CHAPTER 2

STATIONARY COMBUSTION

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2 STATIONARY COMBUSTION

Users are expected to go to Mapping Tables in Annex 2, before reading this chapter. This is required to correctly understand both the refinements made and how the elements in this chapter relate to the corresponding chapter in the 2006 IPCC Guidelines.

2.1 OVERVIEW

No refinement.

2.2 DESCRIPTION OF SOURCES

No refinement.

2.3 METHODOLOGICAL ISSUES

2.3.1 Choice of method

No refinement.

2.3.2 Choice of emission factors

No refinement.

2.3.3 Choice of activity data

2.3.3.1 TIER 1 AND TIER 2

No refinement.

2.3.3.2 TIER 3

No refinement.

2.3.3.3 AVOIDING DOUBLE COUNTING ACTIVITY DATA WITH OTHER SECTORS

No refinement.

2.3.3.4 TREATMENT OF BIOMASS

Biomass is a special case:

- The overall IPCC approach to greenhouse gas emissions from combustion of biomass or biomass-based products (e.g., ethanol) at the national level allows for complete coverage of emissions and sinks, and involves all IPCC sectors, including in particular, Energy, Agriculture, Forestry and Other Land-Use (AFOLU), and Waste.
- Carbon dioxide (CO_2) emissions from the combustion of biomass or biomass-based products are captured within the CO_2 emissions in the AFOLU sector through the estimated changes in carbon stocks from biomass harvest, even in cases where the emissions physically take place in other sectors (e.g., energy). This approach to estimate and report all CO_2 emissions from biomass or biomass-based products in the AFOLU sector was introduced in the first IPCC guidelines for national greenhouse gas emissions (IPCC 1995), reflecting close linkages with data on biomass harvesting, and for the pragmatic reason to avoid double counting.

- In the Energy sector, CO_2, methane (CH_4) and nitrous oxide (N_2O) emissions from combustion of biomass or biomass-based products for energy are estimated, but the CO_2 emissions are recorded as an information item that is not included in the sectoral total emissions for the Energy sector, as they are already included in AFOLU. The CH_4 and N_2O emissions from the combustion of biomass for energy are included in the sectoral total emissions in the Energy sector, as emission rates depend on combustion and transformation conditions and cannot be estimated using AFOLU carbon stock change methodologies. This provides a complete picture of a country's energy system and avoids double counting of emissions with those reported in the AFOLU sector.
- For biomass, only that part of the biomass that is combusted for energy purposes should be estimated for inclusion as an information item in the Energy sector.
- For fuel wood, activity data are available from the International Energy Agency (IEA) or the Food and Agriculture Organization of the United Nations, (FAO). These data originate from national sources and inventory compilers can obtain a better understanding of national circumstances by contacting national statistical agencies to find the organisations involved.
- For agricultural crop residues (part of other primary solid biomass) and also for fuel wood, estimation methods for activity data are available in Chapter 5 of the AFOLU volume.
- In some instances, biofuels will be combusted jointly with fossil fuels. In this case, the split between the fossil and non-fossil fraction of the fuel should be established and the emission factors applied to the appropriate fractions.
- Further clarification on the approach for biomass energy emissions can be found in Section 1.1, "Concepts" in Volume 1, Chapter 1. Further clarification on the reporting of emissions from burning woody biomass for energy is provided in Section 12.5, Chapter 12 of the AFOLU volume of *the 2019 Refinement*.

2.3.4 Carbon dioxide capture

No refinement.

2.3.5 Completeness

No refinement.

2.3.6 Developing a consistent time series and recalculation

No refinement.

2.4 UNCERTAINTY ASSESSMENT

No refinement.

2.5 INVENTORY QUALITY ASSURANCE/QUALITY CONTROL QA/QC

No refinement.

2.6 WORKSHEETS

No refinement.