

CDM in the EU Climate Package – Internal vs. external effort

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1. NECESSARY EFFORTS TO MEET THE EU'S 2°C LIMIT

Stabilization of atmospheric concentrations in the 21st century at any level requires a significant departure from current emission levels. Global emissions will need to decline significantly compared to today's level. They will have to drop below the 1990 level and decline to almost zero over time. The earlier the emissions peak and decline, the lower the stabilized concentration level as well as the absolute level of climate change and the earlier climate change is attenuated. Figure 1 provides possible pathways and corresponding temperature increase.

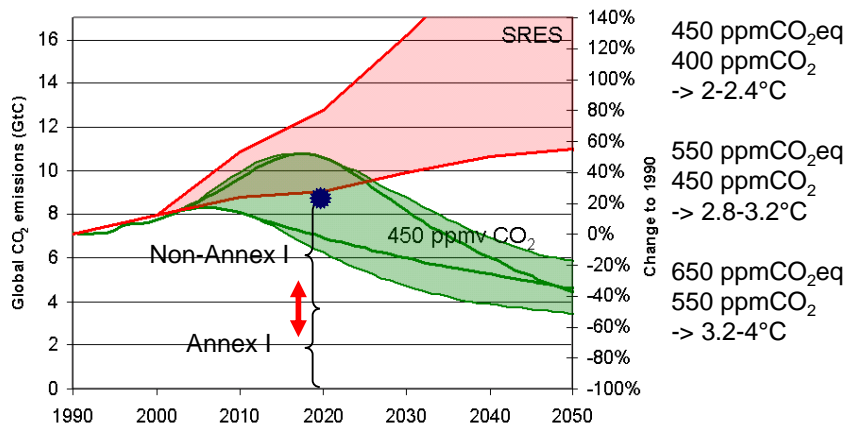


Figure 1. Required stabilization levels and corresponding equilibrium temperature increase.

Table 1 shows necessary reductions below 1990 levels for Annex I countries and the below the baseline for Non-Annex I countries. The values were prepared by the IPCC by comparing studies that have analysed various proposals to share efforts among countries.

Table 1. Necessary reductions in 2020 to keep stabilization at various concentration levels within reach (Source: IPCC 2007, Box 13.7 and Den Elzen and Höhne 2008)

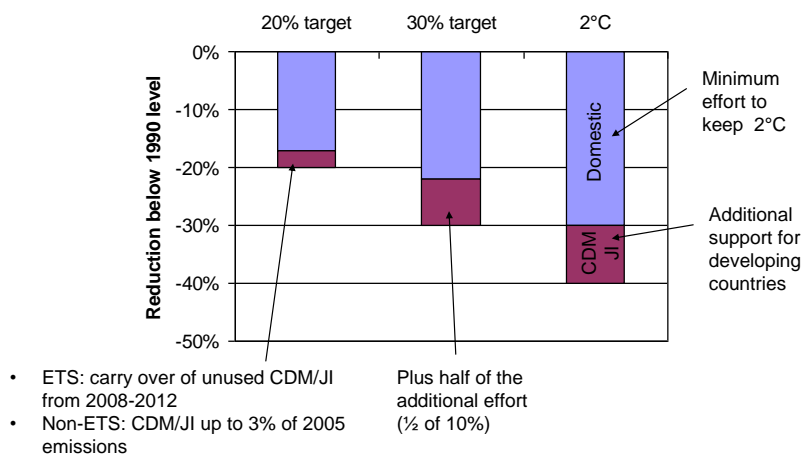
Scenario category	Annex I	Non-Annex I
A-450 ppm CO ₂ -eq ²	-25% to -40% below 1990	<ul style="list-style-type: none"> Substantial deviation from baseline in Latin America, Middle East, East Asia and Centrally-Planned Asia Non-Annex I: -15% to -30% below baseline
B-550 ppm CO ₂ -eq	-10% to -30% below 1990	<ul style="list-style-type: none"> Deviation from baseline in Latin America and Middle East, East Asia Non-Annex I: 0% to -20% below baseline
C-650 ppm CO ₂ -eq	0% to -25% below 1990	<ul style="list-style-type: none"> Non-Annex I: 10% above to 10% below baseline

2. COMPARISON TO PROPOSAL OF CLIMATE PACKAGE

The targets proposed in the energy and climate package allow for the use of CDM and JI. For an overall reduction of 20% below 1990 level roughly 3 percentage points by CDM/ and JI is allowed. For the stricter 30% target, 8 percentage points CDM/ and JI would be allowed (see Figure 2).

A target that is compatible with 2°C would however require at least 30% domestic reductions plus support for developing countries, e.g. as demand for credits from CDM/JI. Assuming that developing countries' emissions can be reduced by roughly 10% below baseline by no-regret measures (Höhne et al. 2008), substantial additional support by developed countries may be necessary, so that their emissions are reduced 15% to 30% below baseline.

Figure 2. Emission reductions in the EU split in domestic and external (CDM/JI)



3. CONCLUSIONS

Limiting global temperature increase to 2°C requires Annex I countries to reduce their emissions -25% to -40% below 1990 level and at the same time Non-Annex I countries' emissions to be -15% to -30% below baseline. Some 10% reduction below baseline can be achieved in developing countries as "no-regret options", meaning there are monetary or other benefits (such as energy security) in implementing them. For the remaining reductions, developing countries may receive some support from developed countries.

An EU target that would be compatible with limiting climate change to 2°C would be to reduce emissions at least -30% below 1990 domestically plus to provide support for developing countries through CDM or other carbon mechanism at the order of magnitude of additional 10 percentage points.

References

- Den Elzen, Michel and Niklas Höhne. (2008). Reductions of greenhouse gas emissions in Annex I and non-Annex I countries for meeting concentration stabilisation targets. *Climatic Change* (forthcoming).
- Höhne, Niklas, Christian Michelsen, Sara Moltmann, Herman E Ott, Wolfgang Sterk, Stefan Thomas and Rie Watanabe. (2008). *Proposals for contributions of emerging economies to the climate regime under the UNFCCC post 2012*. Cologne, Germany: Ecofys, Wuppertal Institut.
- IPCC. (2007). *Climate Change 2007. Mitigation of climate change*. IPCC Assessment Reports. Geneva, Switzerland: Working Group III, IPCC Secretariat (International Panel on Climate Change). <http://www.ipcc.ch>.