will the cities be able to forge their own path on climate protection, even if there is headwind from the national level? Will such local initiatives also strengthen local administrations? And can they actually go beyond their urban boundaries and set a precedent?

# The path of developing countries is crucial for global climate policy

The researchers are looking at these two developments in four countries: Brazil, India, Indonesia, and South Africa – all of which are emerging countries.

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The municipal administration of São Paulo sets a good example of "Urban Greening" with its rooftop garden.

For good reason: Currently, most of the world's population is living in so-called developing and emerging countries. Their paths will have a lasting impact on the world community. This is also true of climate change, as Hickmann explains. "Some calculations show that developing countries will soon produce more pollution than industrialized ones. It would be fatal if emerging countries like these four we are investigating develop as industrialized ones have done." Most developing countries and emerging economies, however, face other problems, such as food shortages, political instability, or poor economic development. Whether reversing climate change is possible at all will depend on whether global climate policy generally initiated by industrialized countries can also be implemented in developing ones. This is a good reason for Fuhr and his colleagues to dedicate special attention to them. "We have been studying policies 'crossing' borders, especially from north to south, from industrialized countries to developing ones."

Despite all four are emerging countries, each was chosen because its differences from the others: While some are increasingly involved in the REDD + program because of their large forested areas, others have large cities that are active in international networks. The "top-down and bottom-up pressure" on national administrations, which the researchers are interested in, is, therefore, different in each case. "It suggests that local administrations are strengthened in states with active cities and that those participating in the international forest protection program develop new central administrative bodies," says Hickmann. In addition, two are federal states, and two are centralized states with strong decentralized elements. "This way we hope to determine in which political constellations stakeholder interaction works well and in which it doesn't."

Months of research are necessary to track the processes, structures, and the ongoing political actions. "You cannot just march into a ministry and ask, 'What are you doing here?'," says Fuhr. During an exploratory research trip, the researchers establish contacts and seek out contact partners as well as access to the appropriate documents. "We do not always start from scratch. We have longstanding partners and research contacts in most of the countries. We also receive support from the German Association for International Cooperation (GIZ) and the local German embassies."

During a second stay of three to four months, the researchers conduct dozens of interviews and look at administrative processes and structures by talking to employees of ministries, regional authorities, and city administrations. "It is tedious, but once you've managed to make it into their office, most interview partners are interested in an exchange," Hickmann says.

## South Africa has strong cities with innovative approaches

"Fieldwork" in one of the four countries – South Africa – is now complete. PhD student Fee Stehle spent



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10 months preparing for the research trip - studying literature and evaluating government documents and laws, media coverage, and online information . She also established contacts with relevant stakeholders and experts, had initial talks with scholars and staff at international and non-governmental organizations as well as German institutions abroad. "This ultimately led to a kind of map of important players in South Africa's administration," she says. "In the end, I was able to talk to many South African government representatives." With quite surprising results. While the country is hardly involved in the REDD + program, three cities - Cape Town, Johannesburg, and Durban – are involved in transnational city networks. Not least because of their impulses, a number of successful programs have been initiatived. Durban,

for example, has taken measures to preserve important coastal areas. "Johannesburg is implementing the sustainable city program 'Corridors of Freedom'. Expanding the public transport system and a higher residential density will reduce emissions," explains Stehle. "In addition, the city has created the stock exchange-listed equity fund Green Bond to finance urban climate measures." In Cape Town, numerous public buildings and even traffic lights were switched to solar power. The city also funds the installation of solar-powered water boilers.

These are promising initiatives, Stehle says. "Urban players in South Africa are sometimes more advanced than those at the national level when it comes to renewable energies and implementing flagship projects." This is particularly evident in cities that depend on the national administration's cooperation. Because the South African energy sector is centrally governed, cities have little leeway in changing their energy mix and switching to renewable energies. "In the context of such massive national conditions, urban measures have only a limited impact," she says. This will not change without a mental paradigm shift in the national administration.

### Changes are only possible together

The researchers' conclusion has, thus, become something of an appeal: This will only work if everyone works together. Cities can establish themselves as pioneers of successful climate policy. Without a functioning cooperation with national administrations, though, they remain beacons with no signaling effect, but these are what matters. After all, the innovative approaches of individual large cities have to be implemented in small- and medium-sized municipalities in order to achieve the climate goals. "This is only possible with the help of the national administrations," says Hickmann. "That's why we find the 'cities, cities, cities!' hype a bit exaggerated. Cities are integrated into a political and administrative system upon which they depend and within which they operate, but they can and will change it in the long term."

Harald Fuhr sees administrations worldwide in a process of change, and climate policy is a striking example of it. "Our project comes at the right time. We are witnessing new actors are taking their first steps, negotiating their interests with the established powers and resolving conflicts." In many countries, national administrations are starting to notice regional and urban actors – and to take them seriously. "The coming years will show how they adapt to it. And we will be there."

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