

EMISSIONS AND CO₂ CONCENTRATIONS AT RECORD HIGHS: DEVELOPED COUNTRIES AMBITION STALLED WHILE DEVELOPING COUNTRIES GEARING UP TO ACT

Climate Action Tracker Update, 16 June 2011

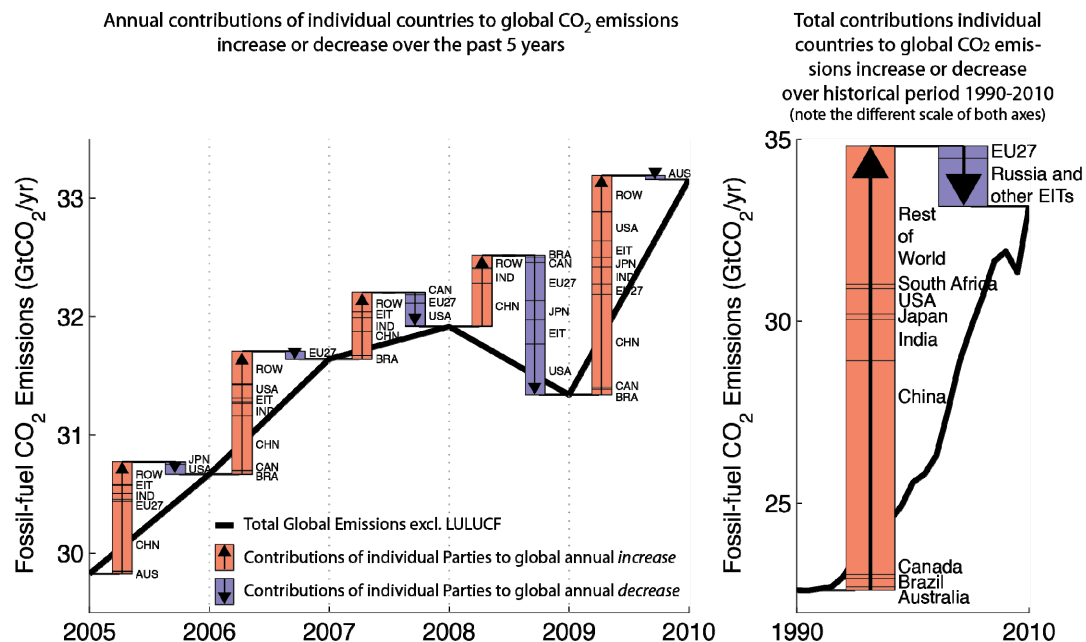
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In this update the Climate Action Tracker provides some insights from the workshops and other material presented by countries at the on-going climate talks in Bonn.

Emissions at historic high: Action not

Despite the recent financial recession, global CO₂ emissions in the energy sector grew by 10% overall over the past 5 years, from about 30 GtCO₂ in 2005, to 33 GtCO₂ in 2010 (excl. LULUCF).

While the recession led to a decrease in emissions in industrialised countries, it only slowed the growth in most developing countries. The recession had a strong impact on emissions in the USA, nevertheless its emissions overall have increased considerably: it is the source of the largest emission increase of any developed country since 1990. In China and India energy sector CO₂ emissions grew in the last 5 years by more than 40% and 45% respectively. The emissions of the EU27 have decreased since 1990, reflecting substantial investment in climate policies in the last decade. Russian emissions have decreased overall since 1990, principally due to the collapse of the former Soviet Union.



Contribution of selected Parties is only shown annually if these make a significant contribution to global annual increase/decrease
Selected Parties: Australia (AUS), Brazil (BRA), Canada (CAN), China (CHN), EU27, India (IND), Japan (JPN), Russia and other Economies In Transition (EIT), South-Africa (ZAF), USA, Rest of World (ROW)
Emission data source: BP Statistical Review of World Energy 2011

UNFCCC workshops see emissions gap unchanged since Cancun

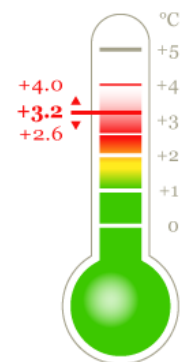
Two workshops were held at the Bonn climate talks 9 to 10 June 2011, as mandated in the Cancun Agreements. The workshop on 9 June allowed *developed* countries to clarify the assumptions and conditions of their proposed emission reduction targets. The workshop on 10 June allowed *developing* countries to clarify assumptions made in relation to their pledges and actions, and to indicate the support needed for implementation of their proposed actions. This was the second round of workshops after the first round at Bangkok in April 2011.

Whilst there was a lot of useful information there were no new announcements that would increase the level of ambition and thereby help to close the emission gap.

From the global point of view, national mitigation activities in China are very relevant as China is now the largest global emitter. In Bonn, China explained its new 5-year plan for the period 2011 to 2015, which includes new detailed national targets to achieve the internationally pledged reduction in greenhouse gas intensity (emissions per GDP) of 40% to 45% from 2005 to 2020. China achieved a 19% improvement in energy efficiency (energy consumed per unit GDP) from 2006 to 2010, only 1% short of its national target of a 20% improvement for that period. New national targets for energy efficiency and greenhouse gas intensity (emissions per GDP) were set until 2015. If the policies and targets included in the 5-year plan are implemented, China would achieve at least its international pledged greenhouse gas intensity target, and possibly exceed it.

Overall, the aggregated emission-reduction pledges of all Parties fall far short of what is needed to get the world on track for limiting global warming to 2 and 1.5°C above pre-industrial levels. Both of these warming limits are mentioned in the Cancun Agreements. Similar emission levels are needed in 2020 to meet both temperature targets: Global emissions need to be at 40-44 billion tonnes CO₂ equivalent per year by 2020, and to steeply decline afterwards.

The Climate Action Tracker added up the international¹ reduction target and pledges of individual countries, and has estimated that global emissions in 2020 would 54 billion tonnes CO₂e/year in 2020: A gap of 10-14 billion tonnes remains to reach the reduction level required. If countries implemented the most stringent reductions they have proposed, with the most stringent accounting, the Climate Action Tracker has calculated the remaining gap would shrink to 8-12 billion tonnes².

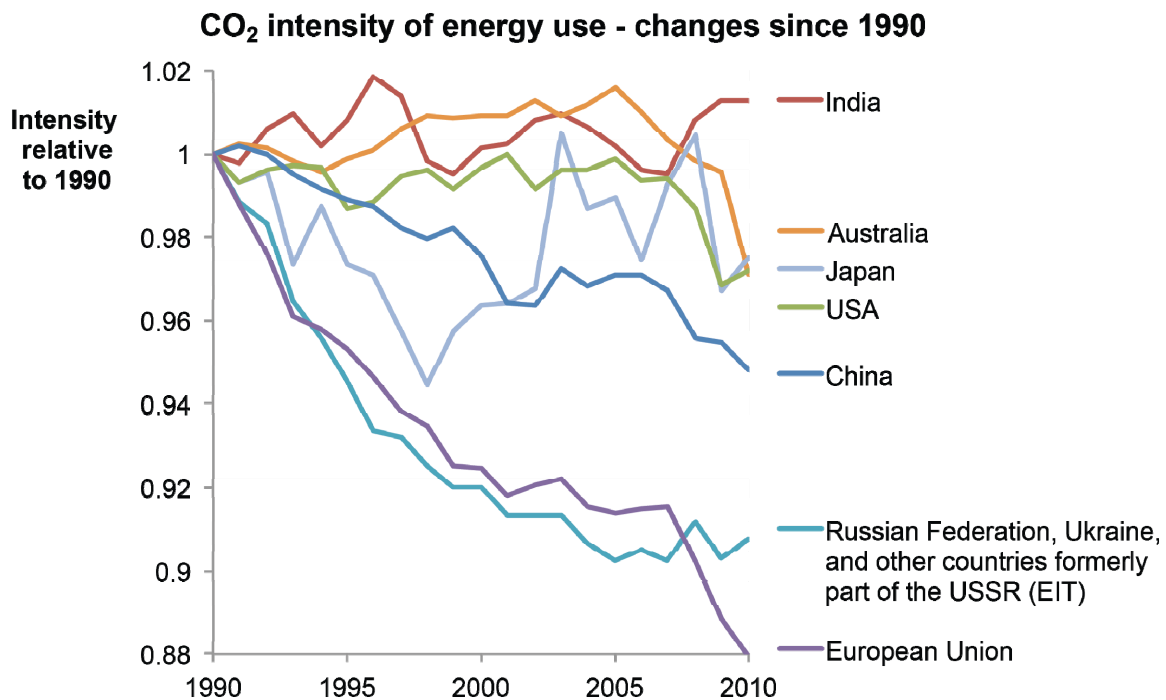


¹ Some countries, in particular China and India, have national policy plans that go beyond pledges made in the international climate negotiations. The CAT has analyzed these as well, but the key numbers provided here concern the status of, and progress in, the international negotiations and therefore exclude these national plans.

² The UNEP Emission Gap Report presented in Cancun, December 2010 estimated a smaller remaining gap at 5-9 GtCO₂e, assuming a 2020 2°C-consistent level of 44 GtCO₂e (rather than a range of 39-44 assessed in that report) and including the effect of national policy plans beyond international pledges.

Why have emission increased, or, why does the carbon intensity of energy matter?

Emissions have risen more rapidly in some countries due to either a slow increase in energy efficiency and/or a slow trend in decarbonisation. Data to 2010 shows that over the period 1990-2010 the EU and China have achieved a long-term decarbonisation (reduced CO₂ emissions per unit energy use). In the last five years, decarbonisation seems to have taken off in the USA and in Australia, but Canada and India have made little improvement. In all countries, except India, energy efficiency (energy use per unit of GDP) has improved strongly, without which emissions would have risen much stronger. Improved efficiency is good news for achieving 2020 reduction targets. In the very long term, however, there will be limits to energy efficiency and deep emission reductions can only achieved by strong and ultimately complete decarbonisation.



Data Source: BP Statistical Review of World Energy 2011

Developed countries: little additional action and fragmented accounting rules

At the workshops in Bonn, no developed country increased the ambition level of their *international* pledge. Most developed countries also reported little progress in implementation of *national* policies to reduce greenhouse gas emissions. In the Cancun Agreements it was acknowledged that aggregate reduction ambition is not sufficient and that developed countries were encouraged to increase their ambition level.

While the nominal reduction targets were not changed, the ambition level could be changed by setting environmentally sound and strong rules for accounting of land use,

land use change and forestry (LULUCF) to limit the credits from this source. LULUCF credits add to the allowed emissions of industrial GHGs for Annex I Parties. Reducing the use of surplus allowances in future commitment periods would also reduce the allowed level of Annex I emissions in the future.

Forestry

In 2011, developed country parties formally submitted their forest management reference levels for the second commitment period of the Kyoto Protocol based on a decision in Cancun. Forest management reference levels, if agreed, would be used to define credits from forest management activities. If forests are a greater sink in 2020 than the reference level then a credit is obtained, and if a lesser sink then a debit is obtained. Potential exists for Parties to put forward reference levels that inflate the level of credits to be obtained. This potential is reinforced by the decision to allow Parties to choose the reference level that would best suit the national circumstances of their countries.

Many Parties have projected forest management reference levels forward to the 2013-2020 period. A small group of countries have chosen 1990 as their base year and one country has chosen zero as their reference level. Many of the reference levels are a net emission over current levels, on the order of 700 MtCO₂eq/yr above mean 2000-2009 levels collectively for Annex I. This implies that higher emissions in the future from forest management (potentially from higher harvest rates) are endorsed by the process, or that some countries will receive large credits for no additional mitigation action if trends over the last 10-20 years continue. These trends indicate that forest sinks could be higher than the present level for many Parties.

Unless there is a way to limit credits from the LULUCF sector it is unlikely that a higher level of ambition for reaching the emission reduction targets can be reached.

Surpluses

The current negotiating text of the Kyoto Protocol includes options that would allow countries to use allowances originally meant for the period until 2012 beyond that date. Used and traded after 2012, these 'surplus' allowances could raise the emission limits of developed countries to an extent that, as a whole, developed countries would not need to implement any further climate policies additional to current practice at least up to 2020. Effectively, these surplus allowances would allow equalizing emissions to business-as-usual levels, thus adding about 3-9% to the emission limit relative to 1990, or about 0.6-1.6 billion tones of CO₂ equivalent. But these effects will only occur if the allowances are bought and used. Currently Australia, Japan and New Zealand could be potential buyers. During the current Kyoto Protocol period, Japan, Switzerland and Germany as well as others have been active buyers of surplus AAUs. For the future it is not clear which countries would be buyers of surplus AAUs. The EU will not recognize surplus AAUs from the first commitment period.

Developing countries: significant planning activities

Developing countries reported at the workshops significant new planning activities to reduce emissions in the future. This is remarkable because for many years most developing countries refused to commit to actions and to engage in detailed mitigation activities requesting action by developed countries first. Now with the Cancun Agreements, many developing countries have committed to actions to reduce emissions and are undergoing a national planning process to implement them. In most

cases this has not yet had significant impact on emission trends, but could in the future.

At the workshop, Ethiopia and Kenya presented timelines to provide comprehensive low emission strategies by the end of the year. Chile presented their efforts to identify nationally appropriate mitigation actions in various sectors. Vietnam showed their efforts to identify mitigation options.

Background on the Climate Action Tracker

The “Climate Action Tracker”, www.climateactiontracker.org, is a science-based assessment by Ecofys, Climate Analytics and the Potsdam Institute for Climate Impact Research (PIK) that provides regularly updated information on countries’ reduction proposals.

The Climate Action Tracker³ reflects the latest status of the progress being made at international climate negotiations. The team that performed the analyses followed peer-reviewed scientific methods (see publications in Nature and other journals)⁴ and significantly contributed to the UNEP Emissions Gap Report⁵.

The Climate Action Tracker enables the public to track the emission commitments and actions of countries. The website provides an up-to-date assessment of individual country pledges about greenhouse gas emission reductions. It also plots the consequences for the global climate of commitments and actions made ahead of and during the Copenhagen Climate Summit.

The Climate Action Tracker reveals major differences between the ambition levels of countries when it comes to reducing greenhouse gas emissions. In the lead are the Maldives, which have proposed to become climate-neutral by 2020. At the high end of the scale are Bhutan, which proposes to stay carbon neutral and Costa Rica, which proposes to become carbon neutral by 2021 if international support is provided. They are followed by Brazil, Japan, Norway, Papua New Guinea and South Korea, who are proposing to reduce their emissions significantly. In the ‘medium’ range are developing countries such as Chile, India, Indonesia, Mexico and South Africa. Many of them propose to reduce the growth of their emissions by the 2020s. The EU is a special case. Its unconditional commitment of 20% reduction is rated ‘inadequate’. However, the adoption of the 30% reduction target would move the EU into the ‘medium’ range and very close to ‘sufficient’. China is rated ‘inadequate’, because its target falls short of the ambition level that was expected from the implementation of the current national policies. Between the middle and the bottom of the scale is the United States, whose target is ‘inadequate’. At the very bottom end of the scale are countries that have yet to propose substantial action beyond ‘business as usual’. Among them are Russia and Moldova.

The Climate Action Tracker shows that much greater transparency is needed when it comes to targets and actions proposed by countries. In the case of developed countries, accounting for forests and land-use change significantly degrades the overall

³ www.climateactiontracker.org

⁴ e.g. <http://www.nature.com/nature/journal/v464/n7292/full/4641126a.html> and <http://iopscience.iop.org/1748-9326/5/3/034013/fulltext>

⁵ www.unep.org/publications/ebooks/emissionsgapreport

stringency of the targets. For developing countries, climate plans often lack calculations of the resulting impact on emissions.

Contacts

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Dr. h.c. Bill Hare (bill.hare@climateanalytics.org) (PIK and Climate Analytics) was a lead author of the IPCC Fourth Assessment Report, is a visiting scientist at PIK and CEO at Climate Analytics.

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Ecofys - www.ecofys.com

Ecofys is a leading knowledge and innovation company that operates in the field of renewable energy, energy efficiency and climate change. We deliver research and service solutions from product development to implementation management. Our clients are energy companies, financial institutions and corporate businesses, governments and local authorities, international institutions, project developers, housing associations, building companies and energy consumers around the world.

Climate Analytics - www.climateanalytics.org

CLIMATE ANALYTICS GmbH is a non-profit organization based in Potsdam, Germany. It has been established to synthesize climate science and policy research that is relevant for international climate policy negotiations. It aims to provide scientific, policy and analytical support for Small Island States (SIDS) and the least developed country group (LDCs) negotiators, as well as non-governmental organisations and other stakeholders in the 'post-2012' negotiations. Furthermore, it assists in building in-house capacity within SIDS and LDCs.

Potsdam Institute for Climate Impact Research (PIK) - www.pik-potsdam.de

The PIK conducts research into global climate change and issues of sustainable development. Set up in 1992, the Institute is regarded as a pioneer in interdisciplinary research and as one of the world's leading establishments in this field. Scientists, economists and social scientists work together, investigating how the earth is changing as a system, studying the ecological, economic and social consequences of climate change, and assessing which strategies are appropriate for sustainable development.