FROM KNOWLEDGE TO ACTION

Wrangling at length

A brief overview of the (less than successful) »pas de deux« between science and politics in the struggle to mitigate climate change

By Birgit Blättel-Mink

The greenhouse effect was discovered as far back as the early 19th century. But it took many further decades for humanity to realise how it affects the world's climate. A retrospective view of the uphill struggle to use insights gleaned by research to set politics on the right track.

The greenhouse effect was discovered in 1824. But only towards the end of the 1950s did improved measuring methods and a broader data basis make it possible to quantify the warming effect of the ever-increasing concentrations of carbon dioxide (CO_2) in the Earth's atmosphere. In 1972, the publication of »Limits of Growth« by the Club of Rome caught the attention of a global audience. A consensus started to build that the increasing atmospheric concentration of CO_2 would lead to the Earth warming. In the 1990s, with more advanced computer models and a deeper understanding of cold periods, the following consensus emerged: greenhouse gases play a major role in climate change and emissions caused by humans are chiefly responsible for ongoing global warming.
(See: https://de.wikipedia.org/wiki/Forschungsgeschichte_des_Klimawandels)

IPCC consolidates findings from around the globe

As political efforts have led to climate research and Earth system research being funded and supported, we have politics as well as science to thank for revealing and tracing the nexus between climate change and global warming with its attendant disastrous consequences for life on Earth. Delegates at the first United Nations World Climate Conference called the World Climate Research Programme into being in 1979. In 1988, the United Nations Environment Programme (UNEP) and the World Meteorological Organisation (WMO) went on to set up the Intergovernmental Panel on Climate Change (IPCC). The IPCC evaluates international research findings without conducting research of its own. Its principal task is to collate and disseminate information about climate change, its risks and consequences, and opportunities for avoiding or mitigating hazardous developments and adapting to change.

The year 1987 saw both the determination of the »one-degree-goal« and the publication of »Our Common Future« (by the World Commission on Environment and Development (WCED) and its Chair, Gro Harlem Brundtland). The »Brundtland Report« contained a definition of »sustainable development« that influenced much future thinking: »Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.« (WCED 1987).

In 1990, the IPCC published its First Assessment Report (FAR). It established that a natural greenhouse effect existed, that human activity was increasing the atmospheric concentration of several greenhouse gases, and that this would lead to a rise in the global temperature. The IPPC's Second Assessment Report (SAR) in 1996 was already able to state that human activity was

»How dare you!«: The Swedish teenager Greta Thunberg gives a highly emotional speech at the World Climate Summit in Madrid in 2019. She speaks in the name of a generation of young people who form a global protest movement.

IN A NUTSHELL

- In the 1970s, consensus grew that increasing concentrations of CO_2 lead to global warming.
- At the first United Nations Conference on the World Climate in 1979, the World Climate Research Programme was established. In 1988, the Intergovernmental Panel on Climate Change (IPCC) was called into being to make information about climate change available and formulate recommendations.
- The UN Conference on Environment and Development in Rio de Janeiro in 1992 is widely seen as a major milestone, especially because of the UN Framework Convention on Climate Change which was agreed here.
- Since 1995, the United Nations Climate Change Conferences (also referred to as World Climate Conferences or Climate Summits) have been taking place as Conferences of the Parties to the UN Framework Convention on Climate Change (COP). These conferences sought to implement climate protection policy instruments that would be binding under international law and could replace the Kyoto Protocol from 1997. In 2015, a decision to limit the average global temperature increase to below 2 °C was adopted in Paris. Sanctions for non-compliance were not designed into the agreement.
- The most vociferous and, up to now, most pointed criticism of climate inaction has come from young people around the world since 2019. The protest movement »Fridays for Future« has vehemently demanded that the looming climate crisis finally be taken seriously and tackled decisively.

having a »discernible influence« on the global climate in the 20th century. The 2 °C objective was then formulated as the boundary between a barely tolerable rise in temperature and an unacceptable level of global warming. The 2 °C objective was defined on the basis of hypotheses that exceeding more than 2 °C of global warming would cause tipping points to be reached that could trigger irreversible changes with almost unimaginable negative consequences.

From a »discernible influence« to the »Anthropocene«

In 2001, the IPCC's Third Assessment Report was published, which found »stronger evidence« that humans are changing the Earth's climate. In 2008, the Geological Society of London stated that the »Anthropocene« had begun: There were now sufficient arguments for recognising a new chronostratigraphic epoch triggered by human influence on the Earth. Anthropogenic activity is now seen as the primary factor driving developments on the planet. In the IPCC's Fourth Assessment Report (AR4 from 2007), anthropogenic greenhouse gas emissions were described as responsible for »most of the observed increase in global average temperatures since the mid-20th century« – with a probability level described as »very likely« (i.e. > 90 per cent). In the IPPC's Fifth Assessment Report (AR5 from 2013/2014, the last report released to date), the margin of uncertainty regarding the significance of anthropogenic influence on the climate was slashed yet further, with the probability that anthropogenic influences are responsible for the rise in global warming observed since 1950 now being described as »extremely likely.«

Emissions rights: Emissions trading as an alternative to reductions

The United Nations Framework Convention on Climate Change was among several agreements reached at the Earth Summit (the United Nations Conference on Environment and Development) in Rio de Janeiro in 1992. It established the following goal: »[...] stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.« (UNFCCC, Article 2)

It was agreed that the path towards reaching this goal would be defined at successive annual UN climate change conferences. The Kyoto Protocol introduced market-based mechanisms for trading emissions allowances and certified emissions reductions in pursuit of this goal in 1997. Upper limits were defined for certain categories of emissions in defined regions and trading mechanisms were developed. Many industrialised countries in the global North purchased certificates from countries in the global South that had lower greenhouse gas emissions because of their economic situation.

Further UN conferences since then have aimed to develop strategies for tackling climate protection and environmental protection goals that have not been reached so far and to find solutions to new global challenges as they arise (the ozone hole, rapid biodiversity loss, the impact of climate change).

The agreements reached at the »Rio+20« UN conference in Rio de Janeiro in 2012 once more emphasised the importance of uniting to combat poverty, recognising and reaffirming the principles of the Rio declaration and existing environmental and sustainability strategies, and developing a green economy based on sustainable development and combating poverty. The idea of »green growth« has repeatedly attracted criticism, for example by the economist Alberto Acosta, who has described the model of a green economy as a green facade (with the green colour coming from US dollar notes). In light of the unbroken march of climate change and a billion people going hungry, he considered that a paradigm shift was urgently required and that Rio had not introduced one by any stretch. (See: https://www.nachhaltigkeit.info/artikel/weltgipfel_rio_20_rio_de_janeiro_2012_1419.html; Accessed: 14 June 2020)

At the 2015 UN conference in New York, the »Sustainable Development Goals« (SDGs) of the 2030 Agenda for Sustainable Development were adopted. These have since been regarded as the global goals agreed on by the international community to mitigate climate change and combat poverty and inequality. »While the SDGs are not legally binding,

Since 1995, the UN Climate Change Conference has taken place in locations that change every year. In 2015, a global post-Kyoto climate regime was agreed at COP 21 in Paris – a step forward that many people had no longer reckoned with after the collapse of the Copenhagen Summit in 2009.

governments are expected to take ownership and establish national frameworks for the achievement of the 17 goals. Countries have the primary responsibility for follow-up and review of the progress made in implementing the Goals, which will require quality, accessible and timely data collection. Regional follow-up and review will be based on national-level analyses and contribute to followup and review at the global level.« (See: http://www.un.org/sustainabledevelopment/development-agenda; Accessed: 14 June 2020). Goal no. 13 includes immediate measures to mitigate climate change and its impact.

Climate targets not backed by sanctions

In the same year, the UN Climate Change Conference (COP 21) took place in Paris. The 197 participating states agreed on a new climate treaty that came into force in 2016. The Paris Agreement formulated the goal of substantially reducing global greenhouse gas emissions and limiting the global temperature increase to 2 °C (with preindustrial temperatures as the baseline) while also pursuing means to limit the increase even further, to 1.5 °C. Each state then set »intended nationally determined contributions (INDC)« of its own to define the extent of reductions in greenhouse gas emissions to be

Since 2019, the world's young people have made their voices loudly heard in vehement protests. The »Fridays for Future« movement has been forceful and persistent in its demands for policy and politics to finally take scientific findings seriously and set the necessary steps in train.

Literature

Hackfort, Sarah. 2014. Für eine Feministische Politische Ökologie des Klimawandels – Überlegungen zu einer erweiterten Analyseperspektive auf Geschlecht und Anpassung. In Prokla, 44/174: 93–109

achieved by 2025/2030 (in the industrial countries) or the extent to which rises in emissions should be limited (in the emerging economies / the global South). Failing to meet these targets, for example due to underinvestment in renewable energy infrastructure, is not sanctioned by the international community. Climate simulation models currently indicate that the world is on course for global average temperature increases between 2.5 °C and 5.5 °C in the 21st century.

The failure of the United Nations to galvanise its members into mitigating climate change has been criticised from many angles. Representatives of eco-feminism, for instance, have argued that gender-specific climate impacts have been largely ignored by policymakers and demanded that more women should participate in international negotiations (e. g. Hackfort, 2014). The loudest and clearest criticism so far came from the world's young people in 2019. Their new protest movement »Fridays for Future« rapidly became ubiquitously established. Konrad Götz from the Institute for Social-Ecological Research (ISOE) in Frankfurt analysed the new situation in a contribution for the German newspaper *Die Tageszeitung* (»taz«) published on 19 January 2020. In this article, he writes that the real success of this movement has been the surprisingly new discourse about the issue of climate protection that it has managed to get under way, and that a rethinking is in train now. He observes that this problem that has been known ever since the Club of Rome report came out in 1972, so for nearly 50 years now, has taken on an astonishing new urgency. The direct connection made between the issue and humanity, between the issue and the young generation themselves is what is new, and the source of their forceful dynamism. And he quotes Greta Thunberg in her »How dare you« speech: »People are suffering. People are dying. Entire ecosystems are collapsing. We are in the beginning of a mass extinction. And all you can talk about is money and fairytales of eternal economic growth. How dare you!« Fridays for Future points to climate science and demands that its findings should finally be taken seriously and translated into action by politics. The future will show what will to act this mobilises in political circles – where the approach taken by the young people has already impressed quite a few players. But the time they have left to act is running out. ●

In the dock: GERMAN CLIMATE POLICY

What if the victims of climate change were to hold policymakers responsible for it? If 31 states in the global South were to sue the Federal Republic of Germany? This scenario, projected into the year 2034, is the basis for a new TV drama from the German public broadcaster ARD. *Ökozid* (»Ecocide«) was shown for the first time in 2020 during a theme week on the lives we lead. The comprehensively researched courtroom drama shows the dilemma faced by industrialised states: politicians who depend on a flourishing economy for re-election, or at least believe that this is the case, are liable to take the wrong decisions or to continually postpone the task of getting back on track towards a better future. By 2034, the not-so-distant future depicted in the drama, the consequences of this action or inaction have become even more palpable than they already are today, especially in the world's poorer countries. These countries unite to create a precedent by bringing German politics before the International Court of Justice (ICJ). As the case unfolds in court, people threatened in their very existence by climate change and decision-makers from politics and business who bear responsibility for it give evidence, among them even »former« German Chancellor Angela Merkel, and the court ultimately must decide whether it will uphold the claim of the 31 states and create a precedent that will surely prompt an avalanche of trials and claims for damages. The TV production stars famous actors including Edgar Selge as the presiding judge (left-hand image, centre), Ulrich Tukur as a lawyer for the defence and Nina Kunzendorf (right-hand image, in the foreground on the right) representing the complainants. It was originally conceived of as a documentary reprising German climate change politics in recent decades. But events then started to move so quickly that the project could no longer keep pace with reality – until its makers finally got ahead by moving the plot into the future and looking back at today's debate from that vantage point. A daring approach – but one does sometimes see more clearly from a distance. Anke Sauter