

Annex I – List of Working Group III AR5 Errors in the Summary for Policymakers

The Summary for Policymakers (SPM) of the Working Group III (WGIII) contribution to the IPCC Fifth Assessment Report, Climate Change 2014: Mitigation of Climate Change was approved and accepted by the IPCC Panel on 12 April 2014. The version that was released on that date was subject to copy edit and final layout.

The copy-edited version of the SPM is now posted on www.mitigation2014.org. Errors have been corrected and the errata to the 12 April version of the SPM are given below. For full transparency, the background to this step is described here.

Errors in the SPM were discovered by the authors of the report after its approval and acceptance by the IPCC. These errors have been handled in accordance with the IPCC Protocol for addressing possible errors in the IPCC Assessment Reports, Synthesis Reports, Special Reports and Methodology Reports (the Error Protocol). For an error in an SPM, the Error Protocol 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.” The Panel was notified about the errors and proposed corrections in a letter from the IPCC Secretariat on 02 May 2014 and agreed to delegate the approval of the errata to the Executive Committee.

On 12 May 2014 the IPCC Executive Committee approved the errata that had been provided by the Co-Chairs of WGIII and that were already approved by the WGIII Bureau. These corrections have been included in the final version of the SPM that will be made available to the 40th session of the Subsidiary Body for Scientific and Technological Advice (SBSTA), to be held from 4 to 15 June 2014 in Bonn, Germany, and that is now available from the WGIII web site. The WGIII report will be published by Cambridge University Press in autumn 2014.

WGIII AR5 SPM Error/Errata to 12 April 2014 pre-copy-edit version:

Corrections of content-related errors

SPM.3, Footnote 7

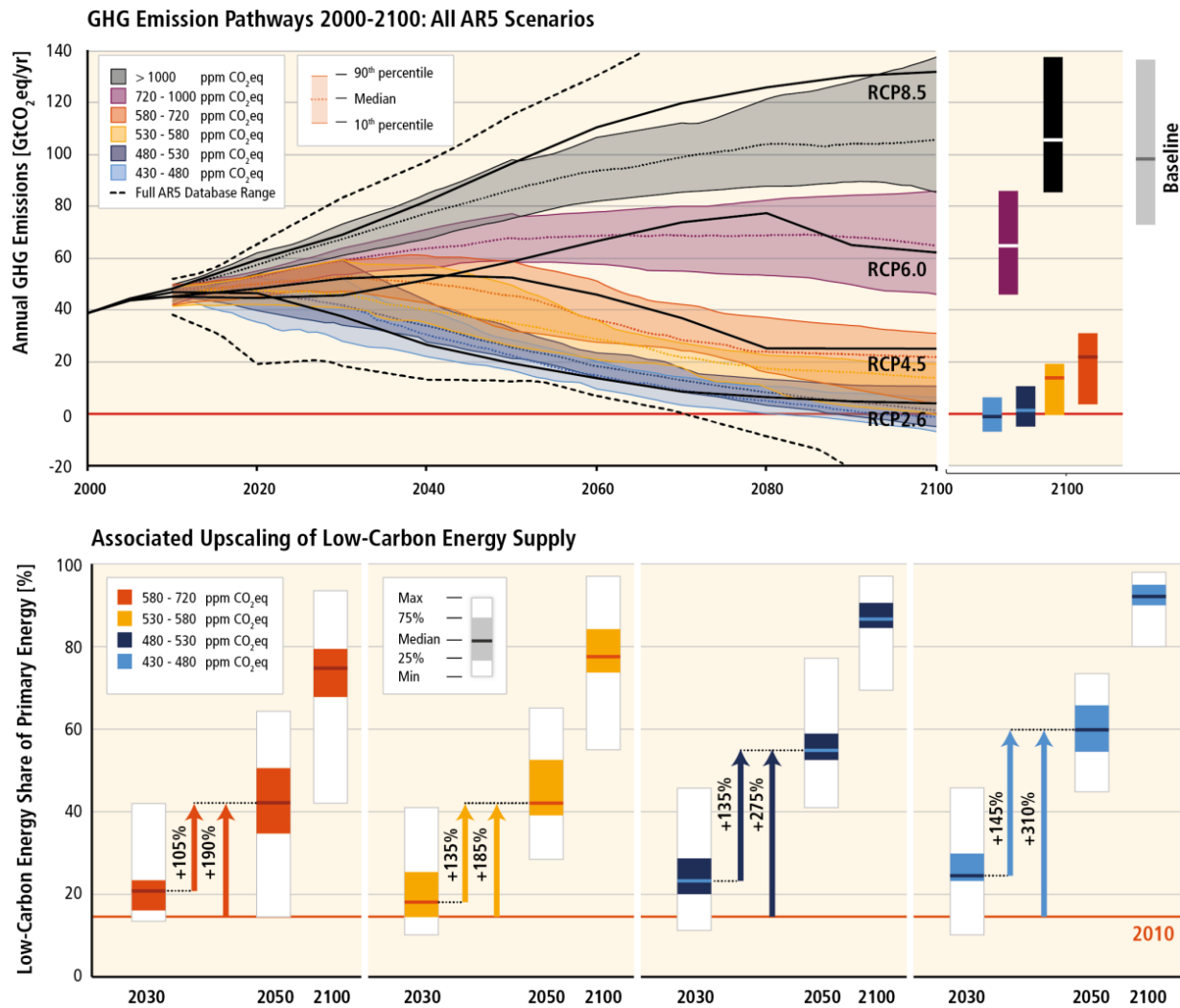
Added clause “as a consequence, small differences in sums due to rounding may occur” to footnote 7 in order to clarify that the chosen two-significant digit rounding approach may result in small differences in sums when adding up emission data. The corrected sentence should read: “GHG emission levels are rounded to two significant digits throughout this document; as a consequence, small differences in sums due to rounding may occur.”

A reference has been added to this footnote in the first paragraph on page 7, where there is a difference between the numbers in the text and Figure SPM.2 due to such a rounding issue. The sentence with the suggested reference to the footnote should read: “When emissions from electricity and heat production are attributed to the sectors that use the final energy (i.e. indirect emissions), the shares of the industry and buildings sectors in global GHG emissions are increased to 31% and 19%,⁷ respectively.”

Section SPM.4.1, Figure SPM.4 – Upper Panel

The upper panel of figure SPM.4 has been updated to be fully consistent with the scenario set used in Table SPM.1 for the baseline CO₂eq emissions estimates for 2050 and 2100. Consequently, the panel now also displays the 10-90th percentile range for these baseline scenarios, consistent with the scenario categories in Table SPM.1 and the coloured bars representing the different CO₂eq concentration levels in 2100 on the right hand side of the upper panel of Figure SPM.4. The corrected figure should look as follows.

Corrected Figure SPM.4



Section SPM.4.1, Figure SPM.4 – Caption

The lower panel excludes scenarios with limited technology availability and exogenous carbon price trajectories. This change is necessary since only the lower panel figure and not the upper panel excludes scenarios with limited technology availability and exogenous carbon prices. Delete “upper and” as well as “the lower panel in addition excludes scenarios that assume” from the caption. The corrected sentence should read: “The lower panel excludes scenarios with limited technology availability and exogenous carbon price trajectories.”

Added reference to the Glossary for definitions of CO₂-equivalent emissions and CO₂-equivalent concentrations at the end of the caption in order to avoid confusion in the interpretation of the figure. The added sentence should read: “For definitions of CO₂-equivalent emissions and CO₂-equivalent concentrations see the WGIII AR5 Glossary.”

Section SPM.4.1, Page 11

Corrected sentence to clarify that only scenarios, which exceed atmospheric concentrations of 650 ppm CO₂eq are assessed to be unlikely to limit temperature increase to below 2°C by 2100 compared to pre-industrial levels. Replace “reach” by “exceed”. The corrected sentence should read: “Scenarios that exceed about 650 ppm CO₂eq by 2100 are unlikely to limit temperature change to below 2°C relative to pre-industrial levels.”

Section SPM.4.1, Table SPM.1

Corrected atmospheric concentration category in footnote 2 consistent with the categories shown in Table SPM.1. Replaced “750” by “720”. Replaced “categorized” by “fall into” for technical correctness. The corrected sentence should read: “Baseline scenarios (see SPM.3) fall into the >1000 and 720–1000 ppm CO₂eq categories.”

Section SPM.4.1, Figure SPM.5 – Left Panel

The SPM figure contained an internal inconsistency by presenting 89 scenarios in the left-hand panel while referring to n=71 scenarios instead. This inconsistency originated from accidentally showing an additional set of 18 scenarios with large negative emissions (>20 GtCO₂) and exogenous carbon price assumptions. In order to regain the envisaged internal consistency with the middle and right panel of the figure, which exclude scenarios with large negative emissions or exogenous carbon price assumptions, these 18 scenarios were removed from the left panel figure as well. This change has no influence on the ranges or any of the main messages in the SPM text. In y-axis title, included “Annual” in the y-axis title to read “Annual GHG Emissions [GtCO₂eq/yr]” for clarification. The corrected figure should look as inserted below.

Section SPM.4.1, Figure SPM.5 – Caption

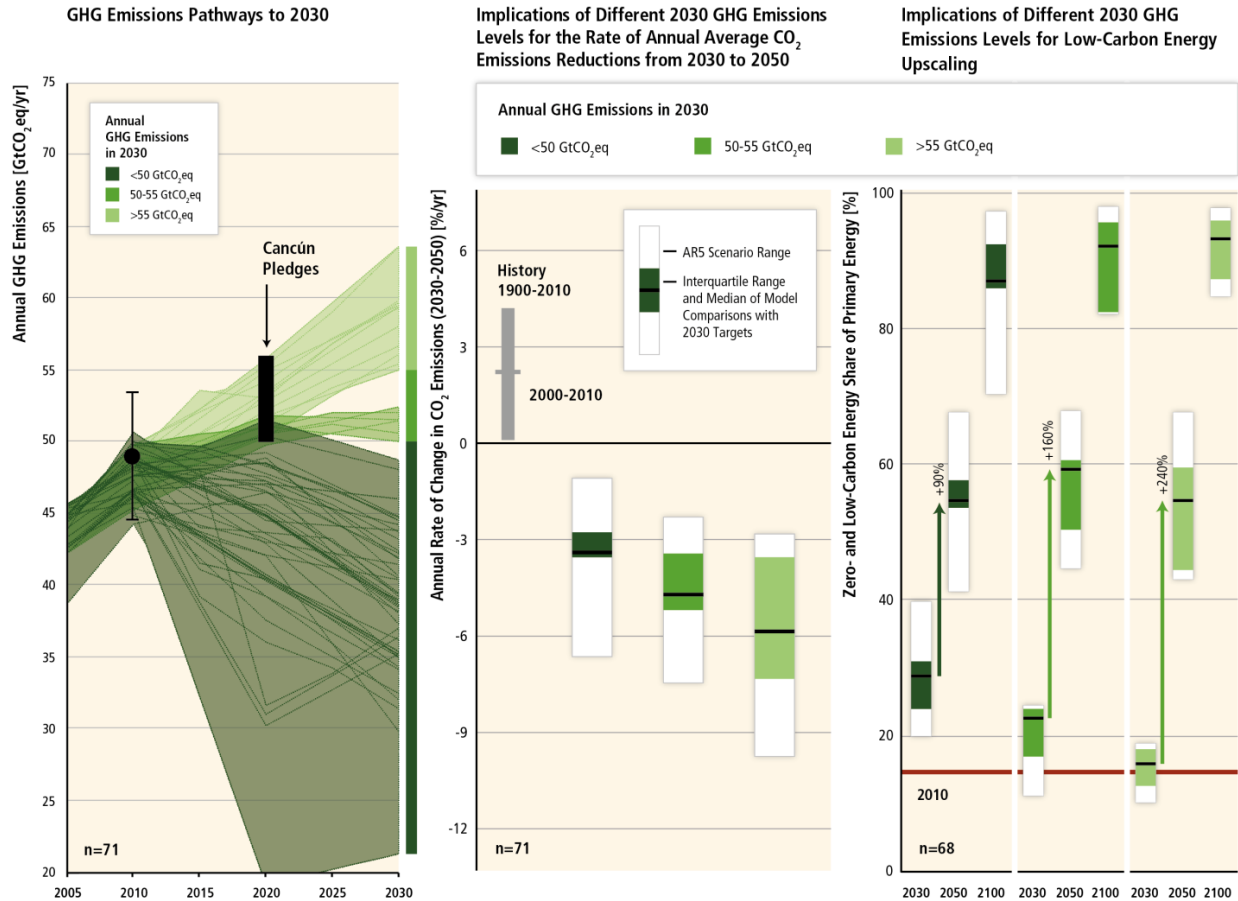
Corrected sentence by deleting “and” before “fossil energy” and replacing “or” by “and” before “bioenergy”. The corrected sentence should read: “Zero- and low-carbon energy supply includes renewables, nuclear energy, fossil energy with carbon dioxide capture and storage (CCS), and bioenergy with CCS (BECCS).” This change is necessary to clarify that both BECCS and fossil CCS are part of the zero- and low-carbon share of the scenarios.

Corrected unit in brackets to read “(>20 GtCO₂/yr)” instead of “(>20 GtCO₂eq/yr)”. The corrected sentence should read: “Scenarios with large net negative global emissions (>20 GtCO₂/yr), scenarios with exogenous carbon price assumptions, and scenarios with 2010 emissions significantly outside the historical range are excluded”. This error correction is necessary to clarify that in the figure scenarios with net negative CO₂ emissions of > 20 GtCO₂ were excluded. This is different from scenarios that report net negative emissions of total GHGs, which are measured in GtCO₂eq.

In order to clarify why in the right panel of the figure there are three scenarios less compared to the other panels of the figure, the following sentence was added at the end of the caption.

The corrected sentence should read: “The right-hand panel includes only 68 scenarios, because three of the 71 scenarios shown in the figure do not report some subcategories for primary energy that are required to calculate the share of zero- and low-carbon energy.”

Corrected Figure SPM.5



Section SPM.4.1, Table SPM.2 – Caption

Moved footnote on the definition of cost-effective scenarios to the first mentioning of this term in the first line of the table caption, where it is most relevant. The first sentence of the caption should read: “Global mitigation costs in cost-effective scenarios¹ and estimated cost increases due to assumed limited availability of specific technologies and delayed additional mitigation.”

Corrected sentence in table caption by deleting reference to the year 2020 as only scenarios with delays in mitigation efforts through 2030 are included. The corrected sentence should read: “The blue columns show the increase in mitigation costs over the periods 2030–2050 and 2050–2100, relative to scenarios with immediate mitigation, due to delayed additional mitigation through 2030.”

Section SPM.4.1, Table SPM.2

In first row of light green column, removed the term ‘implementation’ as its inclusion was incorrect in conjunction with the use of ‘cost-effective scenarios’. Included duplicate footnote 1 to definition of cost-effective scenarios. Column entry should read: “Consumption losses in cost-effective scenarios¹”.

Corrected footnote 5 by replacing “or” by “and/or” to adequately reflect the set-up of scenarios included. Corrected sentence should read: “Some models that are included in the cost ranges for concentration levels above 530 ppm CO₂eq in 2100 could not produce associated scenarios for concentration levels below 530 ppm CO₂eq in 2100 with assumptions about limited availability of technologies and/or delayed additional mitigation.”

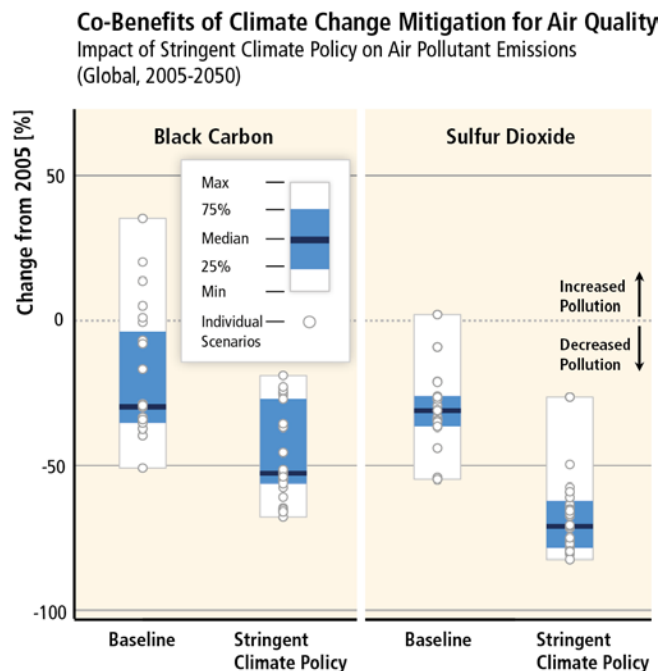
Section SPM.4.1, Figure SPM.6

Included ‘climate change’ in figure title to clarify that co-benefits for air quality result from the mitigation of climate change. Title should read: “Co-benefits of climate change mitigation for air quality”. The figure with corrected title should look as inserted below.

Section SPM.4.1, Figure SPM.6 – Caption

Adjusted reference to concentration range of mitigation scenarios to achieve consistency with description used in caption of SPM.5. Replaced “reaching atmospheric CO₂eq concentration levels between 430 and 530 ppm CO₂eq by 2100” by “reaching about 450 and 500 (430-530) ppm CO₂eq concentrations by 2100”. The corrected sentence should read: “Baseline scenarios without additional efforts to reduce GHG emissions beyond those in place today are compared to scenarios with stringent mitigation policies, which are consistent with reaching about 450 to 500 (430-530) ppm CO₂eq concentrations by 2100.”

Corrected Figure SPM.6



Section SPM.4.2.2, Energy, Page 23

Included “for instance” in sentence. Corrected sentence should read: “CCS power plants could be seen in the market if this is incentivized by regulation and/or if they become competitive with their unabated counterparts, for instance, if the additional investment and operational costs, caused in part by efficiency reductions, are compensated by sufficiently high carbon prices (or direct financial support)”. This change is necessary to emphasize that CCS power plants could also become competitive due to reasons other than the examples listed.

Section SPM.4.2.3, Industry, Page 26

Removed “the” from sentence. Corrected sentence should read: “Lack of policy and experiences in material and product service efficiency are major barriers”. This change is necessary to emphasize that the lack of policy and experiences in material and product service efficiency just constitute some of several major barriers in the industry sector.

Section SPM.5.1, Figure SPM.9 – Caption

Included ‘fuel’ in caption text for clarification. Corrected sentence should read: “Total electricity generation (leftmost column) is the sum of renewables, nuclear, power plants with CCS and fossil fuel power plants without CCS.”

Corrections of references to chapter sections, figures and tables

Section SPM.2, page 4: changed 3.1 to 3.2

Section SPM.4.1, page 15: deleted reference to Figure TS.13.

Section SPM.4.1, page 17, Caption Figure SPM.5: included 13.13.1.3

Section SPM.4.2.2, page 23: included reference to Figure TS.15, deleted reference to Figure SPM.2

Section SPM.4.2.3:

Transport, Page 24: changed Figure TS.15 to Figure SPM.7;

Buildings, Page 25: changed Figure TS.15 to Figure SPM.7;

Industry, Page 26: changed Figure SPM.3 to Figure SPM.2.

Section SPM.5.2, page 33:

Changed Figure TS.37 to Figure TS.38; changed 13.4 to 13.4.1; changed 5.2 to 5.3.3; included 13.3.4; changed 16.2.1.1 to 16.2.1; deleted 13.5.1.3; changed 14.5 to 14.4; included 13.6, 13.7, Figure 13.4, 13.13.2.3; deleted Table TS.9; included 13.6.