

WELT-SICHTEN

Special Issue of the Project “Climate Change and Justice. Climate policy as a component of fair globalisation and sustainable poverty reduction” in co-operation with “welt-sichten”

Climate Change and Poverty

A challenge for a fair world policy

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Bricklayer in Calcutta after flooding.
More and more people are threatened by
the increasing force of monsoon rains.

Photo: Ruchiro





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Social justice is a cross-cultural ideal and a universal benchmark of political thinking. It also serves as a frame of reference for the contributions to this special issue. Globalisation has already revealed what on-going climate change distinctly shows: Reflections about justice today are to be made in a global perspective. Introducing a globally communicable ethical argumentation into climate negotiations is a “challenge for a fair world policy”, so the sub-heading of this special issue.

Maybe we should better say: “A challenge for an unfair world policy”. The uneven distribution of energy consumption and prosperity is one reason why the poor in the South are mainly affected by climate change, to which they hardly contributed themselves. The contributions to this special issue reveal an especially dramatic injustice in climate change impacts. And they ask for corrections that are suitable to close this justice gap and to remedy these unfair conditions.

First of all, it is necessary to distribute resources more even and to support the people in the South in coping with the impacts of climate change. Since the climatic catastrophe begins in the South, adaptation has to start there. At the same time, global warming needs to be mitigated. Improvement of the living conditions of the people that are mostly affected by climate change will also improve the living conditions of the entire human society and of coming generations.

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A global deal for climate and development policy

Climate protection and poverty reduction belong together

Photo: Meredith Deaton



| Michael Reder and Anika Schroeder

Climate change will have severe effects, especially on the poor in developing countries. Climate protection can therefore be an important contribution to reduce poverty. Climate and development policy should be closely coupled.

The industrial countries are mainly responsible for climate change, the poor in the developing countries are most strongly affected by its dangerous impacts. Due to their geographical position, they are much more exposed to extreme weather events that already now occur more frequently. 80 percent of the victims of weather catastrophes since 1980 lived in Asia, Africa and Latin America. This is also due to the fact that the means of developing countries to cope with extreme weather events and to adapt to changing conditions are distinctly lower.

High mountain valley in Kyrgyzstan. Dim perspectives also for international climate protection? Great barriers are still to be overcome before an effective agreement will be reached.

The separation of main polluters and main victims poses a problem of justice that can only be solved adequately if justice is expanded on the spatial as well as on the temporal scale. The tight correlation between climate change and poverty suggests that the

The project

In the project “**Climate Change and Justice**”, the Potsdam Institute for Climate Impact Research, the Institute for Social and Development Studies at the Munich School of Philosophy, the Munich Re Foundation and MISEREOR analyse the interactions between mitigation of dangerous climate change and the reduction of world-wide poverty. The political core question of the project is, how a fair burden sharing in climate protection can be organised within a global deal for climate and development policy and how dangerous impacts of climate change can be mitigated for the poor.

Dialogue with the South: In order to arrive at a joint global strategy, the dialogue with representatives of different countries and cultures about climate impacts and adaptation strategies plays an important role in the project.

The public in Germany: The wider public should be integrated into a discussion about the interaction between climate change and poverty. This will be achieved through disputations between natural sciences, economy, the churches, civil society and politics.

Eight renowned representatives from science, civil society and the media accompany the project as members of the **project advisory board**:

- Hartmut Grassl (Max Planck Institute for Meteorology – Climate Processes)
- Volker Angres (ZDF, Second German Television – Magazine Programme “Environment”)
- Joachim von Braun (International Food Policy Research Institute)
- Saleemul Huq (International Institute for Environment and Development)
- Martin Khor (Third World Network)
- Stephan Klasen (University of Göttingen)
- Dirk Messner (German Development Institute)
- Wilhelm Vossenkuhl (LMU Munich)

For more information:
www.climate-and-justice.de

question of justice should not be restricted to the distribution of emission rights, but should also include the world-wide distribution of wealth in a wider sense, in terms of natural, human and social capital.

In this special issue, the example of Indonesia shows that climate protection and development cannot always be easily linked. The degradation of nature capital, in this case deforestation of tropical forests, has severe impacts on climate (local and global) as well as poor smallholders. Therefore, the protection of tropical forests needs to be part of a global climate policy as well as other policies affecting the local conditions of the people in developing countries. For countries like Indonesia, the preservation of forests would certainly involve high losses in export revenues which the country would urgently need to reduce their debts.

Questions of justice will play a decisive role also in international climate negotiations. Global climate policy needs to limit climate change to a degree that can still be managed and to develop adaptation options for the already unavoidable impacts of global warming. A fair burden sharing is a central prerequisite in both cases.

A “global deal” is necessary for climate and development policy. This term which is already well-established in the international climate debate refers to a negotiation process of all relevant parties. Global climate protection can only be achieved if a fair offer is submitted to the developing and newly industrialised countries. The reports of the Intergovernmental Panel on Climate Change (IPCC) show that climate protection is not expensive and will pay off in the long-term, especially with regard to poverty reduction.

Apart from global emission reductions and a fair distribution of future emission rights, the promotion and transfer of innovative technologies are the core elements of such a global deal. It would be a political framework that could help to keep global warming below two degrees Celsius and, at the same time, to generate new financial flows from the North to the South.

New financial instruments for climate protection, adaptation, forest protection and technology transfer may also be part of such a global deal. They should help the poor and poor countries to introduce a low-emission development path and to cope with the impacts of climate change. According to some estimates up to 86 billion US dollars per year will be necessary only for adapting to climate change. It should however be ensured that the money will reach those places where it is most urgently needed and will actually have sustainable effects. This requires a tight interaction of adaptation measures through national development strategies and international development co-operation. The strengthening of innovative instruments for poverty reduction, like micro insurances for the poor, could also be helpful. ||



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Poor people are the real losers

Weather-related catastrophes: Greater frequency and severity

| Thomas Loster

Nine of last year's ten severest natural catastrophes in terms of victim numbers were weather-related, and all affected developing or emerging countries. Gradual trends like heatwave and drought often pose an even greater threat than individual catastrophes.

In 2007, over 16,000 lives were lost in a total of nearly 1,000 natural catastrophes worldwide, the biggest caused by Cyclone Sidr, which devastated coastal areas of Bangladesh in mid-November, resulting in 3,300 deaths and leaving 50,000 injured and more than three million homeless. In the previous July and August, the monsoon had brought extensive flooding to India, Nepal and Bangladesh, causing over 2,000 deaths.

The long-term trends are also clear: recent years have seen a dramatic increase in the frequency and intensity of weather-related natural catastrophes, with windstorm and flood losses on the advance. Weather records worldwide are being shattered. The highest one-day precipitation level in 2005 was recorded in Mumbai, India. That same year in the Caribbean, Wilma recorded the lowest central pressure of any hurricane, whilst temperatures in the tropical Atlantic reached new highs. Climate change has dramatic consequences: faster-rising sea levels, retreating glaciers and changes in the seasons.

The Assessment Reports published by the Intergovernmental Panel on Climate Change (IPCC) show that developing countries and the poorer sections of the population will be hit particularly hard. Their prospects of fair access to food, clean water and other resources will continue to deteriorate and their health will suffer. New scientific studies such as the Climate Change Index (CCI) published in 2007 by the Swiss Federal Institute of Technology make the same point: the poor suffer disproportionately from climate change. It is always more difficult for them to adapt to changed circumstances and their situation is already bleak.

Although the headlines in recent years have been dominated by major events such as the Izmit earthquake in 1999, which claimed 20,000 lives, the Bam earthquake in 2003 with 30,000 deaths and the 2004 tsunami with a death toll of over 200,000, the gradual onset of heatwaves and drought is often more dangerous. Over the years they lay waste to vast tracts of land. Millions are already affected in poorer countries. On the African continent, for instance: in Ethiopia alone, some 600,000 died in the 1970s and 1980s and seven million people were exposed to long periods of drought. Sudan, Malawi, Chad and Mozambique also struggled with conditions of extreme aridity. According to World Bank estimates, around 100 million

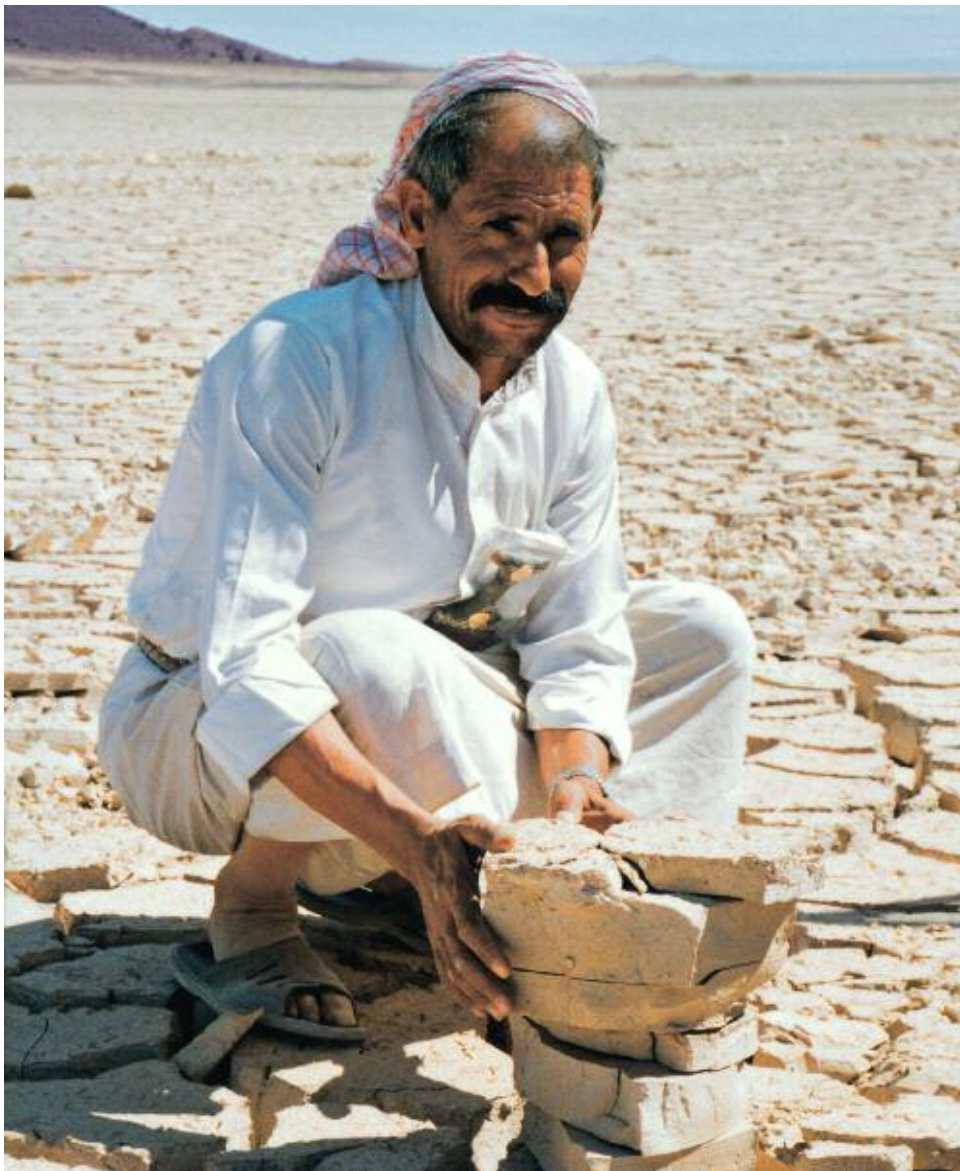
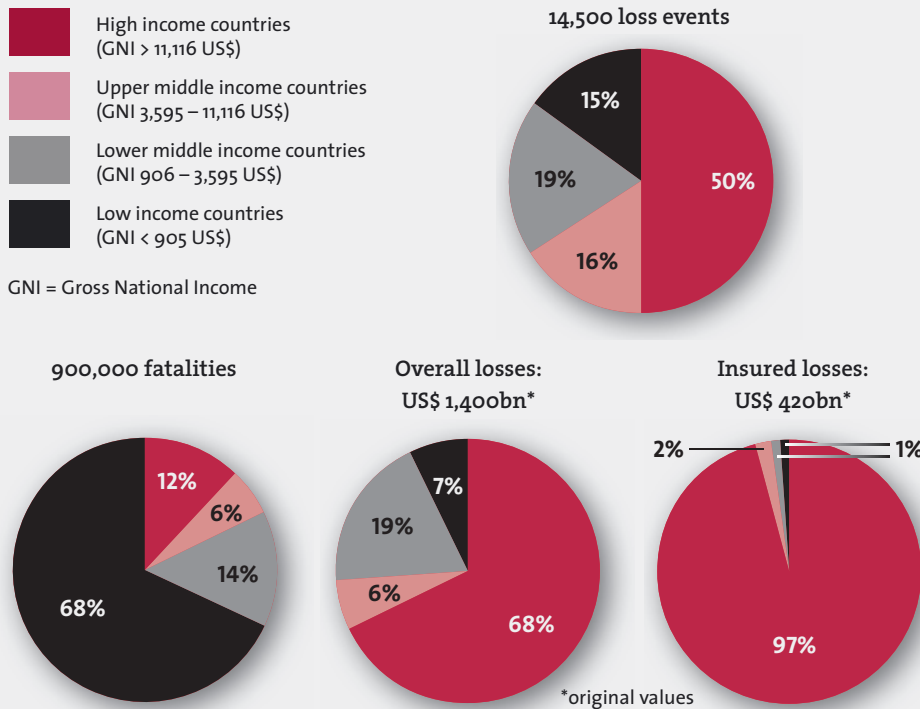


Photo: Prof. Gerhard Berz

Farmer on arid land in Yemen

Worldwide weather catastrophes 1980 - 2007

Distribution according to economic development (%)



Sources: Munich Re NatCatSERVICE (loss information, 3/2008); Worldbank (country classification, 6/2007)

tion measures are extremely important. Ultimately, the United Nations Millennium Development Goals can only be achieved if schools, hospitals and infrastructure in developing countries are not constantly being destroyed by disasters. With loss events placing already threadbare social networks under even greater strains, existing solidarity schemes are failing.

Although experts no longer believe that climate change can be stopped, it is at least within our power to slow it down, by using no-regret, win-win and similar strategies to conserve precious resources and reduce energy consumption. Greater energy efficiency has a key role to play. One way to achieve this is to pave the way for the global energy paths of the future to which all countries can commit. The Kyoto Protocol and agreements regarding its successor are a first step in this direction. The Kyoto Protocol calls on the 36 industrialised nations to reduce greenhouse gas emissions. In all, emissions are to be cut by at least 5% during the period 2008–2012 against 1990 levels. Negotiating rounds conducted by the United Nations have already led to the adoption of an agenda to guarantee that emission reductions continue unabated when the initial commitment period ends in 2012.

However, a global climate protection agreement will have to be far more comprehensive and far-reaching. We can only move on if a global deal is struck, involving clear commitments on the part of those responsible for climate change. One thing is clear: in our globalised world, only sustainable strategies forged between partners in accordance with the precautionary principle will ensure more winners overall. It is now above all up to the industrialised nations to assume their responsibilities. ||



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people in Africa suffered drought in the 1980s and 1990s and that figure is thought to have doubled in the space of a few years.

If we examine the distribution of the humanitarian consequences of global weather-related catastrophes, we note that many countries in the early stages of development are already well in the forefront. The World Bank categorises countries into groups 1 (rich) to 4 (poor) according to their GNP. The following conclusions can be drawn from the figures for the period 1980–2007:

- Approximately half of the world's 14,500 recorded weather-related natural catastrophes occurred in highly developed countries (G1), a third in groups G3 and G4.
- Over two thirds of the one million deaths they caused are accounted for by the lowest-income countries (G4), whereas only 12% relate to high-income countries (G1).
- Whilst, as expected, monetary losses arose for the most part (74%) in G1 and G2 countries, the poorer group G3 and G4 countries bore 26% of

the burden. There is a serious lack of insurance cover to mitigate losses in the poorer countries, a mere 1% of insured losses being recorded in group G3 and G4 countries.

The IPCC's fourth Assessment Report, published in 2007, puts far greater emphasis on the link between global warming and the greater frequency and intensity of extreme events than its 2001 predecessor. There is a considerable weight of scientific evidence to show that flood and drought will further increase. In many regions, the expected rise in sea levels will cause flooding in low-lying coastal plains, river deltas and archipelagos; many parts of Bangladesh as well as Tuvalu and the Marshall Islands in the Pacific, for instance, will soon be uninhabitable. Whilst wealthy countries can afford to build dykes and other engineering constructions to protect themselves, millions in poorer countries are helpless in the face of the looming threat. With no less than the future of entire regions at stake, efficient early-warning systems and other disaster-preven-

Who is most affected by the impacts of climate change?

The magnitude of regional climate changes is only one factor of vulnerability

| Hans-Martin Füssel

The question which population groups, regions or economic sectors are especially vulnerable to climate change has often been asked. The most frequent answer is that poor countries and poor people are especially vulnerable and thus most urgently require international help. Is poverty the same as vulnerability?

Comparative statements about the vulnerability of different population groups (or regions or economic sectors) face various difficulties: First, the term “vulnerability” is not clearly defined. In this article, vulnerability is broadly understood as a measure of how strongly a population group is threatened by an external hazard. Second, many decisive aspects of future climate change cannot currently be predicted with certainty. While climate models for the Mediterranean consistently predict increased temperatures and reduced precipitation, it is uncertain whether the Sahelian zone will experience more or less precipitation or even frequent changes between wet and dry periods. Hence, the impacts of climate change for the Sahelian zone cannot be reliably estimated at present.

| Social developments play an important role

Third, climate change is indeed not the only factor that determines the future development of societies. Compared to industrial countries, developing countries generally have higher population growth rates, a faster urbanisation and often exhibit stronger political and economic dynamics. Even though such socioeconomic developments are of central importance to assess the vulnerability of regions to climate change in the long term, their consideration in climate change vulnerability assessments is at best partial. Who could for instance reliably predict if

poverty, hunger and illness rates in southern Africa would substantially decrease or further increase in the absence of climate change?

Fourth, the vulnerability of a region to climate change can be measured in many different ways. Hurricane Gorky devastated the coasts of Bangladesh in 1991; the similarly strong hurricane Andrew hit the Gulf Coast of the United States in 1992. Gorky claimed the lives of 140,000 people, made 10 million people homeless and caused material damages of 1.5 billion US dollars of which only 3 million US dollars were insured. Andrew claimed the lives of “only” 26 people and made 250,000 people homeless but caused material damages of more than 25 billion US dollars of which more than 15 billion US dollars were insured. Obviously, the people in Bangladesh were (and are) by far more vulnerable to hurricanes than the people at the Gulf Coast of the United States, but insured property and possibly infrastructure in general are more vulnerable in the latter. Vulnerability assessments that combine social and economic damages may therefore produce conflicting aggregate estimates of the vulnerability of these two regions to hurricanes.

Due to these difficulties, it is not scientifically possible to precisely rank regions as to their vulnerability to climate change. Such a ranking requires a number of assumptions that are subjective to a certain degree. It is nevertheless necessary to estimate the risks of climate change for different population groups and, if possible, to compare them with each other. Such information is used among others to determine the overall threat

posed by climate change, to set priorities in supporting poor regions to adapt to climate change, and to make recommendations for the consideration of climate change in on economic development projects and programmes.

| Determining factors

The vulnerability of different regions and population groups to man-made climate change is determined by the following factors:

- **Magnitude of regional climate change.** Global climate change manifests differently in different world regions. For instance, warming in the Arctic region is much more pronounced than in other world regions. Precipitation will hardly change in some regions whereas other regions will experience strong decreases or increases.

- **Sensitivity to climate change.** The same magnitude of climate change may have very different impacts in different regions. For instance, a warming of several degrees would increase the agricultural potential in a cold region like Northern Europe but decrease it in an already hot region like India.

- **Coping and adaptive capacity.** The social impacts of climate change crucially depend on a population's capacity to cope and adapt. For instance, Australia could compensate a climate-induced decrease in food production by one-fifth quite well by additional purchases from the world market due to its economic power, whereas the same decrease in India would cause deep poverty and hunger for large parts of the population.

Based on these considerations, the Intergovernmental Panel on Climate Change (IPCC) identified the following regions to be “especially affected” by climate change in its recently published Fourth Assessment Report:

Photos: Federica Grassi



Abandoned village at a dried-out lake in Libya. In the past, people lived on crab fishery here. When the lake lost its water, they lost their livelihood.



- the Arctic due to the extremely fast warming;
- Africa, especially south of the Sahara, due to its low adaptive capacity and the great importance of agriculture for the population;
- small islands, since its population and infrastructure are exposed to a rising sea-level and storm surges;
- large estuaries in Asia due to their high population density and the fact that they are strongly exposed to a rising sea-level, storm surges and river floods.

| Conclusions

Which conclusions can be drawn from these considerations for the vulnerability of poor population groups to climate change?

1. Poor people are not necessarily concentrated in regions in which climate change itself is especially pronounced; many of them live, however, in regions which already have a marginal climate (hot, dry, high variability) today or that are strongly affected by extreme weather events (hurricanes, floods).
2. Livelihoods of poor people are heavily dependent on climate-sensitive activities, especially agriculture.
3. Poor countries have only a few opportunities to observe and analyse climate data, and poor people have only very limited access to this information. Hence, the poor are less capable to prepare in time for imminent threats.
4. Poor people have fewer resources for protecting themselves against climatic hazards.

5. If poor people are also politically marginalized, they will be disadvantaged in accessing public aid after a natural disaster. Sixth: If vulnerability is defined in absolute terms (e.g., as the risk of malnutrition), then poor people are especially vulnerable because they are already much closer to the vulnerability threshold.

In summary, there is a variety of reasons why the poor are usually much more vulnerable to climate change than the rich. It should therefore be obvious that the poor have a moral claim for support in adapting to climate change and in managing its impacts. This is all the more true since the poor have contributed very little to man-made climate change. Anthropogenic climate change is a problem that historically was mainly caused by the rich but its adverse impacts are to be borne mainly by the poor. Considering this unequal distribution of causes and effects of climate change is a key challenge for international climate policy.

At the same time it is true that effective climate protection in the medium term is not possible without the participation of the main emerging economies, which are responsible for an increasing fraction of global greenhouse gas emissions due to their high population growth and rapid economic development. ||



Dr. Hans Martin Füssel
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Emissions must have a price

The reduction targets can be reached if climate policy is organised in a fair manner

| Ottmar Edenhofer and
Hermann Lotze-Campen

Conservative economists argue that the restriction of economic freedom is the only goal pursued by the climate debate. Global climate protection will however not succeed without justice. And neither will there be freedom without justice. Hence, the relation between economic freedom and social justice needs to be re-determined in the climate debate – as well as the relation between costs and benefits of a global strategy for emission reduction.

Not climate change, but poverty is the problem, argues Björn Lomborg, a Danish statistician. He expresses in a precise way what many think: Global climate protection restricts economic growth and thus also the possibilities of effective poverty reduction. The mandate agreed upon in Bali to negotiate a world-wide climate protection agreement is a disservice to the developing countries – it is not lower emissions of the industrial countries but increased prosperity in developing countries that will protect them against climate change. The more prosperous developing countries would be, the easier they could adapt to climate change – only the rich would be able to afford air-conditioning, higher dams and protected apartments. Climate protection is an assault on the project of a fair globalisation. The freedom of markets with their enormous potential to produce affluence would be restricted at the expense of those countries which wanted to achieve the same affluence as the United States, Europe or Japan. What is actually be threatened – the global climate or the possibilities for development for the poor?



Photo: Günther Fischbach

This question is flawed. Dangerous climate change is a threat to the poor. Intelligent climate protection, on the other hand, can considerably contribute to reduce poverty. But: Global climate protection can only be achieved if a fair offer is submitted to developing and newly industrialised countries, which takes their interests into account. The climate debate involves a re-determination of the balance between the freedom of individual decisions and its market and developing processes on the one hand, and a fair distribution of the burdens and possibilities that are connected with a comprehensive climate protection strategy on the other hand.

The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) confirms an increase of greenhouse gas emissions for the period 1970 - 2004 by 70 percent. Although the energy intensity of the world economy (i.e. the energy consumptions per unit of social product) as well as the carbon intensity in energy production decrease, these emission-reducing effects are by far overcompensated by population

Coal-fired power station in the Ruhr area. Power stations like these become more and more the subject of dispute in German climate policy.

growth and the increase in labour productivity (social product per capita). Only if energy and carbon intensity is reduced quicker than population and labour productivity is growing, world-wide emissions will be able to decrease.

In order to avoid a climatic catastrophe, it is indispensable to restrict global warming to a maximum of two degrees compared to the pre-industrial level. To reach this two-degree-target, global emissions need to be stabilised until 2020 and reduced by the mid-century to less than half of the level of 1990. Even if deforestation can be quickly prevented, the energy-induced emissions with a share of almost 70 percent still need to



In June 2007, super cyclone Gonu was raging in Oman. Even in this rich oil-producing country which is a climate emitter itself such a cyclone damages the economic and social development.

bear the main burden of mitigation. Some energy politicians and many energy strategists in big companies already think that the two-degree target cannot be reached any more.

| Inaccurate statements

In view of the tremendous tasks, news are popular that regard the threats of climate change to be small. Björn Lomborg for instance tried to show that even the economic damages of an unmitigated climate change are by far less than the costs for emission reduction. Even if his statements are reasonable from the economic point of view – they are very inaccurate, since they neglect important effects: The continuing acidification of oceans, the dehydration of tropical forests, the changing monsoon dynamics in China and India or the melting of glaciers in the Tibetan highlands. Tipping points in the Earth system are activated here that create prob-

lems that are hardly comprehensible and can no longer be precluded. A melting of the glaciers in the Tibetan highlands first would lead to increased floodings of the large rivers of China; if the continuous discharge of the glaciers finally breaks down, they will seasonally dry out. These enormous damages that influence the functionality of the whole Earth system cannot be reasonably expressed in monetary values. They reveal however that the tipping points should not be activated at all. But then the transformation of the world-wide energy system is unavoidable.

The IPCC report lists increased energy efficiency, the expansion of renewable energy sources as well as carbon capturing and sequestration (CCS) in geological formations as the most important options for the future. The CCS option is the more important, since it allows for a low-emission use of coal in China and India. Nuclear energy and the substitution of coal by gas that has a lower greenhouse gas potential than coal are estimated to be mitigation options of lower priority. According to the IPCC, measurements for energy efficiency along with a reduction of other greenhouse gases than CO₂ (for example nitrous oxide and methane from agriculture), and the use of renewable energies offer the largest mitigation potentials in the medium term (until 2030).

A conversion of the global energy system is possible at acceptable economic costs and can also be accepted by society. In contrast to earlier IPCC reports, Working Group III shows in its Fourth Assessment Report that the costs of a reduction programme to stabilise the concentrations of emissions in the atmosphere at a level consistent with the two-degree target are relatively low. They would amount to approximately one percent of the world-wide social product until 2030.

| One percent of the world-wide social product

There is however a minimum prerequisite to obtain such political goals: The atmosphere may not be used free of charge anymore. Only if costs for emitting CO₂ are incurred, there is an economic incentive to consider renewable energy sources or carbon sequestration. A world-wide market for emission rights would be a suitable instrument to obtain this.

In order to reach the two-degree target, today's global CO₂-emissions of about 4.9 tons CO₂ per capita of the world population need to be reduced to 1.5 tons per capita in 2050. In political negotiations, however, the question is important how emission rights can be spread in a fair manner over different countries. The allocation of emission rights also has an influence on the distribution of costs for climate protection.

For a fair allocation of emission rights, it is often suggested that each human being should have the same emission rights until 2050: Based on their current per capita emissions, fewer emission rights will gradually be allocated to the industrialized countries, while developing countries will increasingly get more emission rights until each country will have the same per-capita rights in 2050. This would mean that the emission rights of the industrialized countries need to be reduced by 80 percent compared to the current

Justice gaps

Where is in your opinion the greatest justice gap in climate policy?

Hartmut Graßl:

The central justice gap is the creeping destruction of the homes of many people in semi-arid areas due to the shift of the precipitation belt.

Stephan Klasen

The greatest justice gap is the open question of the global distribution of emission rights as well as the consideration of emissions of the past centuries.

Joachim von Braun

The greatest justice gap can be found in rural areas where the majority of the poor live. Most of them are people with small adaptation capabilities. The next generation will also be extremely affected by climate change.

Dirk Messner

Climate change makes the poor even poorer. Climate justice will become one of the central challenges of world policy.

Hartmut Grassl (Max Planck Institute for Meteorology – Climate Processes), Stephan Klasen (University of Göttingen), Joachim von Braun (International Food Policy Research Institute) and Dirk Messner (German Development Institute) are members of the advisory board of the project “Climate Change and Justice”. | |

level. The industrialized countries would not necessarily be supposed to reduce their emissions in their domestic economies. They could buy emission rights from developing countries via the emission-trading scheme. The revenues can help to reduce emissions in developing countries at lower costs than in industrialized countries.

| Revenues from emission trading

If average mitigation costs in developing countries are lower than the certificate prices – which is likely to happen – then the

developing countries will considerably benefit from emission trading in financial terms. The revenues from emission trading may for instance by far exceed the current development aid for Africa. This is even more important, since the developing countries will be especially affected by the impacts of climate change.

A global emission trading scheme cannot directly be introduced, it will gradually develop. The EU has already introduced this system. A total of 25 states in the United States, i.e. about half of the states, plan to introduce three different regional emission trading systems. Hence, there is increased pressure on Washington to quickly establish a homogeneous national system in the United States. Meanwhile the International Carbon Action Partnership (ICAP) was founded as a platform to clarify, if and how the European emission trading system could be linked with emerging regional emission trading systems in the United States as well as New Zealand.

Due to the energy policy requirements resulting from climate change, it will also be necessary to multiply the efforts to develop low-emission energy technologies. However, global expenditures on research and development in the energy sector have decreased during the last twenty years. Public investments urgently need to fill this gap. Government-funded demonstration projects in the area of renewable energy sources and the development of carbon capturing and sequestration are therefore indispensable. Approximately 30 demonstration power plants need to be set up in the next 15 years, in order to prove that the whole sequence from capturing and transporting to sequestering CO₂ is feasible and affordable. Techni-

Global climate protection can only be achieved if a fair offer is submitted to the developing and newly industrialised countries, which take their interests into account.

cal breakthroughs in the area of renewable energies can only be expected if demonstration projects on solar thermal and photovoltaic technologies will be financed with public funds.

Even if the world society agrees upon the ambitious two-degree target and even achieves it, climate changes will occur that cannot be stopped anymore. The impacts of this unavoidable climate change need to be counteracted with appropriate measurements in the affected regions. The industrialized countries are mainly responsible for this inevitable damage. They are also responsible for bearing the costs. Here it is vital to identify suitable financial mechanisms – e.g. an adjustment fund – as well as rules for the allocation and distribution of financial compensation.

The political requirements of such a global deal are large. But politics can be confident that market economies can cope with temporarily increasing prices for CO₂, since coping with scarcities has always been one of the main tasks of free markets. Humankind has had good experiences with innovative market economies; it would almost certainly have bad experiences with dangerous climate change. | |



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Principles of justice

Climate negotiations need a precise ethical concept

| Johannes Wallacher
and Michael Reder

Issues of justice that arise in the context of climate change and poverty reduction need to be systematically considered in climate negotiations. Thus, a comprehensive concept of justice needs to be unfolded first.

Globally sustainable development requires both the alleviation of poverty and the preservation of our natural livelihoods. Climate protection and poverty reduction are mutually dependent. These targets cannot be easily harmonised, since competing claims and interests are inevitably concerned here. Since it is not possible to satisfy all claims simultaneously and to the full extent, ethical concepts like “justice” are needed that enable an equitable distribution in conflict situations.

There are however diverse concepts of justice from which different, partly even contrary political strategies can be derived. The debate on the distribution of future emission rights with a wide spectrum of suggestions that all rely on principles of justice should serve as an example. Some of them refer primarily to customary rights, others to the vulnerability to climate change or the right to development, others again set priorities to equal per capita emission rights for all citizens of the world in the future.

Concepts of justice comprise normative preliminary decisions. One important task of ethics exactly consists in revealing and reflecting such often hidden implications. It al-

so reveals from which point of view fundamental demands of justice can be identified. Are benefits and burdens distributed equitably amongst all concerned or to the advantage of some groups? A convincing ethical reflection requires an objective moral point of view, at least if they claim to be impartial. After developing and establishing it, it can serve as a starting point to determine which demands of justice are important. This determination of central kinds of justice is again the starting point for the conversion of the principles of justice into adequate political strategies.

| Human dignity as starting point

Human dignity is a suitable starting point for a universal concept of global justice as it is justifiable in different ethical traditions and concepts. Furthermore, this principle can be related to different cultural and religious traditions. It is implicitly based on the Golden Rule that is known in all cultures which reads in its simplest form: “Do unto others as you would have others do unto you!”

The normative-ethical claims that are indiscriminatingly and in the same way granted

to all humans due to their human dignity are spelled out in the human rights. These comprise not only civil and political but also economic, social and cultural rights.

Three principles of justice can be derived from human dignity, which are especially important to connect climate protection and poverty reduction: Justice meeting basic needs, justice of opportunities and procedural justice. These three kinds of justice are mutually interdependent and complement one another. Nevertheless, the satisfaction of fundamental human needs like a certain level of health and nutrition or access to clean water is of principal priority. This means that specific basic human needs and thus the demand of justice to meet these needs are the centre stage of all efforts to reduce poverty and to climate protection. All political measurements must therefore be geared to improving the possibilities to be supplied with essentials.

Human dignity also calls for placing the perspective of individual agency at the centre of the stage. The ones who are poor and vulnerable are not just passive recipients of poverty reductions or adaptation programmes, but have to be seen as both focus and objective, subject and agent of all efforts to overcome social and biophysical vulnerability. The principle of participation corresponds to the basic understanding of a “development from scratch”. It is not only an ethical commandment but also a prerequisite to durably reduce social vulnerability. Admittedly, poor people and poor countries need adequate opportunities and proper facilities to be able to actively contribute to climate protection without having to renounce to measures to combat poverty. This is why justice of opportunities is a crucial second aspect. This legitimises for instance the transfer of adjusted, emission-saving technologies into poor



Photo: Komal Soin

So that the poor are not left out in the rain – global climate policy needs to defend the dignity of the poor.

Climate protection should not be played off against poverty reduction, since this is not only factually inadequate but also ethically negligent.

countries at preferential terms. It also justifies investments in humans to increase their scope of capacities so that they can better cope with the risks induced by climate change.

Both, justice meeting basic needs and justice of opportunities can hardly be reached without fair political measurements. The principle of procedural justice is therefore a third important aspect in the considerations about justice. If normative structures are just or not depends to a high degree on the fact how regulatory policy frame conditions are achieved and who decides upon which rules are valid at a certain time or cease to be effective. Due to this fact, it has to be institutionally secured more than before that also the poor countries and the poor that are especially affected by climate change will be adequately involved in consultations and decision processes.

| Spatial and temporal expansion

Climate change refers like hardly any other problem to world-wide interconnections and dependencies. In an interdependent world, activities do always have long-distance effects. Therefore, considerations about justice need to be discussed from a global perspective. This is also directly followed from the selected normative aspect of human dignity. Nations can then no longer form the primary reference point, since the usually applied average of income and emission rights per capita neglects the mostly considerable inequalities within countries. It is rather the question of directly applying appropriate rights to individual humans even though national institutions are undoubtedly important institutions to protect and guarantee these rights.

In the context of climate change and poverty reduction, justice needs to be expanded not only in its spatial but also in its temporal perspective. This is the subject of intergenerational justice that includes both the past and the future. This criterion is based on the anthropological assumption that the human being is a historical being. According to this, the stocks of carbon emissions accumulated in the last decades mainly in industrial countries may not simply be forgotten and be excluded from ethical reflection even though it has to be verified in the individual case which measurements are suitable to fulfil this special responsibility of rich countries for emissions produced by them in the past. The politically quite ambitious proposal to equally distribute future rights of use of the atmosphere simply amongst all may hardly suffice in this respect.

Furthermore, the creation of intergenerational justice requires to take the opportunities of future generations into consideration. This is especially relevant for climate change, since this is a long-term problem the impacts of which will only become visible in the future. It is especially important to consider the path dependencies of decisions (for instance in energy policy). Setting a course has often long-term impacts, not only economically.

Apart from securing future development opportunities, the general principle "intergenerational justice" also requires to reduce current poverty. Climate protection should not be played off against poverty reduction, since this is not only factually inadequate but also ethically negligent. The temporality of human existence and the pertaining proportions of responsibility between the generations suggest the interconnection of both perspectives. This is only possible if unmanageable impacts of climate change are mitigated and at the same time everything is done to be able to manage unavoidable impacts through adaptation.

| Specification of suitable "currencies of justice"

An integrated assessment of climate protection and poverty reduction reveals that it is not adequate only to distribute future emission rights in a just manner. A fair worldwide distribution of assets in all their forms is in fact required: Real capital, nature capital, human capital and social capital influence the capability to overcome poverty and to adapt to climate change. Admittedly, this is never absolutely determinable. The definition of what is part of basic needs or which aspects are subsumed under the demand for equal opportunities has to be defined in a societal discourse behind different socio-cultural backgrounds. Thus, the "currency" of the different considerations about justice needs to be determined. Justice is a general principle that needs to be constantly re-specified in societal as well as intercultural dialogues. ||



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Indonesia – stuck between a rock and a hard place

Looking for a strategy between energy and poverty policy



Photo: B. Flitner/MISEREOR

| Johannes Müller

Climate change requires a collective climate policy of as many countries as possible but also tailored solutions for individual countries. The fine-tuning will be even more difficult if at the same time measurements are to be taken that are oriented towards the poor. The example of Indonesia shows how complex the problems are.

Indonesia has approximately 225 million inhabitants and is thus the fourth most populous country of the world. Although it does not belong to the poorest countries, it is not yet a newly industrialized country. According to the World Bank, the share of the extremely poor, i.e. those who have to live on less than one US dollar a day amounted to 7.5 per cent of the Indonesian population in 2002; the share of the poor with an income of less than two US dollars per day amounted to 52.4 per cent. According to the Interna-

tional Labour Organisation (ILO), the unemployment rate which is the main cause of poverty amounted to 10.5 per cent in 2006, in the age-group 15 to 24 years even 30.6 per cent, whereas these figures reflect only the official labour market. In view of these data it goes without saying that a strong economic development as a prerequisite for a successful poverty reduction is in the centre of Indonesian policy. But does such a development leave room for a resolute environmental and climate policy?

| Indonesia as a greenhouse gas emitter

Regarding energy-related CO₂-emissions, Indonesia was far behind the industrialized countries in 2002 with 1.4 t per capita. It causes however 6.5 times more CO₂-emissions by burning off peat land than by combusting fossil fuels. If methane and other greenhouse gases are added, Indonesia is seen as the third largest emitter of greenhouse gases according to recent studies.

The causes are manifold. Tropical woods are a profitable source of foreign currencies that Indonesia can hardly manage without due to its foreign debts of 140 billion US dollars. The export of palm-oil is getting more and more important. It is used for food products, cosmetic products and detergent products and increasingly for bio-fuels. Its world market price has strongly increased due to global demand. Therefore, Indonesia plans to increase the production of raw palm-oil from 110 to 4700 million litres in the period 2006 - 2025. This would result in an enormous increase in deforestation and slash-and-burn land clearances to reclaim land for palm-oil plantations.

The winners are mainly companies in this sector and their henchmen in politics and military. The export of wood and palm-oil is an important source of revenue for them. A corrupt political system and a lack of governmental control are jointly responsible that approximately 80 percent of the wood is cut illegally. Laws are enforced to a small extent



Photo: Watch Indonesia

**“This used to be my land”:
A man and his former field that
has been converted into a palm-oil
plantation without his prior
agreement.**

Deforestation and booming palm-oil prices have contradictory effects on poverty. Some poor farmers and cities in Sumatra and Borneo became rich, the majority however became totally impoverished in this hard business. The increased energy and food prices that are determined by the world market have the strongest impacts. They contributed to the fact that food security in Indonesia is increasingly under threat.

Bottlenecks in energy supply, especially with electricity, have been a main obstacle for economic development for a long time. Indonesia has had mineral oil of its own for a long time, but the amount produced does no longer cover domestic needs. In connection with strongly increasing world market prices, this caused the government in 2005 to increase already subsidised prices for oil products, petrol for instance by 125 per cent. Since energy costs amount up to 30 per cent of the expenses of the economy and the population, this has severe consequences for businesses and the poor.

Hence, Indonesia faces enormous investment needs in the energy sector, and the selected energy paths will hardly be revisable for a long time. One possible suggestion is the construction of coal-fired power stations. The planned construction of a nuclear power station in North Central Java, a region that is densely settled and highly endangered by earthquakes, is equally questionable. It would be a climate-friendlier alternative to use the enormous geothermic potentials of Indonesia. This however requires large investments which can certainly not be raised by the country alone. A global deal is therefore required so that the country can commit itself to protect its tropical forest and to adopt poor-oriented measures.

Not only in Indonesia, poverty reduction and climate policy face the problem that there is always a certain tension between the macro-, meso- and micro-level. What is desirable on the global or national scale does often not

correspond with the needs of poor countries and/or the poor at a certain place and vice versa. Climate change requires a common climate policy of as many countries as possible. This will only be successful if there are tailored solutions for the individual countries. A fine adjustment which considers the specific local distresses of the poorer local population is even more difficult.

In this context, the opportunity costs of high expenses for adjustment measures are to be considered. There is the risk that funds for regions and people that are most affected by climate change will not be available for those who have always been extremely poor but do not directly have to suffer from the impacts of climate change. This may lead to shifts in the national budget that are unfair from the distributional perspective and may mislead the macroeconomic development.

If one wants to comprehend the complexity of the problems, it is on the one hand indispensable to look at individual countries. On the other hand, one should not be blind to the fact that there is a lot of competition among the developing regions, especially among those which are strongly affected by climate change but are not important in climate policy (Africa) and those which are probably less affected (Indonesia) but have to be included in a global deal in any case. Hence, one can speak of a twofold, but different vulnerability. ||



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The people who needed to leave their land due to the expanding plantation economy end up in Jakarta. Below the motorways at rivers, they are often victims of floodings that are also increasing in Jakarta due to deforestation.

here. Overcapacities of the Indonesian pulp and paper industry with their demand for wood increase this pressure.

| Indonesia as a victim of climate change

Climate change will also affect Indonesia severely starting with still higher temperatures that contribute to the spread of diseases and culminating in sea-level rise that will lead to the salinisation of farmland caused by floodings. A 60-cm sea-level rise would result in the loss of 2.000 islands and the resettlement of 800.000 houses. The rainy seasons will also change which will lead to longer dry periods as well as shorter and more intense rainy periods. This can already today be noticed. This change cannot be compensated by the fact that some regions of Indonesia will perhaps benefit from it.

“Adaptation must not be allowed to perpetuate the inequality in the world”

Interview with Dr. Bernd Bornhorst, Head of the Development Policy Department at MISEREOR

Mr. Bornhorst, when the discussion of climate change refers to “adaptation”, what is meant by that?

Within the debate on climate change the term is used to signify the social and economic changes that become necessary in the face of climate change. From the development perspective we are not referring to things such as helping ski resorts adapt to the lack of snow by using snow cannons, or growing Merlot instead of Riesling. We are concerned with adaptation that focuses on those most affected by climate change, the poorest of the poor. Adaptation is the sticking plaster that we need to apply to the wound, but it is just as important to close the wound itself by reducing CO₂ emissions. The aim is to avoid warming of more than two degrees against the baseline of 1900. The Earth’s atmosphere has already warmed by 0.8 degrees since the Industrial Revolution.

That leaves another 1.2 degrees – which sounds as though there is still plenty of time.

Two more degrees of warming, seen globally, turn the present interglacial period into a “fire age”. And even if the warming remains at less than two degrees, it will still have consequences that we must adapt to. Germany and Holland are already adapting their flood defences to the future rise in sea level, because it is assumed that that will be necessary. And climate change is already taking place in the developing world too. Obviously poor people are not talking about climate change, but about the weather. They are saying that severe weather is no longer predictable, that new species of fish are becoming established and familiar ones are migrating to other regions, that harvests are failing because the rain is not coming as it used to do, and that droughts are becoming increasingly common. There is already a need for adaptation, and it is the very poorest who are having to face up to it. If anything, therefore, we are running out of time.



Dr. Bernd Bornhorst

Does there come a point at which we have to give up on adaptation? For example – to use a commonly quoted scenario – if Bangladesh sinks into the sea?

For ethical reasons alone we can’t put the question in those terms. We must, firstly, strive to prevent this scenario happening, and secondly we must help people to cope now with the increasing floods and storms without incurring further losses. But adaptation will still be needed too. Adaptation and mitigation go hand in hand. The next 10 to 15 years will be crucial. Our generation must lead the way and must wholeheartedly pursue both mitigation and adaptation.

What sort of adaptive measures are required? For example, is it about building houses on stilts, as happened in the rebuilding of villages that were destroyed in the 2004 tsunami?

That can be one way forward. And while such houses are being built in the South, here in the North people are developing houses that float. Their hollow foundations are attached to steel posts that are anchored in the riverbed; if floods come, the house can float on the water like a buoy. In poor countries, by contrast, communities

living in endangered villages are being helped to cope with floods by being provided with lifejackets. Desmond Tutu, the former Archbishop of Cape Town, is therefore justified in warning of “climate apartheid”; he points out that the people of the rich world are being protected from disaster while the poor are exposed to the harsh reality of climate change in their everyday lives. Adaptation must not be allowed to perpetuate the inequality in the world.

What other adaptive measures do you consider necessary?

Disaster prevention measures are important: early warning systems for severe weather and the development of climate-resistant infrastructure, such as roads that are still usable if the sea level rises or there is further severe weather. We need to protect residential areas by building dykes and develop adapted healthcare systems. Agriculture must also adapt to the changing conditions and operate with greater diversity. That is the only way to ensure that plants provide adequate nutrition even under altered climate conditions. The greatest support must be given to people who have poor-quality land and little education, and to those who live on hillsides and riverbanks because there is no alternative open to them.

So it is about enabling people to survive where they are and preventing mass migrations of people?

There are going to be climate refugees, for example when the land no longer permits anything to be grown. But our aim must be to enable people affected by climate change to live in the areas that they know as home. To keep to the example of the sea level, the first step must be to prevent it rising further. The second step is to build dykes to protect people. Thirdly, rice production in the fields must be sustained, but with rice of traditional varieties that are relatively

Photo: Habermeier/AGEH-MISEREOR



Farmers work together to build an erosion protection wall in a forest garden on Haiti. This project, sponsored by MISEREOR, is a model for sustainable agriculture. It is helping to secure the food supply in times of climate change.

unaffected by salt water – so that the farmers can continue to live from it. Fourthly, we must find efficient ways of combating illnesses that will increase as a result of climate change. The classical approach to tackling poverty includes all those things too. Evacuation would be the last resort in a long list of options. To consider it first would be incompatible with our view of the dignity of human life. People should be able to decide for themselves where they want to live.

How do you help them to do that?

By using and promoting the potential of people locally. We assist people affected by climate change with advisory services, knowledge and technology transfer and the promotion and development of local knowledge. Alongside infrastructure programmes, sustainable agriculture will be particularly important in securing food supplies.

Our partners in the developing world have already encountered the implications of climate change at first hand, before it became something that everybody is talking about. Thus we have supported things like appropriate techniques for farmers in these countries – and then noticed that the soil was becoming dry and infertile, the water was no longer flowing away and periods of drought were lengthening. Many projects were already dealing with the effects of climate change without being labelled as addressing the issue of adaptation. But these projects are just a tiny part of what is needed. In addition to the relief organisations and NGOs, the industrialised nations must be involved. And at the same time the developing countries must be enabled to do what is necessary.

How is adaptation funded in developing countries?

In Bali an adaptation fund was approved; under the mandate of the UN, it will be administered on the principle of “one country – one vote”. This gives developing countries an equal say in the use of the funds. The setting up of the fund strengthens the credibility of the industrialised nations in the eyes of the South and is seen as an appropriate consideration in return for their climate mitigation efforts. For the South is being asked to adhere to standards of development that we have not yet attained ourselves – that is, to the model of “low-emission economic growth”, which is intended to prevent CO₂ output rising still further.

Recently, however, the USA, Japan and Great Britain have flourished large sums of money and announced that they are setting up a new adaptation fund at the World Bank, where they would be able to decide how the funds should be used. This would destroy what has been achieved in Bali – trust between developing and industrialised countries and the desire to address the problem jointly and on the basis of parity. In order not to endanger the international process, we are calling for the agreed adaptation fund to be strengthened and given appropriate financial backing. But even if the UN fund is realised, there is no automatic guarantee that projects that we

consider useful will be carried out. MISEREOR will therefore continue striving to ensure that the local population is involved in the application of the funds and that the money is used for the poorest of the poor.

How much money is needed, and where will it come from?

The adaptation fund agreed in Bali will be financed from a two-percent levy on emissions trading schemes benefiting climate mitigation projects in developing countries. However, the 26 million euros so far paid into the fund are but a drop in the ocean; this is the amount that Great Britain spends on coastal protection measures in a week. Well-founded estimates predict that up to 86 billion dollars will be needed.

This money should be in addition to the 0.7 percent of GDP that the governments of the industrialised nations long ago pledged to expend on official development assistance. Climate change is the price being paid for the affluence that the industrialised countries have created. Ever since the 1992 Framework Convention on Climate Change we have publicly declared that we recognise this. So we are responsible for the damage being done in developing countries and we must do something about it – we must live up to our responsibility! | |

Questions by Anja Ruf.

The forest is not only a carbon sink

Fair, effective and permanent forest protection by a new climate policy instrument?

| Anika Schroeder, Katrin Vohland
and Alexander Popp

Deforestation contributes to approximately one-fifth to the world-wide greenhouse gas emissions. Particularly in developing countries large areas will get lost. Forest protection recently makes progress within the framework of the climate protection agreement. However, it may involve great risks if applied wrongly.

Forest is not only a reservoir for wood, a carbon sink or an ecosystem but also a living space and economic zone for humans. They hunt here and gather fruits, mushrooms or medicinal plants. Forests protect against the impacts of extreme weather events and become thus more important than ever in times of climate change. Besides, a diverse ecosystem is more capable to adjust to changing environmental conditions. In spite

of the importance of tropical forests for climate, humankind and biodiversity, there is so far no effective international agreement for the protection of forests. An international forest protocol within the framework of the biodiversity convention or even a forest convention of its own is a distant prospect. All hopes thus concentrate on an effective forest protection within the framework of international climate protection policy.

We now discuss the instrument REDD, i.e. Reducing Emissions from Deforestation and Degradation. It is explored whether forest protection measures under REDD can be financed by market-oriented mechanisms like a global emission trading scheme. This however involves substantial risks. Fire and chainsaws can quickly destroy all successes made in forest protection. If protected forest areas generated emission rights that would be bought by industrial countries to allow them to emit more greenhouse gases, climate protection would be undermined. And if only a few parts

of protected forest areas were financed and national forest protection programmes were not brought into effect, this would bear the risk that forest would simply be cleared in neighbouring regions or countries.

“Avoided deforestation” – thus the protection of endangered forest – can prevent the loss of biodiversity. There is however no internationally acknowledged definition of forest. The Marrakech Protocol defines forest as an area that is covered by trees to a minimum of 15 per cent. Hence, palm-oil plantations which replace the species-rich tropical rain forest fall into the same category as intact rain forests. The reducing of forest to the amount of carbon bound in the trees could also result in the fact that funds from REDD are granted for plantations.

To warn against the social risks, 2000 people, mostly from the Indonesian civil society, demonstrated during the climate conference in Bali against including forest protection in the climate protection agreement. They feared that the role of forests as living space and economic zone for the local population and their traditional rights of use will not be sufficiently considered. Human rights are often violated when establishing protected areas. This can lead to violent conflicts. The Modhupur Eco Park Project in Bangladesh was for instance declared to be a national park without involving the local population. Part of the resident population, above all the Garos, were expelled, others were allowed to further live in the walled-in park. The gates were closed at night. 25 persons were hurt and one man was killed in protests over the national park in 2004. Reforestation projects for the international climate protection also meet problems, although they should promote a local sustainable development according to the climate protection agreement. A eucalyptus plantation in the form of a ring was planted around the national park Mount Elgon in eastern Uganda to protect the forest against “intruders”. This increases local conflicts around the national park.



Photo: KIVA / MISEREOR

A piece of intact rain forest on the Philippines. Effective instruments need to be created for global forest protection.

Photo: Sonja Birnschein



| Sustainability standards for forest protection measures under REDD?

International social and environment standards have only to some extent an influence on local conditions, since they are determined by the national governments according to the sovereignty principle. This means that the local population acts illegally in countries with unsettled land rights by defending themselves against protected areas or plantations and not those who expel them from their traditional land due to reforestation or forest protection measures.

If deforestation should be effectively decreased, their causes need to be precisely analysed. The expansion of infrastructure and cattle breeding supersede the forest in Brazil. In Indonesia, however, the conversion of forest into plantations for paper as well as the production of palm-oil for cosmetics, food and bio-fuels is prevailing. Large companies together with local decision-makers benefit from this overexploitation.

The role of smallholders in deforestation is controversial and regionally quite different. Poverty and a lack of access to land as well as a systematic resettlement or expulsion by large companies drive people into forests and unknown vegetation and cultivation zones. It is hardly possible for them to use land sustainably. Moreover, land rights are missing. Only these encourage people to conduct sustainable agriculture and thus allow for long-term forest protection programmes in cooperation with the smallholders.

The British economist Sir Nicholas Stern emphasises that land reforms and the introduction and strengthening of land titles for forested land is decisive for its protection. The hope of many nation states and great land owners for high revenues from compensation payments per hectare or ton carbon to dispense with the use of forest would thus not be justified. It can nevertheless be assumed that at the request of governments of forest-rich countries, the protection of forests

without land reforms and the strengthening of political institutions will also be rewarded. In this case, it will be important to flexibly adjust the “compensation” to changing (currently increasing) market prices for agricultural products that could be cultivated on forest areas.

If land owners and licence holders get compensation payments when they abandon deforestation, this may then however result in new justice gaps. A company might for instance get financial incentives; municipal governments whose inhabitants have no land rights or already use forests sustainably will however get none. On intergovernmental level, the question arises whether countries which have already protected forests for a long time would also benefit, or only those that recently started due to new financial incentives.

| Promote justice

The political framework for realising REDD and resulting international financial mechanisms need to promote justice. For this purpose, sufficient contributions for the protection of natural resources by industrial countries need to be provided by the industrial countries and effective control mechanisms need to be established in forest-rich countries. Forest protection programmes need to

A palm-oil plantation is being created. After the clearing of Indonesian rain forest, tree stumps are removed and drains are made.

consider the different causes of deforestation and should aim at not making any concessions regarding the destruction of valuable forest areas and land being allotted to those who have customary rights.

In order to secure that ecologically intact areas will be protected, an internationally valid definition of forests needs to be accepted that fully comprises their ecological functions. Participation in the planning, at least a previously informed acceptance of the inhabitants of affected forest areas, should absolutely be guaranteed. It should however not be forgotten that the greatest pressure put on forests is especially caused by the lifestyle of global consumers. This includes the high meat consumption as well as to an increasing degree the cultivation of “bio-energy”. Moreover, external national debt forces a non-sustainable export-oriented agriculture that leads to forest clearances. Therefore, the question of debt relief should also be asked anew. ||



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Cover against poverty

Microinsurance to cover climate risks

Photo: Dirk Reinhard



| Dirk Reinhard

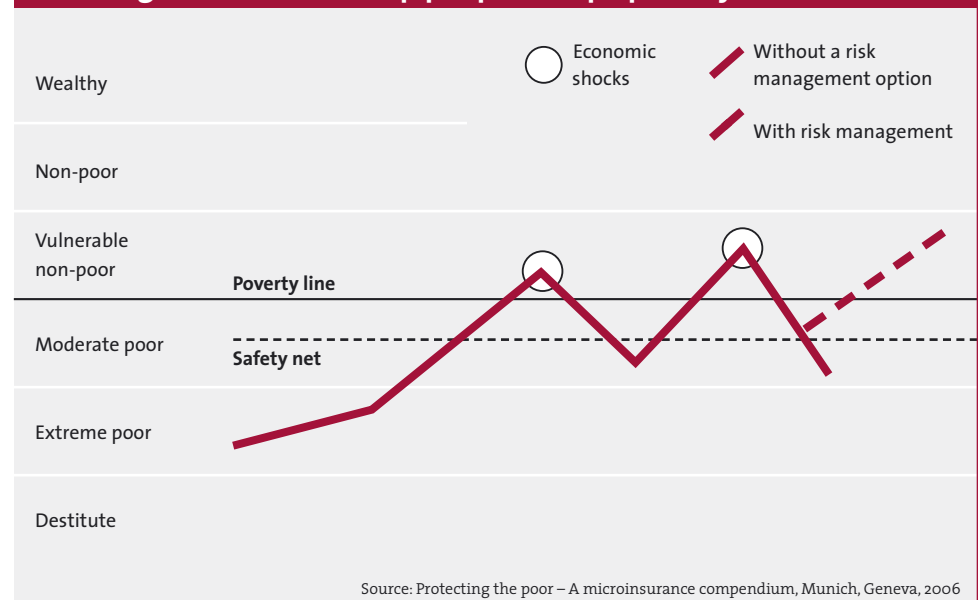
Loans and insurance can be a considerable help to people on low and irregular incomes. They enable many families to build up a livelihood and protect themselves from financial hardship. However, in the past they have been in short supply for those who will be most affected by climate change, the poorest of the poor.

Since the Grameen Bank first introduced microcredits in Bangladesh in the late 1970s, schemes of this kind have been an effective means of helping people to improve their financial situation and of fighting poverty. It is estimated that over half a billion people now take advantage of microcredits and other microfinance products. Such products help

them to establish a living and escape poverty – an increasingly urgent problem as the world’s population continues to grow. This model for helping people to help themselves achieved international distinction when Professor Yunus, founder of the Grameen Bank, was awarded the Nobel Peace Prize in 2006.

Microinsurance is an important addition to the range of microfinance products. It is normally tailored to the major risks to which the people of a particular region are exposed. De-

Cover against risks can help people escape poverty



Knife salesman in Mumbai, India. Hundreds of thousands of people in developing and emerging countries earn a living from micro-businesses. Their livelihood is on the line when natural catastrophes and other events cause economic crises. Microinsurance can be the solution.

spite a significant increase in the number of schemes and insureds in the last few years, it remains relatively low key. Nevertheless, even the most rudimentary of financial services are still beyond the reach of many in the developing world. Surveys carried out in late 2006 by the Microinsurance Centre, a US consultancy firm, found that fewer than 3% of the poor in the world's 100 poorest countries had access to insurance products, i.e. less than 80 million people.

This figure is far from adequate, particularly in view of the increasing risks posed by climate change. The UNDP's 2007 report on human development explicitly states that little or no insurance cover, low incomes and negligible to non-existent financial reserves often spell disaster for poorer families when extreme weather strikes.

| Demand for new natural catastrophe covers

Studies carried out by the CGAP Working Group on Microinsurance – a network of microinsurance experts – on behalf of the International Labour Organization (ILO) show that low-income households regard the incapaci-

ty of the family breadwinner as the biggest risk they face. Ill health and death are the main causes. However, even if breadwinners are not directly affected, they may still find themselves unable to earn money if, for example, they are cut off from their workplace by floods. A natural catastrophe therefore constitutes one of the greatest risks they encounter.

In essence, microinsurance is no different from other forms of insurance: losses suffered by individuals are borne by the community of insureds as a whole. The only difference is that the customers have not had access to financial instruments before. There is great need for information and awareness programmes. Many people in the regions concerned cannot read or write. Frequently, they are "insurance illiterate", believing that insurance works like a lottery. Policies therefore have to be simple and easy-to follow, with no complicated exclusions. Premium collection also has to be very flexible to ensure cover does not lapse if payments fall into arrears because the insured's income is irregular. In the absence of a suitable financial infrastructure, new sales channels will have to be established. At the same time, however, in view of the low premiums, administration will have to be highly efficient to ensure costs are kept under control. Future technological advances such as mobile data acquisition systems will play an important role in this.

Microinsurance developments follow two distinct paths, depending on the risks to be insured. The one aims to make social security systems (such as health insurance) accessible to the poor. The other aims to develop profitable products that target the low-income segment of the market. The distinctions are blurred. Given the enormous threat posed by natural catastrophes, microinsurance should be complemented by specially developed catastrophe bonds or weather derivatives and tailored reinsurance so that schemes are not put at risk by extreme events.

| Sustainable economic development

Numerous needs analyses have shown that the potential buyers of microinsurance are not the poorest of the poor, for whom other solutions are needed. Microinsurance caters more for people currently in the process of freeing themselves from poverty, for example after they have obtained a microcredit to help them set up in business. The Indian insurance regulator estimates the number of potential microinsurance customers in that country alone to be around a quarter of a billion. Without suitable cover they would probably be plunged back into poverty at the first economic setback (see chart).

Photo: B.Flitner/MISEREOR



Nothing will grow any more on this land in Burkina Faso. The poorest of the poor will not be able to afford microinsurance to cover increasing crop failures. Those primarily responsible for climate change should help to find solutions to insure the poor.

Case studies by microinsurance experts have also shown that the poor are more than ready to pay for cover if they believe the money is well spent. After all, in the long term they will “pay” a lot more if they do not have suitable cover. For example, if they have to sell their livestock to pay a medical bill or if their tools of trade are destroyed.

Insurance is just one of many instruments that help the poor manage the risks they face. Savings, loans and traditional mutual assistance options within the village or family soon reach their limits if losses follow one

another in rapid succession. Moreover, the precautionary and preventive concept of insurance and the detailed risk evaluation it involves offer enormous potential for preventing losses and the human suffering they bring.

Unlike state support or emergency external aid, insurance is a more reliable means of helping people find their own way out of crises. The past has shown that emergency aid is very much dependent on the region concerned and media reaction to the disaster; those affected cannot really rely on it. Moreover, people do not like having to accept charity.

| Cooperation with the insurance industry

Help is also needed from the insurance industry if microinsurance is to achieve a major breakthrough. Since many insurers are reluctant to assume the financial and administrative burdens involved, and most do not have access to the people concerned, aid organisations, local NGOs, government representatives and insurance industry will have to jointly take the initiative and work more closely with one another. The supervisory authorities need to create the right legal framework to facilitate the development of microinsurance.

However, developing appropriate microinsurance covers will be a lengthy process if adequate resources are not available. The Bill & Melinda Gates Foundation recently emerged as a major sponsor. The foundation will provide funding in the order of €16m over the next few years in support of the Microinsurance Agency set up by microfinance network Opportunity International. Its aim is that, by 2012, more than 20 million people will have microinsurance cover. The Gates Foundation is providing €20m in support of the Microinsurance Innovation Facility. This is backed by the CGAP Working Group on Microinsurance and provides start-up capital

Unlike state support or emergency aid by third parties, insurance is a more reliable means of helping people find their own way out of crises

for innovative microinsurance projects, technical expertise and research.

Commercial insurers are also taking a growing interest. Swiss Re, Munich Re and primary insurers like Allianz, Zurich Financial Services and Axa are starting to explore this potential growth market. US insurer AIG already has over 1.5 million customers in Uganda and has established a joint venture with India's TATA insurance company which is expected to have more than 100,000 customers by 2008 and as many as a million by 2012.

In the face of this demand, other companies are waiting in the wings. Microinsurance doubtless also has huge potential to offer people in developing countries cover against weather-related extremes and catastrophes. The current discussion hinges on whether premiums should be paid only by those concerned. Another potential source of finance would be to establish climate funds to which those primarily responsible for climate change would contribute. The issue has already found its way onto the agenda of the international climate forums and is set to be an even bigger talking point in the future. ||



Dirk Reinhard

is a graduate in industrial engineering and Vice-Chairman of the Munich Re Foundation.



Outlooks

How do you see the chances for an effective international climate protection after 2009? What are in your opinion the greatest barriers on this way?

Hartmut Graßl:

Since the 13th Conference of the Parties in Bali, I see strongly increasing chances for an effective global agreement. The main barriers are profits made from the extended use of production plants or products that have already been written off, instead of replacing them by less polluting ones.

Stephan Klasen:

The chances for an effective climate protection are continuously increasing. Much depends on the outcome of the American presidential elections where all strong candidates will do distinctly more than the office-holder. Only if the United States are actively taking part, it will be possible to also integrate China, India and other emerging countries. International agreements are always difficult to reach, since they can only be concluded by mutual agreement and the active participation of all (at least of the most important) emitters being vital to the success.

Joachim von Braun:

I consider the chances for an effective climate protection after 2009 quite positive. The world is today strongly sensitised,

especially due to the price increases in the agricultural sector. The greatest barrier on the way to climate protection is the perceived problem that it "will cost growth".

Dirk Messner:

There is the risk that the reduction commitments will be soft in order not to call off the negotiations – the price of which would be to actually abandon the two-degree target. Due to the complex goal conflicts, the time pressure until the next UN climate conference in 2009 in Copenhagen is enormous. The debate on an imminent global recession could remove the international climate discussion from the agenda within the next one and a half years. There is a lack of "global leadership" on the way to Copenhagen: The EU is on the right track, it has however only limited global creative power; the United Nations are the platform of the climate process, but are no political powerhouse; the United States are still the crux of the problem, not the solution.

Hartmut Grassl (Max Planck Institute for Meteorology – Climate Processes), Stephan Klasen (University of Göttingen), Joachim von Braun (International Food Policy Research Institute) and Dirk Messner (German Development Institute) are members of the advisory board of the project "Climate Change and Justice". | |

Service

Planned Public Conference of the Project "Climate Change and Justice" 2009

22nd-23rd January 2009

Ludwigshafener-Gespräche: "Climate Policy doing Justice to Development", Ludwigshafen/Germany

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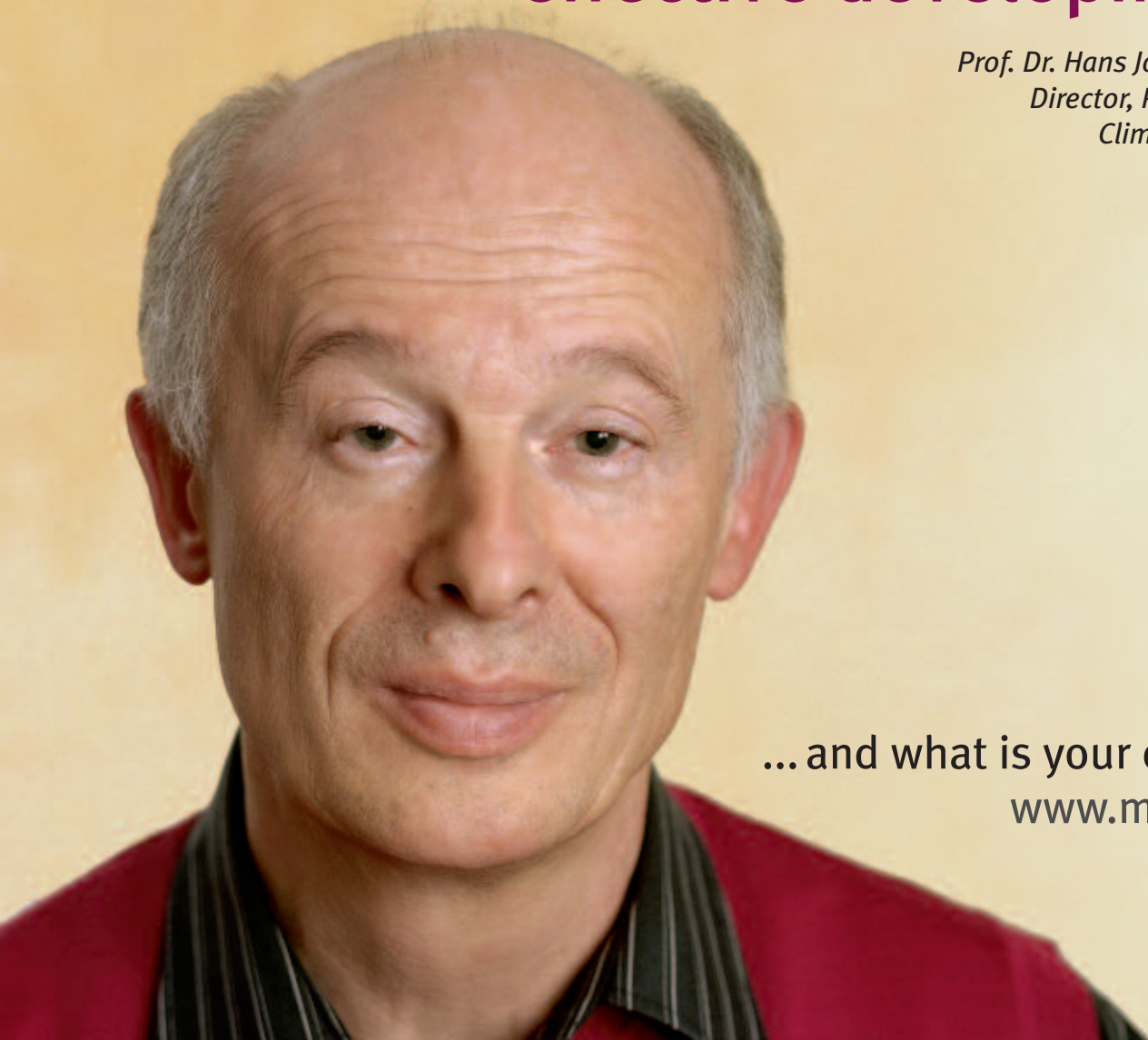
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effective development aid."**

*Prof. Dr. Hans Joachim Schellnhuber
Director, Potsdam Institute for
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