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To designated IPCC Focal Points and
Ministries of Foreign Affairs (MFAs)
(if no focal point has been designated)

COPY

Geneva, 31 October 2013

Sir/Madam,

I wish to address you on the matter of two errors in the Summary for Policymakers (SPM) of the Working Group I (WGI) Contribution *Climate Change 2013: The Physical Science Basis* to the IPCC Fifth Assessment Report, that have been discovered by the authors of the report after approval and acceptance at the 12th Session of Working Group I and the 36th Session of the IPCC in Stockholm, September 2013.

The two errors, which require correction before publication of the SPM, are the following:

The first concerns the cumulative emissions from fossil fuel consumption and cement production up to year 2011 section B.5, Bullet 4. In the revision of the First Order Draft (FOD) of the WGI SPM, values were revised to include the year 2011, as requested in the government comments. Unfortunately, the FOD value of cumulative emissions was not updated. Therefore, the 10 GtC emitted in 2011 need to be added to these values. This correction will consequently propagate into the total anthropogenic emissions and the residual land sink in B.5 Bullet 5.

The second concerns numbers and information for additional likelihood levels that the Panel requested in the very late hours of the WGI Plenary for E.8 Bullet 2 of the WGI SPM. These include the past cumulative emissions for 1870-2011 and the cumulative emissions compatible with the 2°C target. A cross-check by the authors has revealed that small changes to the numbers given in Stockholm should be made.

In the text below, red highlights the numbers to be corrected, yellow marks the corrected values.

Revisions to B.5 Bullet 4 and B.5 Bullet 5:

B.5 Bullets 4 and 5 Approved:

- From 1750 to 2011, CO₂ emissions from fossil fuel combustion and cement production have released **365 [335 to 395]** GtC to the atmosphere, while deforestation and other land use change are estimated to have released 180 [100 to 260] GtC. This results in cumulative anthropogenic emissions of **545 [460 to 630]** GtC. {6.3}
- Of these cumulative anthropogenic CO₂ emissions, 240 [230 to 250] GtC have accumulated in the atmosphere, 155 [125 to 185] GtC have been taken up by the ocean and **150 [60 to 240]** GtC have accumulated in natural terrestrial ecosystems (cf. cumulative residual land sink). {Figure TS.4, 3.8, 6.3}

B.5 Bullets 4 and 5 Corrected:

- From 1750 to 2011, CO₂ emissions from fossil fuel combustion and cement production have released 375 [345 to 405] GtC to the atmosphere, while deforestation and other land use change are estimated to have released 180 [100 to 260] GtC. This results in cumulative anthropogenic emissions of 555 [470 to 640] GtC. {6.3}
- Of these cumulative anthropogenic CO₂ emissions, 240 [230 to 250] GtC have accumulated in the atmosphere, 155 [125 to 185] GtC have been taken up by the ocean and 160 [70 to 250] GtC have accumulated in natural terrestrial ecosystems (i.e., the cumulative residual land sink). {Figure TS.4, 3.8, 6.3}

Revisions to E.8 Bullet 2:

E.8 Bullet 2, Approved:

- Limiting the warming caused by anthropogenic CO₂ emissions alone with a probability of >33%, >50%, and >66% to less than 2°C since the period 1861–1880²², will require cumulative CO₂ emissions from all anthropogenic sources to stay between 0 and about 1560 GtC, 0 and about 1210 GtC, and 0 and about 1000 GtC since that period respectively²³. These upper amounts are reduced to about 880 GtC, 840 GtC, and 800 GtC respectively, when accounting for non-CO₂ forcings as in RCP2.6. An amount of 531 [446 to 616] GtC, was already emitted by 2011. {12.5}

E.8 Bullet 2, Corrected (and values for GtCO₂ added per the request by the Panel as part of the approved SPM):

- Limiting the warming caused by anthropogenic CO₂ emissions alone with a probability of >33%, >50%, and >66% to less than 2°C since the period 1861–1880²², will require cumulative CO₂ emissions from all anthropogenic sources to stay between 0 and about 1570 GtC (5760 GtCO₂), 0 and about 1210 GtC (4440 GtCO₂), and 0 and about 1000 GtC (3670 GtCO₂) since that period, respectively²³. These upper amounts are reduced to about 900 GtC (3300 GtCO₂), 820 GtC (3010 GtCO₂), and 790 GtC (2900 GtCO₂), respectively, when accounting for non-CO₂ forcings as in RCP2.6. An amount of 515 [445 to 585] GtC (1890 [1630 to 2150] GtCO₂), was already emitted by 2011. {12.5}

Appendix A to the Principles Governing IPCC Work, ANNEX 3 *IPCC Protocol for addressing possible errors in the IPCC Assessment reports, Synthesis Reports, Special Reports and Methodology Reports* (referred to below as “Error Protocol”) lays down the procedures to address alleged errors in the SPM of a Working Group Contribution (see Error Protocol Section 2, Step 5A). If Co-chairs and relevant Coordinating Lead Authors (CLAs) agree that there is an error they construct an error statement and submit to the WG Bureau for approval. The Co-Chairs of WGI have informed us that this step has been concluded.

The Error Protocol further stipulates: “Following WG or TF Bureau approval, the proposed erratum is submitted to the Panel for approval. To allow for rapid response, the Panel may delegate this approval step to the Executive Committee, which can decide that the erratum be posted on the IPCC and WG or TF websites and that the claimant be informed, or can decide to defer to the next session of the IPCC Bureau or of the Panel.”

As you are aware, there is very high interest and demand for the WGI SPM, which is already widely consulted and downloaded in its electronic format. A brochure is ready for publication and distribution at the upcoming UNFCCC COP 19 and other important meetings. The immediate correction of the errors described above is, therefore, desirable. Consistent with the Error Protocol we suggest to use the option foreseen for rapid response and in particular to submit the corrigendum, as constructed by the WGI Co-Chairs and CLAs and approved by the WGI Bureau, to the IPCC Executive Committee for approval at its next meeting, scheduled on 6 November 2013.

The SPM in its final form including copyedits and the correction of these errors would be made available in advance of UNFCCC COP 19 for download from the WGI and IPCC web sites together with a notice in the form of an erratum stating that the errors have been corrected.

I sincerely hope that you agree with the proposed way forward, which will enable us to distribute a fully accurate version of the WGI SPM. Unless we hear any objections by 6 November 2013, 10:00 a.m. Geneva time we will proceed as suggested.

A copy of this letter is being sent to the Ministry for Foreign Affairs, the Permanent Representative with the World Meteorological Organization (WMO), and the United Nations Environment Program (UNEP) Focal Point(s) of your country for information.

Yours sincerely,



(Renate Christ)
Secretary of the IPCC