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SOCIAL JUSTICE IN CLIMATE PROTECTION AND THE ENERGY TRANSITION

RENEWABLES ENSURE A FAIR AND DEMOCRATIC ENERGY SUPPLY

The causes and consequences of climate change have long been known. But the associated questions of justice have only recently been the subject of intensive discussion. The concept of "climate justice" views climate change not only as an environmental problem, but also as a question of social justice. Certain population groups - such as socially disadvantaged and indigenous peoples - are particularly affected by the consequences, while they have hardly contributed at all to climate change. The rich industrialised countries are mainly responsible for the increasing concentration of climate-damaging gases in the Earth's atmosphere. Therefore, it is primarily their task to reduce emissions and support poorer countries in coping with the consequences of climate change. And finally, the opportunities associated with the transformation to a low-carbon economy must be distributed fairly. Local authorities can play a central role in this.



Photo: Markus Spiske/www.unsplash.com

1 THE CONCEPT OF CLIMATE JUSTICE

The concept of climate justice is based on the assumption that all people - regardless of national and ethnic affiliation, gender, age and religion - have the same right to use the Earth's atmosphere and bear equal responsibility for protecting it. In addition, everyone has the right to an intact atmosphere.

In reality, there is an immense imbalance. Some countries and population groups have been using the atmosphere much more than others since the beginning of industrialization. Furthermore, some countries are making greater efforts than others to reduce greenhouse gas emissions. Finally, some countries and populations suffer more from the consequences of climate change than others. Climate justice now means helping those excessively affected by the consequences of climate change but who themselves contribute little to climate change - both geographically (e.g. indigenous peoples, island and coastal states) and socio-economically (low-income groups, minorities, women) and in terms of time (coming generations). The United Nations Framework Convention on Climate Change states in Article 3, paragraph 1: " The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."

1 UNEQUAL IMPACTS

Geographically, the island states in the Pacific and Indian Oceans are feeling the consequences of climate change most acutely - and already today. Some of these states are, at their highest points, only a few meters above sea level, so their very existence is threatened by global warming. For them, every inch counts. The annual [World Risk Index](#) of the Alliance for Development Assistance measures the vulnerability of countries to natural events. It was developed in cooperation with the United Nations University (UNU-EHS) and consists of three components: vulnerability, coping and adaptation. Since 2018, the index has been calculated by the Institute for International Law of Peace and Humanitarian Law (IFHV) at the Ruhr University Bochum. A total of 27 indicators are included in the calculation. Among the 20 most vulnerable countries are nine small island states. They try to articulate their interests through the Alliance of Small Island States (AOSIS). The riskiest countries all have a coastal or island location and a low level of development.¹

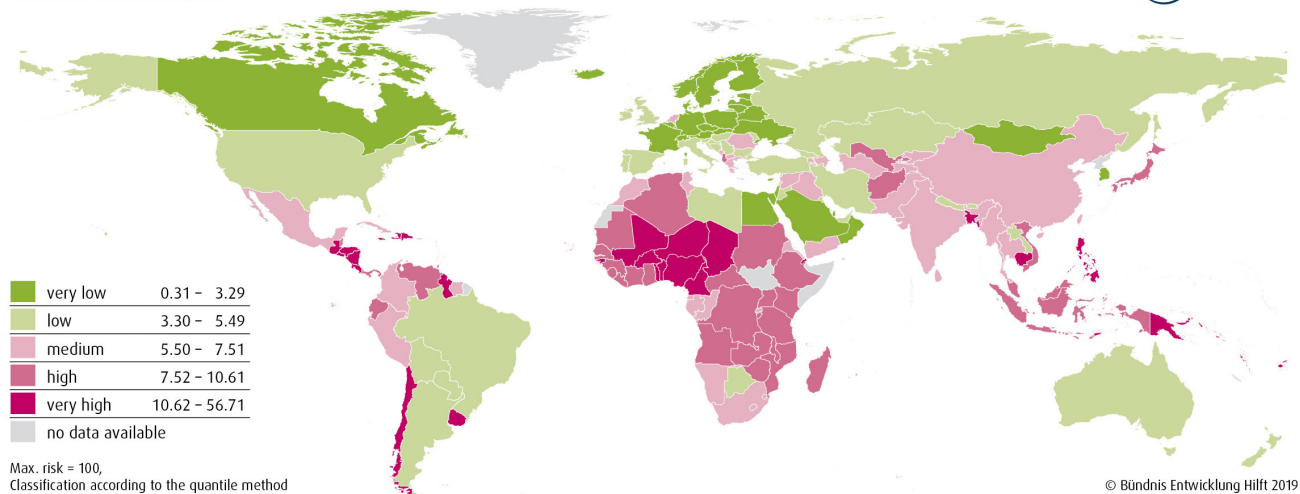
Socio-economically, the poorer countries of the Global South are most affected by climate change - such as through floods, heat waves, droughts, storms and ocean warming. They also have little capability and resources to adapt. Farmers in developing countries, for example, have no insurance if they lose their crops due to drought. The discrepancy between being affected and contributing to climate change exists not only between rich and poor countries, but also within nations. Some sections of the population and ethnic minorities are particularly exposed to the consequences of climate change but contribute relatively little to it. Poorer sections of the population often live in lower-lying areas and in areas at risk of flooding. In addition, they cannot easily rebuild their houses and apartments or change their place of residence after natural disasters. They are therefore victims of a double injustice. First, they were excluded from participating in an economic system based on the burning of fossil fuels. And today, they lack the resources generated by this model of prosperity to cope with the consequences of this climate-damaging economic system. These population groups and countries should be supported in coping

with the unavoidable consequences of climate change, in adapting to the long-term consequences and in being compensated for losses.

In terms of time, future generations, who themselves have contributed nothing to climate change, will feel the consequences much more strongly than today's. Climate justice is therefore also generational justice.



WorldRiskIndex
WorldRiskIndex as the result of exposure and vulnerability



Source: Bündnis Entwicklung Hilft (2019)

2 POLLUTER-PAYS PRINCIPLE

In addition to helping the most vulnerable, climate justice also means that the main polluters - i.e. the energy-intensive industrialized countries - recognize their responsibility and find solutions to reduce their emissions. But the global climate justice movement goes even further: the solutions should be developed together with the countries of the Global South and should lead out of both the climate crisis and poverty. Climate protection and sustainable development should go hand in hand.

The United Nations Framework Convention on Climate Change speaks of "common but differentiated responsibilities". The "responsibility for causing the problem" and the "capacity" of states have to be taken into account. Justice does not therefore mean equality: not all countries must reduce their emissions equally. The industrialized countries with their economic strength and high emissions must do more. Greenhouse gases are long-lived and have effects over years and decades; the United States and Europe are primarily responsible for historical emissions. For their economic rise, the causers of climate change used the atmosphere as a free "dump" for the emissions produced by the burning of coal, oil and natural gas. "The North has accumulated ecological debts to the South," says sociologist Wolfgang Sachs.²

Saúl vs. RWE

The issue of climate justice made headlines when Peruvian farmer and mountain guide Saúl Luciano Lliuya sued German energy company RWE. A melting glacier threatens to flood his home. In a simulation, the University of Texas at Austin warned that a flood could inundate the city ten meters deep because of climate change. Since RWE alone is responsible for about 0.5 percent of the historic CO₂ emissions since the beginning of industrialization, Saúl Luciano Lliuya is demanding compensation from RWE for precisely this 0.5 percent of the damage to his property caused by climate change. The Regional Court in Essen initially dismissed the claim because no linear causality could be proven. The Higher Regional Court in Hamm, however, allowed the appeal and allowed evidence to be taken.

The lawsuit "only" concerns 23,700 euros. Nevertheless, the case is politically explosive. It could set a precedent. The costs of the trial were borne by the environmental NGO Germanwatch. It was primarily concerned with the symbolic significance of the case. By making the complex issue of climate change tangible in a concrete case, it wanted to draw attention to the issue of climate justice in international climate negotiations.

A look at current greenhouse gas emissions shows that the emerging countries now also contribute a significant share. The seven largest emerging economies (including China, India, Russia and Brazil) together now have a higher gross domestic product and emissions than the G7 countries.

A look at total emissions per country would of course be too narrow. In addition to the afore-mentioned historical emissions, it is also fair to look at today's emissions per capita. According to the World Bank, the inhabitants of the world's poorest countries emit on average less than half a ton of CO₂ per capita each year. The front-runner is Qatar with almost 44 tons. Among the classic industrialized countries, the US, Canada and Australia lead with more than 15 tons. Germany's CO₂ footprint of 8.9 tons is also in the top quarter, although slightly below the OECD average (9.6 tons). The global average is 5 tons. However, these statistics only take into account emissions occurring on national territory. In a globalized world with worldwide trade, these figures do not speak the full truth. The emissions that occur during the production of energy-intensive and carbon-intensive goods (electronic equipment, cement, etc.) are attributed solely to the exporter and not to the importing countries. A classic example is China as the "workbench of the world". The traditional industrialized countries have moved many of their energy-intensive production steps, and thus a large proportion of their greenhouse gas emissions, there. In this context, one speaks of carbon leakage.

The question of fair burden-sharing is one of the main lines of conflict between industrialized countries, emerging economies and developing countries. A central bone of contention between the nations is what point in time should be the reference point for future emission reductions. It determines how much emission budget the nations still have left. The year 1990 is usually chosen because, since then, anthropogenic climate change has been recognized as a problem by politicians as a result of new scientific findings; above all, the first IPCC Assessment Report was published in 1990. Many countries in the Global South, on the other hand, see the beginning of industrialization (the middle of the 19th century) as a sensible point of reference, since from then on fossil fuels

were burned on a large scale. [Estimates of emissions](#) for this longer period back to 1850 are also available, even if they are subject to greater uncertainty.

Climate justice thus has several dimensions. It's not just about fair burden-sharing. After all, not all the problems for the world's particularly vulnerable states would be solved if the international community agreed on who has to reduce how much emissions and by when. For these countries, it must also be a matter of supporting them in coping with the climate damage that can no longer be prevented even with the greatest efforts and of helping developing and emerging countries to decouple economic growth from greenhouse gas emissions and resource consumption.

3 IS GERMANY'S ENERGY TRANSITION SOCIALLY (UN)JUST?

Germany ranks fourth in terms of historical emissions. The country therefore has a special responsibility to make an adequate contribution to global climate justice. The energy transition is therefore a must. The question is, however, whether it will lead to social injustice at home.

Distributed energy supply

The energy transition is not just about replacing climate-damaging technologies with climate-friendly ones. It also creates new opportunities for participation and involvement. The switch to renewables can lead away from oligopolies to citizen energy and to more competition between smaller and larger companies. Citizens have an opportunity to generate energy themselves and invest in plants and infrastructure.

This transformation process depends on the political framework conditions. Otherwise, new injustices will arise. A [survey](#), conducted by the Potsdam Institute for Advanced Sustainability Studies (IASS), revealed that more than half of the respondents consider the current implementation of the energy system transformation to be unjust. Two thirds agree with the statement that it is primarily the wealthy and companies that benefit from Germany's energy transition. There are ways to help poorer households, however. For example, low-income homeowners could receive additional investment support to invest in renewables and energy efficiency. The reimbursement of heating costs could be extended from welfare recipients to low-income households. A climate bonus could help towards renting expensive but particularly energy-efficient housing. Instead, however, the political discussion usually revolves around the level of energy prices. An appropriate price is an important incentive to conserve energy. And for most households, energy expenditure hardly plays a role compared to other consumer spending, so help should target low-income groups. But even with the approaches mentioned above, energy policy cannot replace a fair social policy; in order to fight poverty, social policy is needed - not energy policy. All measures should therefore be integrated into an overall strategy.

Energy prices: a source of social injustice?

The central criticism against Germany's energy transition is energy prices. They have a regressive effect: Although poorer households spend less on energy in absolute terms, this expenditure accounts for a larger percentage of their disposable income. Low-income households are thus relatively more burdened by the level of electricity prices than households with higher incomes. The former spend an average of about five percent of their household income on electricity. Wealthier households, on the other hand, spend only 1.5 percent on electricity - even though they consume much more electricity. The situation is similar for expenditure on heating and hot water.

Together, the energy costs (electricity and heat) in poorer households thus account for about ten percent of income.³

Social solar housing

Rents are rising rapidly in conurbations such as Frankfurt am Main and its surrounding area. For lower-income households, often only flats with a low basic rent are an option. Affordable apartments, however, are often poorly insulated and have an outdated heating system, so heating costs become all the more expensive. In addition to the energy-efficient renovation of old buildings, economical new buildings in low price segments are therefore in demand. In the residential area Parkstadt Unterliederbach, a local municipal housing company shows that the demanding PlusEnergy house standard and cost-effective construction are not mutually exclusive. Thanks to the clever combination of a heating network, solar thermal energy and storage, tenants have low heating costs. Since 2017, the new district has been offering a new home to over 1,000 people in around 300 households. As plus-energy homes, the residential buildings supply even more energy than their inhabitants consume over the year. The landlord was keen on keeping costs for heating and building services low in the long term.⁴

Electricity prices in Germany have gone up 60 percent since 1995. Some of this is attributable to renewables, as solar in particular was still relatively expensive - which is no longer the case today. Since 2013, the rise in electricity prices has flattened off considerably. In the years 2013 to 2020, only 2.5 Ct/kWh were added in total. Over this period, this corresponded to an increase of 1.2 percent per year, which was even slightly below the average inflation rate.

The costs of the expansion of renewables are passed on to electricity customers via the renewables surcharge. However, these costs are not distributed equally among all consumers; energy-intensive industry is largely exempted from these costs in order to make Germany attractive for industry. The flip side of this policy: all non-exempt groups (households, small and medium-sized enterprises, etc.) shoulder almost the entire burden. The exemptions could therefore be made more targeted and appropriate. In addition, energy suppliers have not always passed on the falling electricity prices on the stock exchange to electricity customers in return for the rising renewable energy surcharge. Since 2014, the increase in the surcharge has been only slight (+0.5 Ct/kWh). What has recently become more expensive are mainly procurement costs and grid fees. The latter have risen by 1 ct/kWh since 2013.

The price of electricity without an energy turnaround: what if?

What would a world without renewables actually look like? Would we have cheaper electricity without them? A [study](#) by the Friedrich-Alexander University of Nuremberg-Erlangen investigated this question. It found that, between 2011 and 2018, renewables saved electricity consumers 70 billion euros. The researchers calculated the hypothetical wholesale prices without electricity from wind, solar, bioenergy and hydropower for that time span. Procurement costs would have amounted to 227 billion euros, offset by 157 billion euros in funding for

renewables. The difference is 70 billion euros. In order to prevent wholesale electricity prices from becoming significantly more expensive in the coming years, renewables need to be expanded faster than at present.

However, the study does not include the external costs of conventional electricity generation, i.e. the costs to society as a whole of damage to the environment, climate and health. These costs are not sufficiently taken into account in electricity bills. These are paid for out of taxes and health insurance contributions, and disproportionately burden low-income households. Whether the energy transition will really lead to social imbalance depends on policy design. On the one hand, energy costs must speak the ecological truth, i.e. environmental costs must be given even greater consideration. On the other hand, poor households must be able to afford an appropriate level of energy consumption.

A socially just carbon price

Basically, all major energy scenarios assume higher carbon prices. These would internalize the external costs (environmental, climate and health damage), which would inevitably lead to higher prices for petrol, gas and heating oil. Although high-income households emit significantly more CO₂, e.g. through more air travel and larger cars and apartments, the additional financial burdens affect lower income groups more severely. Households in poorly insulated rentals that cannot afford energy-saving appliances and that cannot switch to public transport or riding bike would be particularly affected. Most concepts therefore provide for a refund from carbon pricing to all citizens. A per-capita reimbursement, where all citizens receive the same amount, would benefit lower-income groups in particular.

Another proposal suggests that the revenues can be used to finance specific climate protection measures which would particularly support low-income households. For example, poor households could be subsidized to buy energy-efficient appliances, or energy-efficient social housing could be supported. The revenue could also be used to expand public transport, cycling and walking. For those who have no alternative to cars, the commuter allowance could be increased and graded by income. The electricity tax could be reduced or abolished in return for the CO₂ surcharge.

According to the IASS survey, almost three-quarters of the respondents agree with an increase in fuel prices. Most of them, however, support higher prices only if there is some relief at the end of the day. Only 12 percent reject higher prices for fuel and heating in general.

4 MUNICIPAL CLIMATE PROTECTION AND CLIMATE JUSTICE

Local communities play a key role in reconciling climate protection and justice. Local authorities can contribute to global climate justice by shaping the energy transition. Within the framework of local self-government, cities and municipalities have sovereignty over their infrastructures. In particular, they can plan and design heating networks or bike lanes and footpaths. One important instrument is municipal heat planning.

Local authorities can ensure that cycling is safe, comfortable and attractive for everyone - including children and senior citizens. Well-developed bike lanes ensure a wider participation in traffic. They give old and young people who cannot drive a car as well as socially disadvantaged people who cannot afford a car an opportunity to be mobile. Cycling is therefore not only good for the environment, climate and health; it also contributes to social justice. However, most cities today are still designed for cars, which benefits the socially better-off above all. The

external costs of motorized transport, in turn, primarily affect lower-income households. The poor generally live on the highly frequented and air-polluted roads.⁵

Finally, climate protection partnerships are a way that local authorities can promote climate protection and climate justice. Towns and municipalities have valuable experience that can be important for municipal development cooperation. Sharing information about the consequences of climate change in developing countries increases the motivation to act in one's own municipality. Clearly, local political decisions have a global impact.

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¹ For the complete WeltRisikoIndex, visit: <https://weltrisikobericht.de/english/>

² Sachs, Wolfgang: Gerechtigkeit im Treibhaus, in: Blätter für deutsche und internationale Politik, September 2017.

³ Öko-Institut: Die soziale Seite der Energiewende.

⁴ https://energie-update.de/portrait/sozialer-wohnungsbau-heisst-solarer-wohnungsbau/?fbclid=IwAR1HoGScVQZK0msBN5CQENmwZZnPaQdhW7l_Wb5BTq3j6ehI0lyLHHFzxc0

⁵ Walker, Peter: How cycling can save the world, New York 2017.