



## **Why Climate Change is a Moral and Economic problem**

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Cynics are people who know the price of everything and the worth of nothing, Oscar Wilde once said. In the past, many environmentalists considered economists as cynics because they objected the idea of climate protection: the damages of unabated climate change were assessed to be relatively small, while the costs of emissions reductions be particularly high especially in industrialized countries. Ambitious climatic policy aiming at drastic reductions of greenhouse gas emissions therefore did not seem to be recommendable. This picture has now been revised. In his recently published Review of the Economics of Climate Change the former chief economist of the World Bank, Sir Nicholas Stern, shows that the damages of unabated climate change are higher than previously assumed. In addition, it turned out that the costs of reducing emissions are substantially lower than they were considered a few years ago. If comparing the increased damages of climate change with the decreased costs of climate protection it becomes clear that a drastic reduction of emissions is economically reasonable. The Stern Review will make history as the Copernican turn in climate politics – the questions is no longer, whether we need ambitious climate policy, but what ambitious climate policy should look like. The economists question whether climate protection is worthwhile has now been answered: Ambitious climate protection is necessary and affordable. New scientific insights led to a re-valuation of international climate policies. The greatest merit of the Stern Review is the fact that it states these insights clearly and weights them correctly. Thus it opens a new debate about climate policy.

The damages caused by climate change are higher than expected: In the last years tipping points in the “system earth” could be identified. Passing these thresholds will lead to dramatic consequences: The acidification of oceans and drying out of rain forests due to climate change can accelerate global warming even further. Beyond that, recent calculations of US-economists show that extreme weather events such as storms or floods cause more damage in economically developed regions than previously assumed.

The costs of drastic reductions of greenhouse gas emissions are lower than feared: Recent studies at the Potsdam Institute for Climate Impact Research, which the Stern Review quotes several times approvingly, come to the conclusion that the costs of climate protection will be considerably lower if climate policy can mobilize innovations: increasing efficiency in the use of coal, oil and gas, promotion of renewable energy sources, and carbon capture and storage at large coal- and gas-fired power stations are indispensable components of any climate policy. It could be shown that under these

conditions ambitious climate protection costs less than 1 % of the world GDP, implying a delay in global economic growth during the 21<sup>st</sup> century by just a few months.

The damages of climate change can probably be limited to a controllable amount if the global average temperature does not rise more than 2°C compared to the pre-industrial level. On the basis of latest cost- and damage-estimations in the Stern Review it can be shown that the 2°C goal is economically reasonable. The Stern Review does not commit itself to the 2°C goal; it obviously does not consider it reachable. The reason for this pessimism probably lies in the fact that the possibility of temporarily overshooting the 2°C goal is excluded. A temporary increase of the average global temperature over the 2°C goal can be accepted, however, because the damage caused by this is small; at the same time relatively high cost can be avoided, because emissions can be reduced more slowly.

The climate negotiations taking place in Nairobi at the beginning of November will come up with no substantial progress - neither will further steps to reductions of the greenhouse gas missions be agreed upon, nor will negotiations taken up with large-scale emitting countries that so far have refused to accept obligations for reducing emissions like the USA, China or India. If climate protection is not only economically worthwhile but also necessary for the avoidance of dangerous climate change, why then is international climate diplomacy in a crisis? The answer is simple: Principally, all countries have to participate in climate policy. If, however, everybody is responsible, no-one is responsible. Each state, each enterprise is always tempted to sheer out of course and let others do the work. This is the moral dilemma of climate policy. Without the awareness that mankind is jointly liable for the dangers of climate change, all sophisticated international agreements will fail.

It is one of the biggest strengths of the Stern Review that it clearly formulates the moral problem of climate change in the language of economics: The industrial nations are responsible for those countries that will primarily be affected by climatic change. Already today an extreme tide costs the lives of hundred thousands in Bangladesh. These events will increase. The rich countries will have to support the poor countries to adapt to draughts, floods and streams of refugees to morally acceptable costs. Even if greenhouse gas emissions clearly decrease in the future, such support will remain necessary because avoiding climate change completely is not possible any more. It would, however, be irresponsible to increase - by loosening the global climate protection goal - the pressure to adapt to the consequences of the climate change even further, as above all mainly developing countries will be affected.

In addition, today's mankind is responsible for the future generations. They too have a right to relish economic growth and to overcome poverty. Wealthy countries have already used the atmosphere for their industrialization extensively. Therefore the Stern Review formulates a simple truth - whoever wants to emit greenhouse gases must pay for it. The use of the atmosphere can no longer be for free. The price for the use of the atmosphere will have to rise in the next decades; otherwise investments into climate protection cannot become profitable. Rising energy prices can only be prevented, however, if the efficiency

of the energy use rises considerably at the same time. Therefore an innovation offensive by the industrial nations is indispensable – this is the only way of lowering the economic costs of climate protection.

What are the technologies and innovations that will yield reductions in emission levels? Neither the public nor scientists agree on this: Some approve an aggressive employment of nuclear power, others favor particularly low-emission coal- and gas-fired power stations. Assessments of the potential of renewable energies are quite contended among experts. The debate about the best way for climate protection will be very controversial – and how else could it be, since the future of our power supply is closely linked with the question of how we want to live in the future. The costs and risks of different energy scenarios must be examined in the perspective of climate protection requirements and need a reevaluation on this basis. Energy politicians are only beginning to understand that the challenge of energy policy does not only lie in the supply of safe and cheap energy - energy policy will have to provide the main contribution to climate protection. There is certainly more than one way to an emission-free world economy. Right now we are still in a position to choose between different futures; we still have the time for a public debate. If, however, climate protection does not move into the focus of international policy very soon, we will not be able to choose anymore. We will then have to accept the dictatorship of unpleasant conditions.