Summary
Bangkok climate talks have not changed the gap between emission reduction pledges and what is needed to get the world on track for limiting global warming to 2 and 1.5°C above pre-industrial levels. No developed country attempted to increase their reduction target as it was requested in Cancun Agreements and in the mandate for the workshop held in Bangkok. Only few countries clarified their actions to the extent that it would raise the ambition, but the effect of most countries' clarifications is unclear. Major issues of uncertainty remain, such as the carryover of unused allowances, accounting for forest, business-as-usual emissions in developing countries, exact conditions for implementing more ambitious pledges, such as details of the comprehensive international agreement for some developed countries and the scale of financing support needed for some developing countries.

Introduction
Emission-reduction pledges, after the close of the Cancun climate conference, fall 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. To keep warming limited to the 2 and 1.5°C targets, global emissions need to drop to 44-40 billion tonnes CO₂ equivalent per year by 2020. After adding up reduction proposals of individual countries and taking into account accounting provisions, expected global emissions leave a gap of 10-14 billion tonnes by 2020 to what is required. If countries implemented the most stringent reductions they have proposed, with the most stringent accounting, the remaining gap would shrink to 8-12 billion tonnes, according to the Climate Action Tracker, a website that provides an independent assessment of individual counties' emission reduction proposals and their global aggregate. The Climate Action Tracker¹ 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)² and significantly contributed to the UNEP Emissions Gap Report³.

¹ www.climateactiontracker.org
Two workshops were held at the Bangkok climate talks 3 to 8 April 2011. The workshop on 3 April allowed *developed* countries to clarify the assumptions and the conditions of their proposed emission reductions and ways to increase their level of ambition. The workshop on 4 April allowed *developing* countries to clarify underlying assumptions made and any support needed for implementation of their proposed actions.

Several elements are relevant for estimating expected global emissions in 2020 as a result of the actions proposed by countries:

- What is the proposed percentage reduction from a base year or business-as-usual level?
- What is the exact definition of the scope of the target, i.e. the exact base year emission level or baseline scenario used, the list of sectors covered under the target?
- What means will be allowed to achieve the target, e.g. can allowances be used that were not used in earlier commitment periods, how much of the reductions can be achieved through offsets in other countries or which rules apply for accounting of forests?
- What are the exact conditions under which conditional targets apply?

**No direct increase in ambition level**

No developed country attempted to increase their reduction target, as was requested in Cancun Agreements and in the mandate for the workshop. All developed countries presented their already known pledges. No developing country showed an increase in the level of ambition of their pledges. Many countries stated that their targets and/or pledges would be increased if there were a more ambitious and legally binding global agreement.

**Few clarifications that could increase the ambition level**

Some clarifications could have an effect on the global emission levels in 2020, raising the ambition:

- **European Union**
  - International aviation is part of the EU Emissions Trading Scheme from 2012 onwards and therefore affects the 20% target. International aviation is expected to be a buyer of allowances, effectively making the EU’s 20% target 1-2 percentage points more stringent (exact details are unclear due to lack of data). EU international aviation emissions in 2008 were equivalent to about 2.5% of 1990 GHG emissions for the EU.
  - EU will not recognize the use of surplus AAUs from the first commitment period of Kyoto in the accounting rules of its post-2012 target.
  - If there is no progress on international marine emissions at the international level the EU will include these in some form in the EU Emissions Trading Scheme. EU international marine emissions in 2008 were equivalent to about 3% of 1990 GHG emissions for the EU.

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3[www.unep.org/publications/ebooks/emissionsgapreport](www.unep.org/publications/ebooks/emissionsgapreport)
The 20% reduction by 2020 from 1990 target applies to a single base year (1990) for all member states and all gases (unlike for Kyoto where for some countries a different based year than 1990 can be used, or where 1995 can be used as base year for fluorinated greenhouse gases).

The EU will not apply forestry (land use, land-use change and forestry, LULUCF) accounting until further notice (e.g. moving to 30%).

Offsets will be allowed to cover a maximum of 4 percentage points of the 20% target, i.e. 16% reductions will be domestic at a minimum.

- **Indonesia**
  - The target of 26% below BAU is unilateral and 41% could be achieved with financially supported Nationally Appropriate Mitigation Actions (NAMAs). Additional reductions could be achieved through the carbon market, which is a new element.

- **Australia**
  - New information was provided on how its targets of -5%, -15% and -25% from 2000 levels by 2020 are to be interpreted and calculated. First, it is clear that these targets are set by Australia with respect to its 2000 GHG emissions excluding LULUCF plus deforestation emissions (ARD) in that year. The ARD emissions appear to be based on those reported under Kyoto Article 3.3. Hence the proposed targets are not set according to the Kyoto architecture. This architecture sets allowed emissions as a percentage of 1990 GHG emissions excluding LULUCF (as agreed in Cancun) plus, for countries with a LULUCF source in 1990, only deforestation emissions in 1990. We interpret the Australian target as setting an absolute allowed emission level in 2020 of 530 MtCO2e, 474 MtCO2e, and 419 MtCO2e for the -5%, 15% and -25% targets respectively. These can be converted to Kyoto equivalent targets and the likely increase in GHG emissions excluding LULUCF by 2020 compared to 1990 levels estimated. Expressed as a Kyoto equivalent commitment (e.g. as an amendment to Annex B of the Protocol) the -5% goal would be -3% from 1990 (the Australian target in the first commitment period is +8%)⁴. Taking into account projected ARD emissions 2020 and the benefits gained from Article 3.7 by Australia, this Kyoto equivalent target would permit an increase in GHG emissions excluding LULUCF of 17-27% above 1990 levels in 2020. The range is due to different estimates that can be made for likely future ARD emissions for 2020. For the -15% goal the Kyoto equivalent target range is +3% to +12% from 1990 levels; and for the -25% goal the range is -1% to -10% from 1990 levels (GHG emissions excluding LULUCF). Australia is the only country to quantitatively define its conditions for moving to higher levels of ambition with specific values for the joint efforts by developed countries group and developing countries group. This is more detailed than before, but still open to interpretation and appears to move away from the commitment to hold warming to below 2°C by referencing only concentration levels of 450 CO2e, which have a 60% chance of exceeding 2°C.

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⁴ This assumes that Article 3.7 applies to Australia based on the present Kyoto architecture. For comparison with a situation without deforestation emissions in the base year, where targets are set only with respect to Annex A GHGs, the target corresponding to the -5% from 2000 goals would be an increase of 27% from 1990 levels.
• **Bangladesh**
  • Presented its mitigation actions, although it has not made a submission under the Copenhagen Accord and the Cancun Agreements.

### Several clarifications with uncertain impact on ambition level

Several countries clarified their actions, which could have a positive or negative effect on the global emission levels in 2020:

• **USA** reaffirmed the 17% reduction below 2005 in 2020 as an economy-wide target to be implemented through various national policy instruments. It stated that the target applies to all sectors according to the agreed IPCC guidelines for national greenhouse gas inventories. Forests will be accounted at the broadest possible scope. There is significant uncertainty surrounding the consequence of this target for reductions in industrial GHG emissions (all emissions excluding LULUCF) due to uncertainties in the LULUCF emission estimate. If the estimate based on official data reported in 2009 is used, this target would likely translate to a 3% increase above 1990 levels of industrial emissions, whereas the estimate based on data reported in 2010 (as used in the CAT most recently) would result in a likely 3% reduction from 1990 levels for industrial emissions. Estimates based on the newest draft data reported in 2011 indicate that the industrial emissions would be close to 1990 levels. The important issue is that these uncertainties arise from the same or very similar historical periods and differences are a result of technical revisions to data and methods. In addition, the USA mentioned that LULUCF adjustments may be made for natural disturbances and other factors but details were left unclear.

A larger uncertainty is the policies for the national implementation of the target. Whilst the Administration maintains a strong commitment to the goal, the legal and political processes at national level are confronting its attempts to embed policies.

• **Singapore** disaggregated its conditional pledge of 16% below BAU into a 7 to 11% unconditional and a 16% conditional on a legally binding agreement. Details of the conditions for that agreement were not provided.

• **Marshall Islands’** pledge is no longer conditional on an international agreement, only conditional on financing. However details on the magnitude of financing needed are still being generated.

• **Norway** emphasized the importance of clarifying LULUCF rules and revising countries’ targets after the rules have been agreed. For its own targets of 30% and 40% it attributed 6 percentage points of the pledged reductions to LULUCF. This implies industrial emissions would to be reduced 24% for the unconditional pledge and 34% for the conditional pledge. These reductions for industrial emissions will remain fixed, even if a different set LULUCF rules is adopted or new inventories change the original 6% estimate. This clarification does not change the overall evaluation of their level of ambition, but it is a positive step forward towards understanding level of ambition.
One clarification with impact lowering the ambition level

One country clarified its actions, which has a negative effect on the global emission levels in 2020:

- **Brazil** for the first time presented a business-as-usual level in 2020 that is the basis for their 36% to 39% reduction target. This level is significantly higher than the level that can be derived from the submission to the Copenhagen Accord made in January 2010. This is due to additional sources included in the historical emissions and larger projected emissions from deforestation and other sources. Hence the allowed absolute emission level under the target is significantly higher. Brazil has now characterized its actions as conditional on financial support.

Major issues still need clarification

There are several issues that were not yet covered by the workshops and that need to be covered by future similar discussions:

- The current negotiating text 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.

- **Russia** remained very unclear on its baseline emissions, intended use of forestry credits and carryover of emission allowances not used in the first commitment period of the Kyoto Protocol. These decisions can have an impact of up to several billion tonnes of CO₂ equivalent on the total global emissions in 2020.

- **No developed country** that has a second more ambitious but conditional target clarified their conditions for increasing the ambition, except Australia. These countries usually mention as a condition a comprehensive international legally binding agreement with comparable commitments by others. In the Cancun Agreements, countries have put forward actions but these seem not to satisfy the conditions. Moving to the more ambitious targets could further reduce emissions by around 1 to 2 billion tonnes of CO₂ equivalent.

- **Many developing countries** did not quantify their expected emissions in 2020. China and India did not present an estimation of total emissions in 2020 as a result of their intensity target. Both stated that business as usual is not a concept that they can quantify. The uncertainty introduced by this issue by China and India alone is 3 billion tonnes of CO₂ equivalent on the global total in 2020.

- Uncertainty remains around the target of Japan.
• Most developing countries did not provide details on the financial support needed to implement the conditional pledges. South Africa showed some illustrative example activities and magnitude of billions of US$ needed for covering the “full incremental costs” of these activities.
• Intended use of carbon offsets to contribute to the conditional targets of developing countries is still unclear for most countries.

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

Contacts

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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.