



Climate change and energy supply

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1/ Who is affected by the issue? What are the main reasons for this issue?

The last 12 years have proven to be the warmest since data collection began in 1850. The average global surface temperature has risen by 0.74% over the last century. Scientists are warning of the grave effects of global warming and how it will affect *people all over the world*. On the one hand, there are fears of an increase in droughts, heat waves and ever expanding deserts. On the other hand, the melting of icebergs and glaciers is leading to a dramatic increase of the sea level, thus, causing an increasing number of tropical storms and flooding. Whole coast regions and island states are threatened. Both issues effect humans generally and specifically as famine and massive outflows of refugees can follow.

Primarily responsible are the increasing *CO2 emissions* made by humans (industry, households, traffic). Especially the field of energy supply via fossil fuels (lignite, hard coal, peat, gas and oil) for industrial purposes, for steel and power stations are particularly CO2-intensive. It is the industrial countries that bear the greatest responsibility for this situation. For decades, the USA was the biggest producer of carbon dioxide. In 2009 China superseded the USA as an aspiring emerging market; a nation of one billion inhabitants. The result of this constant growth in the number of emerging industrialized nations is an escalation of the global demand for energy. If these energy-intensive forms are utilized further and an auto-mobilization of these regions is continually promoted, the average surface temperature of the earth could increase dramatically.



2/ Who is responsible for finding solutions? Who should get involved in decision-making?

The issues concerning climate change and global warming can only be successfully and efficiently addressed on a global level. But international institutions such as the *United Nations (UN)* lack the mandates of countries for far-reaching solutions and a commitment to common regulation. Nevertheless, some significant climate conferences of international community states have taken place and heightened the awareness for collective action.

It is, above all, the first world climate conference in Rio de Janeiro (1992) in which the *Framework Convention on Climate Change* was adopted and which laid the path for the *Kyoto Protocol* (1997). The latter was successful as state countries finally committed to legally binding limitations on the levels of CO2 emissions for industrial countries. In 2012 the Kyoto Protocol expires and participants of the last world climate conferences (Copenhagen 2009, Cancún 2010, Durban 2011) were not able to agree on the most important issue; a second commitment phase. The UN plays an important role on the global level because it is legitimized by the international community of states. The principle of a unanimous vote on UN decisions often impedes the passing of guidelines for climate change and slows the problem-solving process down. As only concerted action is effective all UN states must participate in finding solutions for climate change.

From this point of view it is difficult to understand that the USA, as the biggest producer of CO2, was not prepared to sign the Kyoto-Protocol.¹ As the politics of climate change is a long-term issue particularly in view of sustainability for future generations, it is difficult to communicate the urgency for immediate action. Simply not acting has no direct or negative effect

¹ In 2001, Canada also backed out of the Kyoto-Protocol.

on countries and states and here lies the greatest difficulty for international climate protection policy.

Although effective resolutions for climate change can only be found on an international level, the *European Union (EU)* has played a pioneering role since the year 2000 by committing to a European Climate Change Program (ECCP) and establishing higher threshold values. In March 2007 the Council of the European Union passed a *Climate and Energy Package 20-20-20* with the convincing argument that climate protection can only go hand in hand with energy politics. The EU member states have set a target to reduce CO₂-emissions by 20% and to increase the proportion of renewable energy (solar, wind and water power) by 20% until the year 2020. To enable implementation, specific mechanisms such as emissions trading system (ETS) of 40% of CO₂-intensive industries have been introduced and national measures and action plans for the areas of transport, agriculture, waste industry and other smaller industries have been finalized.² Since the Lisbon Treaty in 2009, rules and regulations on climate protection are adopted by the *European Parliament* together with the *Council of the European Union* in co-decision. As the citizens of the EU directly elect members of the European Parliament there is a greater basis for legitimization. Additionally all over Europe, measures against climate change are also taken nationally and are adopted by the respective state parliament.



3/ How can this issue be permanently solved?

The politics of climate protection are very much a future oriented issue and are based on the sustainable development of policies for later generations. It is therefore necessary that national, European and international climate policies are constant, binding and foreseeable over years and terms of parliament. Short term decision-making will not do justice to the problem. A combined effort on a global platform is therefore of particular significance.

The next steps towards a second commitment phase of UN states on legally binding CO₂ reduction targets is planned for the next world climate conference in Qatar in 2012. If climate protection could be viewed as a *cross-cutting issue* that influences other areas such as economics or energy policies, an agreement between the different fields of politics would be desirable. Regarding future energy policies, energy supply structures need to introduce CO₂ reduced and renewable energies and to improve generally energy efficiency. E-mobility could be part of the answer for the area of automobile sector.

In view of the current economic crisis, an additional commitment to initially expensive climate protection seems to lead to a declining involvement of states and countries. *Climate protection and economic growth* are often seen as opposite vectors. However, on a long term time-horizon the cost-benefit calculation could be more economically positive than expected. The development of new technologies such as solar, wind and water power could enable new markets and new jobs. It is interesting to note that a recent study by Greenpeace showed that companies integrate climatic and environmental targets in their company policies when faced with a loss of image.³ It seems these companies are acting more efficiently than members of international politics who could find many solutions here. Following the logic of the market, *emissions trading system*⁴ could be a promising political tool to successfully reduce CO₂ emissions. The EU has already implemented this policy which is to be continually extended to further CO₂-intensive industrial states (so far only 40% of CO₂ emitters participate) and most importantly extended to a global platform. It is again the world wide implementation of such policies that is of such importance as enterprises would otherwise simply moved production to economically cheaper areas of the world.⁵

In the short term, European and international climate policies should advocate the inclusion of economic and social differences of states to enable the introduction of *compensation mechanisms*

² 2. Depending on the conditions such as economic growth and economic development, specific targets of reduction were set (Ireland, Denmark, Luxemburg = -20%, increase of emissions in Bulgaria capped at +20%).

³ <http://www.dradio.de/nachrichten/201203160800/9>; data collected on 16.3.12.

⁴ Emissions trading system is an environmental tool to sink levels of CO₂ emissions.

⁵ The phenomena is called "carbon leakage" and describes the relocation of CO₂ emissions from areas in which regulations apply, i.e. outside the EU.

(such as Joint Implementation and Clean Development) which do not influence negatively economic growth and the further development of poorer countries.⁶ It has often been stated that social aspects in climate and environmental policies must be taken into consideration on a national and regional level. A mandatory state and private renovation of buildings⁷ in accordance with the latest environmental standards cannot be justified as the costs would be transferred to rent prices at the expense of the poorer communities. Paramount for the protection of our climate is, aside from *Investments in Research and Future Technologies* the creation of an awareness for climate change and the assuming of responsibility for coming generations.

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⁶ Industrial countries have the possibility to finance environmental projects and the creation of energy efficient infrastructure in developing countries and can thereby improve their own carbon footprint.

⁷ Improved insulation stops loss of energy and increases energy efficiency.