

IPCC Expert Meeting on HWP, Wetlands and Soil N₂O

WMO Geneva, 19-21 October 2010

Co-Chairs Summary

- In June 2010, SBSTA 32, as part of its work programme to revise their reporting guidelines for Greenhouse Gas Emissions and removals from Annex I parties to allow the use of the 2006 IPCC Guidelines, invited the IPCC to hold an Expert Meeting to “*explore the need and ways to clarify methodological issues related to reporting on harvested wood products, wetlands and nitrous oxide emissions from soils*” (FCCC/SBSTA/2010/L.12). In response, the IPCC Task Force on National Greenhouse Gas Inventories held this meeting in Geneva on the 19th-21st October.
- The meeting considered the three separate topics, harvested wood products, wetlands and nitrous oxide emissions from soil, and, in general considered that the methodological advice contained in the 2006 IPCC Guidelines still reflects the latest science. A few editorial issues were noted for HWP and Soil N₂O and corrigenda addressing these will be issued by the TFI.
- A meeting report will be produced that describes the discussions and conclusions in more detail and also highlights areas where additional scientific research could contribute to future improvements in estimates of greenhouse gas fluxes.

Wetlands

- The Wetland chapter (volume4, chapter 7) of the 2006 IPCC Guidelines identifies gaps which could not be filled at the time the 2006 IPCC Guidelines were compiled. These include rewetting of peat lands and wetland restoration (conversion of land to wetlands, and wetlands remaining wetlands), and CO₂ and CH₄ emissions from reservoirs (flooded land remaining flooded lands, and lands converted to flooded lands). It should be remembered that drainage and conversion of wetlands to other land uses is included in other chapters of volume 4 (e.g. forest land, cropland and grassland): coherence between these chapters and the wetland chapter should be maintained.
- Since the 2006 IPCC Guidelines were completed much new scientific information is now available about various wetlands that enable emissions and removals to be estimated from wetland restoration and rewetting especially for peat lands. ***The meeting recommended that the IPCC provide additional methodological guidelines for the rewetting and restoration of peat land; emissions from fires, ditches and waterborne carbon; and constructed wetlands for waste water disposal, to fill gaps in the existing guidelines.***
- The meeting also noted that there are now a large number of new EFs measurements and other information available across climate zones for wetlands and drainage addressed in other land use chapters. ***The meeting recommended that an expert meeting be held to assess these data and***

develop emission factors from this information to enable more accurate country- and region-specific estimates to be made. The meeting also recommended that the TFI actively collect such data and add it to the EFDB.

- For reservoirs (flooded lands), in the 2006 Guidelines there is only a method for the estimation of CO₂ from the conversion of land to flooded lands. Methods for CH₄ are in appendices “for the development of future methodological guidance” as is a different approach for CO₂ from land converted to flooded lands. The meeting discussed whether there was now sufficient new information available to produce new and additional guidelines based on these appendices and the latest literature. The participants discussed a range of associated issues, such as the impact of reservoirs on total emissions from watersheds, allocation of emissions to specific drivers and how emissions may be related to specific reservoir typologies. ***The meeting concluded that there should be an expert meeting to discuss all the new science and issues surrounding the development of new guidelines for reservoirs.***

Harvested Wood Products

- The meeting agreed that the methodological guidance in the 2006 IPCC Guidelines is correct, but noted that the entire chapter needs to be considered to ensure there are no inconsistencies with other parts of the guidelines. ***The participants also noted that the guidance is complex and proposed the development of FAQ (frequently asked questions) that would guide users to the correct, full implementation of the guidelines.***
- The participants noted that to produce estimates for HWP according to the approaches currently being discussed in the UNFCCC AWG-KP negotiations (FCCC/KP/AWG/2010/CRP.3) may require some modification to the existing guidelines (particularly equation 12.3).

Soil N₂O

- The participants agreed that the methods in the 2006 IPCC Guidelines reflect the latest scientific literature, but the emission factors¹ were based mainly on information from temperate regions.
- They agreed that there is no N₂O from the biological nitrogen fixation process itself (this was included in earlier guidelines but removed from the 2006 IPCC Guidelines).
- There has been a lot of work published on N₂O emissions from soils since the 2006 IPCC Guidelines were published and this should allow for the development of more regional or country specific emission factors. This would allow greater stratification by climate, soil, management and leaching. ***The meeting proposed an expert meeting to assess recent literature and consider stratified EF1 values for the EFDB.***
- The meeting also noted that the atmospheric N₂O increase is not matched by bottom-up estimates of anthropogenic N₂O emissions but the reasons for this are unclear. Increased measurements of currently under represented systems (e.g. large river deltas) may help resolve this issue. ***This meeting proposed a joint expert meeting with WG I to explore this gap.***

TFI Co-Chairs, Geneva, 21st October 2010

¹ Most importantly for EF1 but this also applies to all emission factors for soil N₂O emissions