



Towards a “global deal” on climate change

Background Session I: Scientific and policy recommendations for climate stabilization in the post–2012 climate regime

By burning fossil fuels humans have released huge amounts of carbon dioxide (CO₂) into earth’s atmosphere. From 280 parts per million (ppm) in the middle of the nineteenth century the atmospheric concentration has risen to about 380 ppm today. Because CO₂ traps heat from the sun in the atmosphere, global climate has warmed by about 0.8 degrees Celsius in that time. Scientists now expect a warming of 1.1 to 6.4 degrees Celsius from 1990 to 2095 – depending on how much more greenhouse gas is emitted.

The impacts of climate change are far-reaching and in some cases unpredictable. Sea level rise is regarded as one of the greatest risks. In a warmer climate, heavy rains and droughts are likely to occur more often and more intensively. Extreme events will reduce agricultural production in many already poor countries. Many species of plants and animals will probably not be able to adapt to rapid warming and face extinction unless emissions are quickly and dramatically reduced.

To avoid the most dangerous consequences, the European Union has decided to halt global warming below two degrees Celsius. To reach this goal, global CO₂ emissions need to be at least halved by 2050 in comparison to 1990 levels and must peak in the next ten to fifteen years. Economic modeling shows that this is affordable for less than one percent of gross domestic product. And there is no time to lose: The Kyoto Protocol parties need to begin negotiations on a “global deal” this year to reach an agreement by 2009 so that it can be ratified and enter into force by 2012, the end date of the first commitment period of the Kyoto Protocol.

Industrialized countries are primarily responsible for climate change and need to take on a leading role in the mitigation efforts through the adoption of deep mandatory emissions reduction targets for 2020. The major emerging economies must also contribute more action on an equitable basis. The involvement of developing countries in a staged approach must also take into account their per capita emissions and income and the impacts that these countries are already experiencing today. The expansion of the global carbon market is an important element in the post–2012 agreement. Deforestation, accounting globally for almost a fifth of emissions, must also be reduced, linked with new financing mechanisms, including the exploration of the carbon market.