

# Loopholes Negate Pledges for Emission Reductions

## Overview

Rather than a cut on 1990 level emissions, current pledges by developed countries are likely to result in a net increase on this baseline once “loopholes” are taken into account.

The pledges to cut emissions by 2020 are made relative to existing and proposed accounting rules that significantly reduce the net level of emission reductions. The true level of environmental performance depends on many factors including whether individual countries elect to use particular loopholes. However, the rules now in force open the way for the current pledges to result in a net increase in emissions over 1990 levels.

If the cuts assumed to result from the pledges are adjusted to account for the loopholes available, there is the potential for a net rise in emissions of 2% to 8% above 1990 levels when the low and high end of the ranges are directly compared (see table below). This is before counting the effect of credits sourced through the clean development mechanism – an adjustment that could further erode the effectiveness of the pledges.

Measure	Impact Relative to 1990 Levels
IPCC Target Range	-25% to -40% (cut)
Aggregate Emission Reduction Pledges (Annex 1 countries)	-11% to -19% (cut)
Effect of “Loopholes” (excluding CDM)	+13 to +27 (rise)
Net Impact on the Atmosphere	+2 to +8 (rise)

The estimates that are most important to this calculation are based on European Commission analysis. They demonstrate how far developed nations have to go to bring forward pledges that would at least meet the IPCC target range for developed nations of emissions falling to between 25% and 40% below 1990 levels, by 2020.

## Context – The 2020 Pledges

### *The IPCC Target*

The IPCC estimates that to be in line to achieve a target concentration of greenhouse gases of 450 ppme (often associated with limiting the global temperature rise to 2 degrees C), industrialised countries need to cut emissions by between 25% and 40% below 1990 levels.

### *Current Pledges*

In November, the UNFCCC assessed the current pledges for emission reductions by 2020, issued by countries with binding Kyoto targets (known as Annex 1 parties). It estimated that these would result in a collective reduction of 11-17% below 1990 levels. Since then, Russia has nominated a target and Climate Analytics estimates that including this pledge, the overall effect of the Annex 1 pledges is to take their emissions to 11-19% below 1990 levels - an average of 15%.<sup>1</sup> (The low estimate is based on an assessment of the least the pledges could be expected to deliver and the upper level is based on higher reduction targets also offered).

### *Treaty Compliance vs Environmental Performance*

It is important to note that the pledges are made relative to existing and proposed treaty rules. That is, they are commitments relative to particular accounting arrangements and exclusions that significantly reduce the level of total emission reductions that would be measured in the atmosphere.

To understand the true level of environmental performance that the pledges represent, it is necessary to distinguish between progress made relative to these accounting rules, and progress relative to the total emissions being released to the atmosphere. This involves assessing the scale of emissions that the rules do not count.

## The Loopholes

There are four major classes of rules that diminish the effective level of environmental performance. The following assesses each of these “loopholes” in turn.

### *Hot Air*

Under the Kyoto Protocol, Annex 1 countries must surrender AAU certificates equal to their emissions (where each AAU corresponds to one tonne of carbon dioxide equivalent). Each is issued with AAUs equal to its target and if it overshoots, it can purchase AAUs from others that have a surplus. Russia and former Soviet states have a large surplus of AAUs (known as hot air) as a result of the collapse of the Soviet economy soon after the 1990 base year. If other Annex 1 countries purchase these AAUs, they can comply with the Protocol but there will be no net reduction in emissions to the atmosphere.

To assess the extent of the AAU surplus, a number of assumptions need to be made. A European Commission analysis that assumed Annex 1 parties would cut emissions to 30% below 1990 levels put the excess at 4% of 1990 levels.<sup>2</sup> However, current

<sup>1</sup> <http://www.climateactiontracker.org/developed.php>. See also:

<sup>2</sup> <http://www.wri.org/publication/comparability-of-annexi-emission-reduction-pledges>

“The impact of this amount of surplus AAUs on the achievement of a -30% reduction target for developed countries by 2020 is significant. If it is assumed that the surplus AAUs under

emission reduction pledges by Annex 1 parties add up to much less than this. During a meeting at the Copenhagen COP 15, the EU presented a slide that recalculated the impact on the basis of the highest level of pledges offered and this indicated the surplus would be higher – bringing it to the equivalent of 7%.<sup>3</sup> However, an assessment by Climate Analytics suggests the overhang is larger still:

The total amount of surplus AAUs is large enough to allow the Annex I countries as a group to follow a business-as-usual emission pathway until after 2020 (longer after 2020 for the lowest end of the Copenhagen reduction proposals), while still complying with the currently announced reduction targets. This implies that overall emissions of the developed countries would be only 3% below 1990 levels by 2020 (about equal to business as usual).<sup>4</sup>

Other analyses have also highlighted the scale of this problem and suggest that the surplus AAUs could result in up to a 15% reduction in environmental performance, compared to that pledged.<sup>5</sup> Much depends on assumptions but on the basis of current pledges, the estimated range of possible impacts of the surplus AAUs is from about 7% to 15%.

### **Land Use**

Rules governing accounting for emissions from land use<sup>6</sup> vary significantly from those for fossil fuel use. They allow countries to elect whether to account for these at all, use different accounting bases for different land uses, and cap some emissions.<sup>7</sup> In all, they provide considerable opportunity for countries to lessen their emissions liability under FCCC rules while still adding emissions to the atmosphere.

The European Commission estimates that if all loopholes were fully exploited by Annex 1 countries, this would result in a 9.2% reduction in the effective performance of future commitments.<sup>8</sup> Different rules deliver different contributions to this

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the Kyoto Protocol are consumed for compliance purposes at a constant rate over the period 2013-2023 by the group of all developed countries (including the USA), then a total of 737 million AAUs (= 1474 x 5 / 10) would be available each year up to 2020. This would represent 4% of 1990 emissions of this group, including the USA.” European Commission Copenhagen communication staff working document, SEC(2009) January 2009, [http://ec.europa.eu/environment/climat/pdf/future\\_action/part1.pdf](http://ec.europa.eu/environment/climat/pdf/future_action/part1.pdf) p 60.

<sup>3</sup> The slide showed an additional 3% equivalent. Slide presented by the EU on 9 December 2009.

<sup>4</sup> <http://www.climateactiontracker.org/developed.php>

<sup>5</sup> Jens Buurgaard Nielsen and Christian Holz, *Background for developed country targets as the atmosphere really seems them*, Draft in preparation, 12 December 2009, suggest the surplus represents up to a 15% change on 1990 levels. See also: Point Carbon, *Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime*, A report for CAN Europe, 26 October 2009.

<sup>6</sup> Emissions from land use and land use change are termed LULUCF in UNFCCC accounting terms.

<sup>7</sup> “For different sectors there are different accounting rules. Forests activities are accounted for using the so-called 'gross-net' accounting method while for agricultural activities (cropland and grazing land management) the 'net-net' accounting approach was adopted. In the case of forest management, 'national caps' were agreed in the Marrakech accords, which were in part politically motivated and which are due for review before 2012”. European Commission Copenhagen communication staff working document, SEC(2009) January 2009, p 28 and 29.

<sup>8</sup> “Unconstrained accounting for forest management applied together with the current rules of gross-net accounting would lead to very large credits from the LULUCF sector in the order of -8.7% of 1990 emissions for the EU and -9.2% for the whole group of developed countries. This is equivalent to almost one third of the suggested target of -30% by 2020 compared to 1990 that the EU proposes for the whole group of developed countries. In addition, the

reduction and the impact would be less if the full scope of the loopholes were not accessed by all nations. The EU's recent briefing at COP 15 suggests that use of these at the low end to the range would result in a loophole equal to 3% of 1990 emissions.<sup>9</sup>

When the land use rules were first established, they were intended to be reviewed prior to the new commitment period from 2013 to 2020. The European Commission has recommended significant reform to at least curb the impact of these rules but some of its member states along with other countries that have forestry and land use interests seek to have distorted land use rules continue. It is unclear what the overall impact of the new rules proposed at COP 15 would be but they suggests a level similar to that estimated by the European Commission – a loophole with a range equivalent to 3% to 9% of 1990 emissions.<sup>10</sup>

### ***International Transport Fuels***

Emissions arising from fuels for international aviation and shipping (known as bunker emissions) are currently not included under the Kyoto Protocol. They constitute one of the fastest growing sectors globally in terms of greenhouse gas emissions. If they are not required to be counted as a part of Annex 1 country obligations post 2012, then this will continue to remain a significant loophole. Proposals have been made for their inclusion but there is no agreement to date and no inclusion in the draft text.

Total bunker emissions in 1990 for Annex 1 countries were 560 Mt of CO<sub>2</sub>e, and 816 Mt by 2005.<sup>11</sup> Nielsen and Holz extrapolate from this to derive business as usual emission levels of 1,210 Mt by 2020 – an increase of 650 Mt or more than 100%.<sup>12</sup> This is equivalent to 3% of Annex 1 1990 emissions. Nielsen and Holz also point out that the impact of aviation emissions on global warming is at least double that currently registered in UNFCCC reporting and that if this is allowed for, they estimate a loophole with a 6% effect. However, as allowance for this effect would involve a change to how equivalences are calculated, at this stage a conservative estimate of 3% seems appropriate.

### ***Credits Earned in Developing Countries (CDM)***

Some credits earned by Annex 1 countries in developing countries derive from projects that result in a net reduction in emissions. However, other credits are tied to projects that do not decrease emissions overall.<sup>13</sup> The European Commission indirectly acknowledges that the Clean Development Mechanism (CDM) is open to this.<sup>14</sup>

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method of gross-net accounting without applying a cap or a discount factor does not provide an accurate account of the real net carbon fluxes due to human-induced activities.” European Commission Copenhagen communication staff working document, SEC(2009) January 2009, p 57.

<sup>9</sup> Slide presented by the EU on 9 december 2009.

<sup>10</sup> The proposals are set put in: *Chair' Proposed Draft Text on the outcome of the work of the ad hoc working group on long term cooperative action under the convention*, 11 December 2009, pages 8 to 16.

<sup>11</sup> [http://unfccc.int/ghg\\_data/ghg\\_data\\_unfccc/time\\_series\\_annex\\_i/items/3814.php](http://unfccc.int/ghg_data/ghg_data_unfccc/time_series_annex_i/items/3814.php)

<sup>12</sup> Jens Buurgaard Nielsen and Christian Holz, *Backgrounder for developed country targets as the atmosphere really seems them*, Draft in preparation, 12 December 2009.

<sup>13</sup> This includes project that would have proceeded without CDM support.

<sup>14</sup> “The use of CDM credits and removal units generated through the LULUCF sectors is expected to further increase the amount of surplus AAUs over the period 2008 – 2012 and thus the potential negative impact on the environmental effectiveness of a given reduction

Nielsen and Holz estimate the use of offsets in 2020 at between 1.1 and 1.7 Gt CO<sub>2</sub>e - equivalent to between 6% and 9% of 1990 emissions.<sup>15</sup> There is however a high level of uncertainty over what proportion of CDM credits do not provide net gains for the atmosphere. Further, the draft rules presented to COP 15 provide for the “standardisation” of baselines for the assessment of CDM credits and this could well alter the proportion of credits that will in future fail to deliver a net reduction,<sup>16</sup> while there have also been calls for restraints that would govern the proportion of CDM that could be used by a country to meet its commitments. Overall, the size of this loophole is subject to a high degree of uncertainty. We therefore note its potential threat but do not include this in the quantitative assessment of the total level of exclusions.

### ***Conclusion***

If the cuts assumed to result from the pledges are adjusted to account for the loopholes available, there is the potential for a net rise in emissions of 2% to 8% above 1990 levels when the low and high end of the ranges are directly compared. This is before counting the effect of credits sourced through the clean development mechanism. The estimates demonstrate how far developed nations have to go to bring forward pledges that would at least meet the IPCC target range for developed nations of emissions falling to between 25% and 40% below 1990 levels by 2020.

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target in 2020.” European Commission Copenhagen communication staff working document, SEC(2009) January 2009, p 61.

<sup>15</sup> This is based on analysis of offset limits in existing or proposed EU and US legislation. Jens Buurgaard Nielsen and Christian Holz, *Background for developed country targets as the atmosphere really seems them*, Draft in preparation, 12 December 2009.

<sup>16</sup> The proposals are set put in: *Chair’ Proposed Draft Text on the outcome of the work of the ad hoc working gorup on long term cooperative action under the convention*, 11 December 2009, pages 10 to 11.