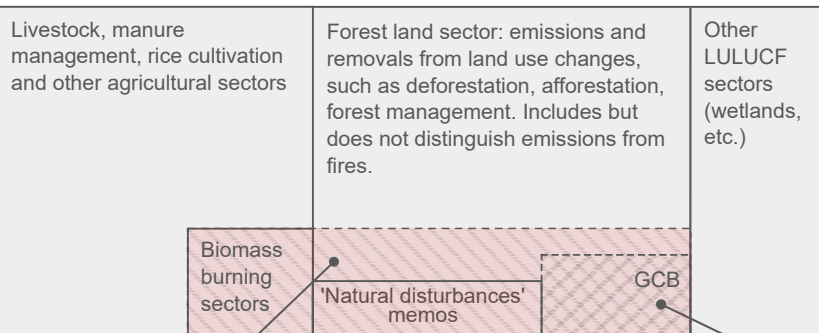


Differences in fire emissions estimates

National GHG inventories,
Sector 3 Agriculture

National GHG inventories,
Sector 4 LULUCF



Managed land
(as defined by
inventories)

Unmanaged land
(as defined by inventories)

Fire emissions in national GHG inventories and FAOSTAT follow an area-based approach, reporting CO₂, CH₄ and N₂O emissions from fires on managed lands. These are typically included in the forest land sector total, and in agricultural sectors 3E and 3F. In some national inventories (but not in FAOSTAT) major fire events are reported as “natural disturbances” memos and excluded from national accounts. Fires on non-managed lands are excluded.

Fire emissions in GFED and global GHG budgets include those from both managed and non-managed lands. GFED does not distinguish between anthropogenic and natural fires (although data can be extracted for agricultural and other types of fires). The Global Methane Budget and Global Nitrous Oxide budget also follow this system boundary and classify all CH₄ and N₂O emissions from fires as anthropogenic (while noting that some ignitions are natural).

Fires emissions in the Global Carbon Budget follow a driver-based approach, defining anthropogenic CO₂ fire emissions as those associated with land use change (e.g. deforestation, shifting cultivation). Fires not associated with land use change are not considered anthropogenic.