Food and Agriculture Organization of the United Nations

>> FAO Statistics Division

Updates from FAO: Emissions from Land Use, Land Use Change and Forestry (LULUCF)

Francesco N. Tubiello
FAO Statistics Division

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FAOSTAT GHG Data structure

UNFCCC National GHG Inventories

Land Use, Land Use Change and Forestry (LULUCF)

Agriculture

Energy

Industry

Waste

	Emissions
Greenhouse gas	CO_2; N_2O; CH_4; F-gases – Quantities and indicators (per capita, per commodity, per total economy)
Spatial Coverage	194 Countries and 36 Territories
Temporal Coverage	1990-2021; 1961–2021
Thematic Coverage	All IPCC sectors, all food system processes
Main input data sources	FAOSTAT, UNSD, PRIMAP

FAO Agrifood Systems

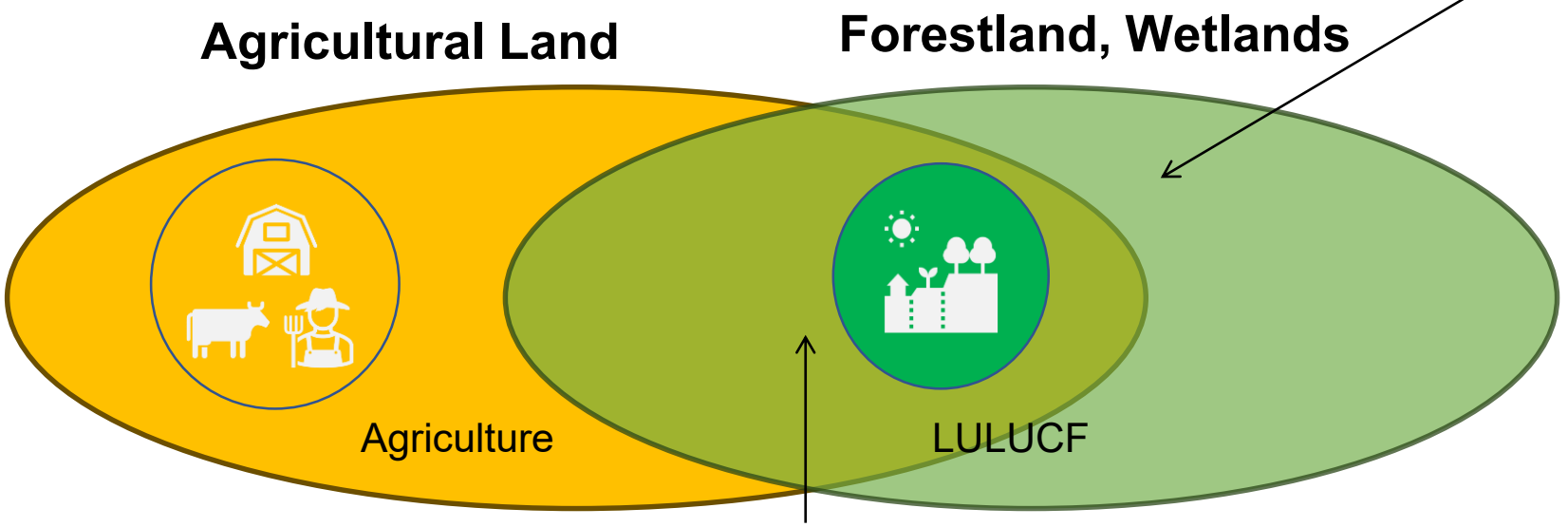
Farm gate

Land use change

Pre and post agricultural production

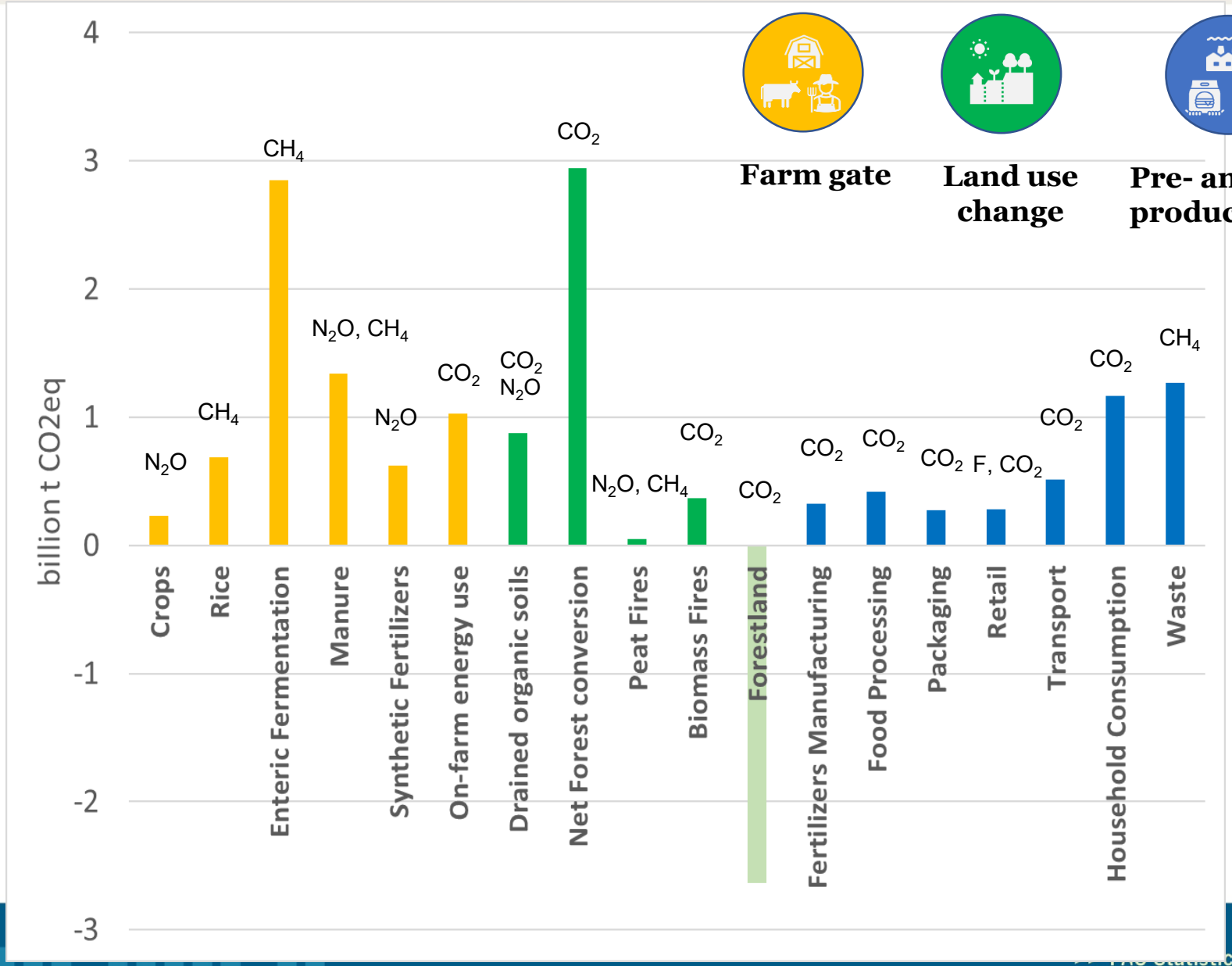
LULUCF Components in FAOSTAT

Forest land
-Forest biomass stock change
-Forest fires

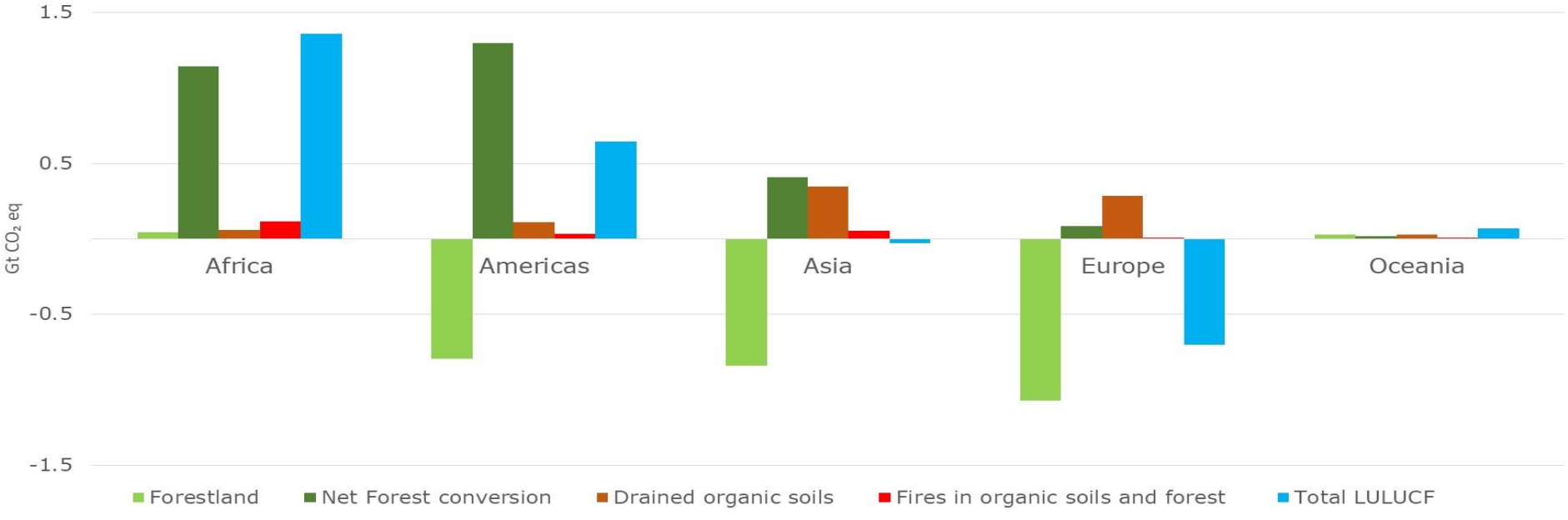


New agricultural Land through conversion:
-Deforestation
-Peatland Drainage
-Peatland Fires

World emissions by agri-food system component, 2021



World and regional LULUCF emissions, 2021

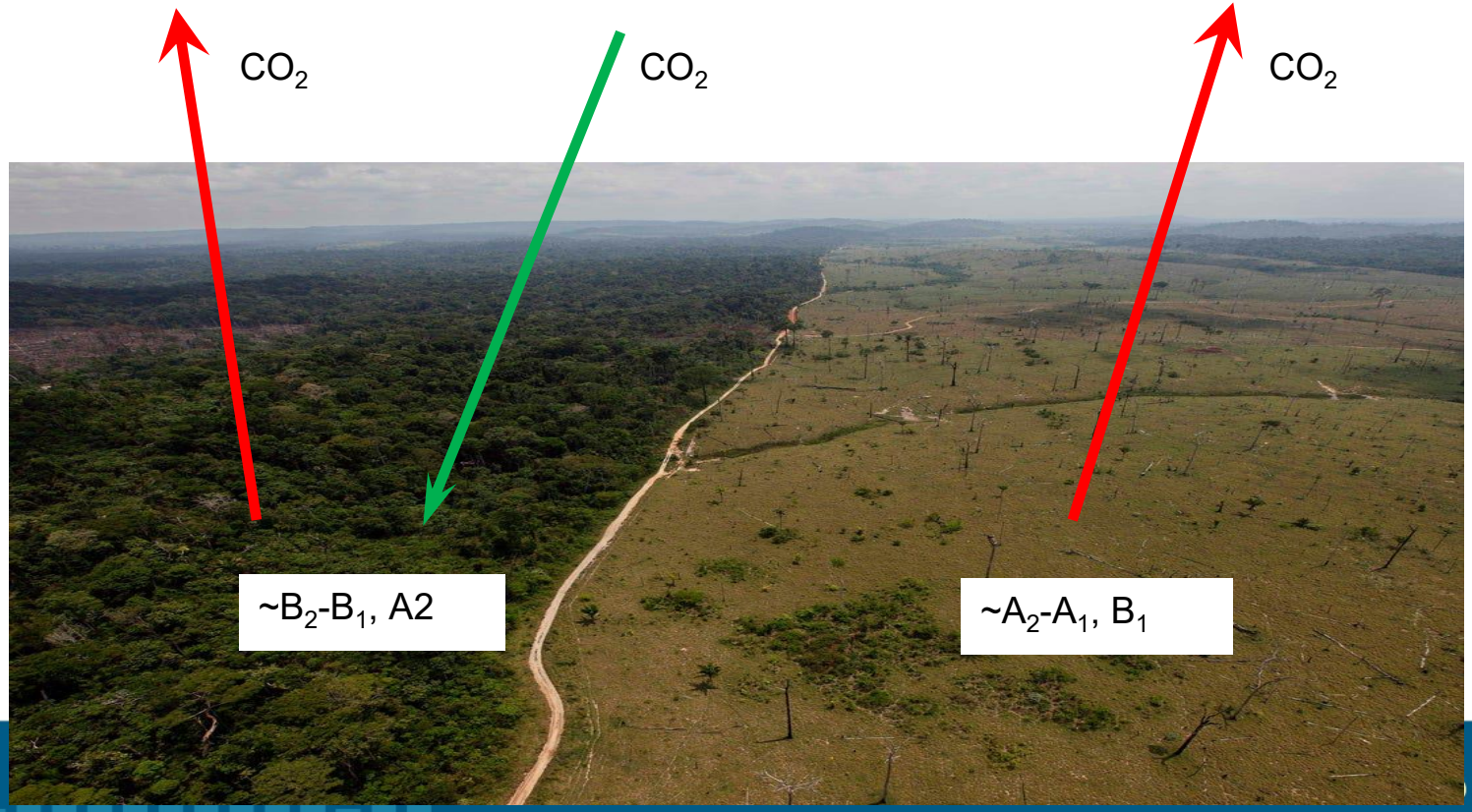


From national forest statistics to FAOSTAT GHG

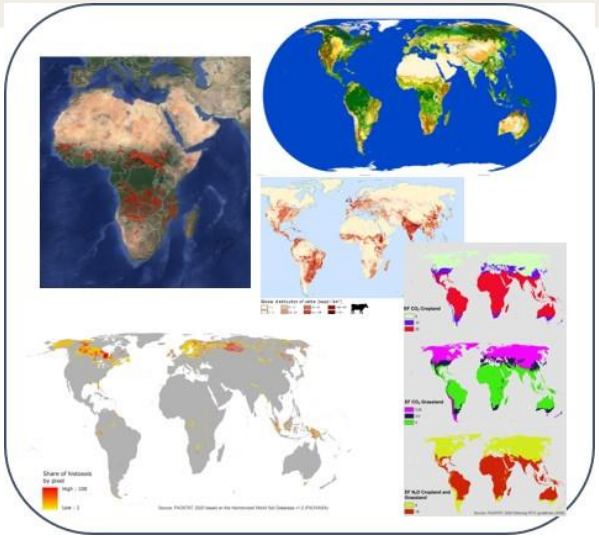
- A_i (A_{nr}, A_{pl}) = Forest land area (Nat. Regen., Planted)
- B_i = Carbon stock in living biomass
- i = 1990, . . . , 2020

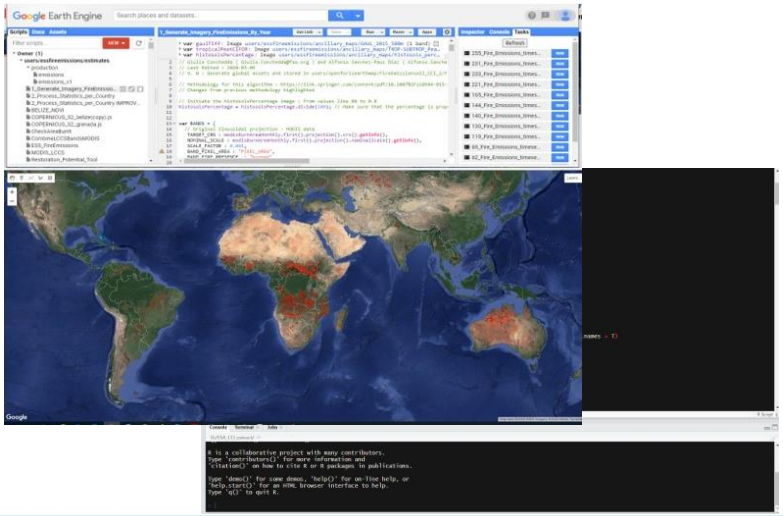
FRA 2020 INPUT DATA

FAOSTAT Emissions estimates:



From geospatial maps of fire, peat, to FAOSTAT





Geospatial implementation of IPCC methods

Global and openly available data

- FAO map of *histosols* (organic soils);
- Annual land cover maps for cropland and grassland organic soils: European Space Agency – Copernicus;
- Gridded Livestock of the World;
- Climatic Zones: IPCC – FAO to spatialize the emissions factors
- NASA MODIS fires for peat fires

Code editor of the Google Earth Engine; R

Country statistics

Thank you

more info: francesco.tubiello@fao.org