

# Energy Community: LULUCF emissions/removals - GLOBIOM-G4M *Preliminary* model results

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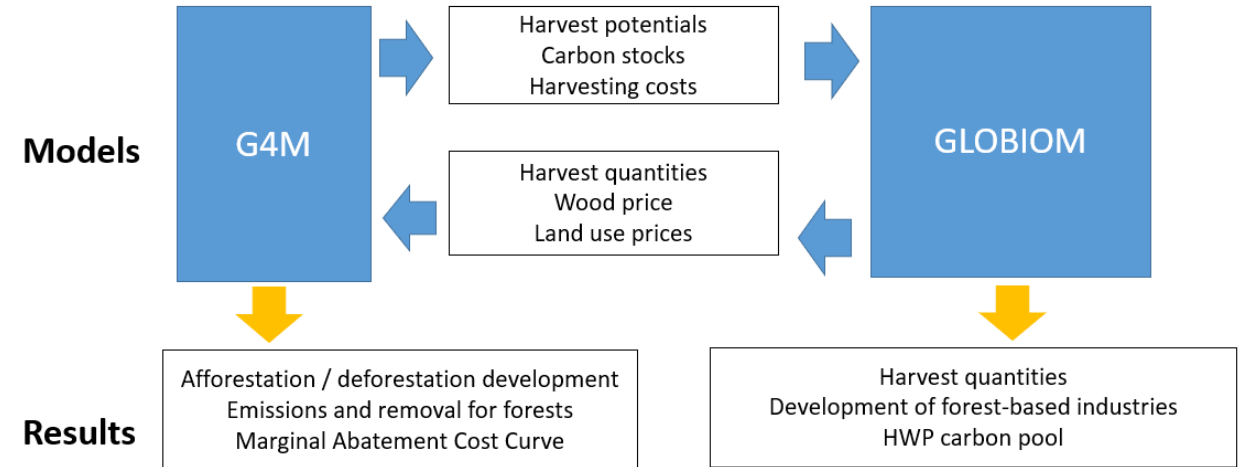
Energy Community

9<sup>th</sup> Energy and Climate Technical Working Group

Vienna April 7, 2022

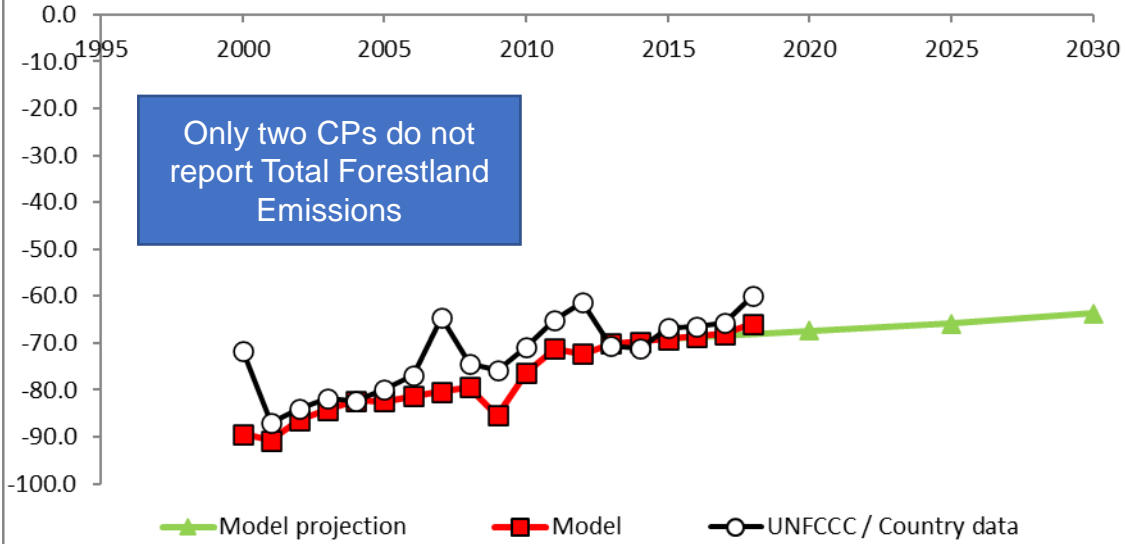
# Energy Community: LULUCF emissions modelled with GLOBIOM-G4M

- Total LULUCF
- GLOBIOM-G4M:
  - Forest sector
    - Forest management
    - Afforestation
    - Deforestation
    - Harvested Wood Products (HWP)
  - Cropland management
  - Grassland management
- Exogenous:
  - Wetlands
  - Other land
  - Settlements

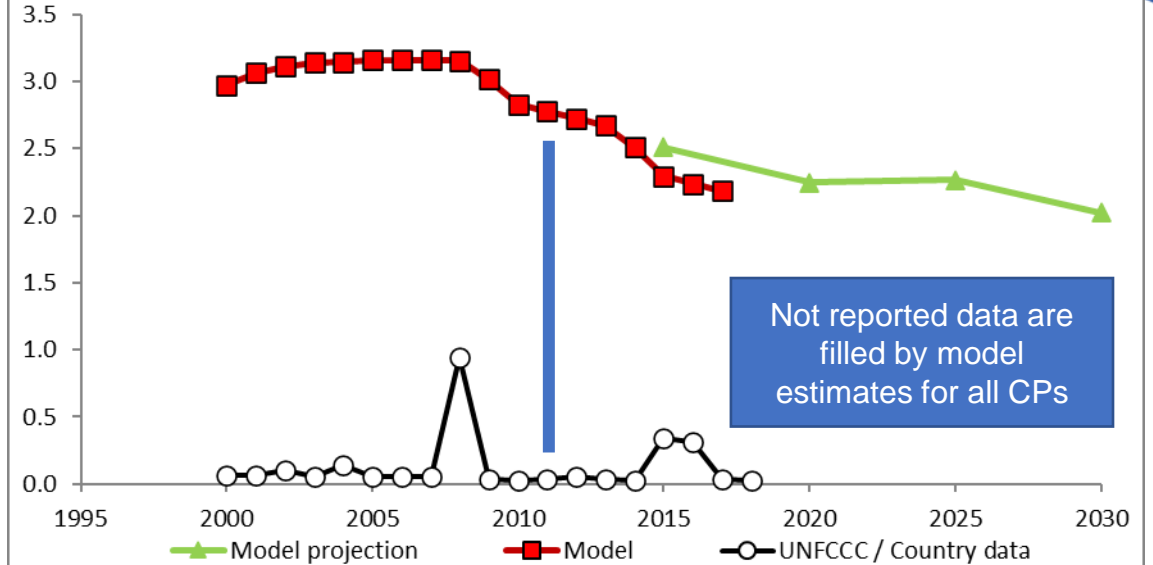


# Forest sector – EnC – Preliminary reference

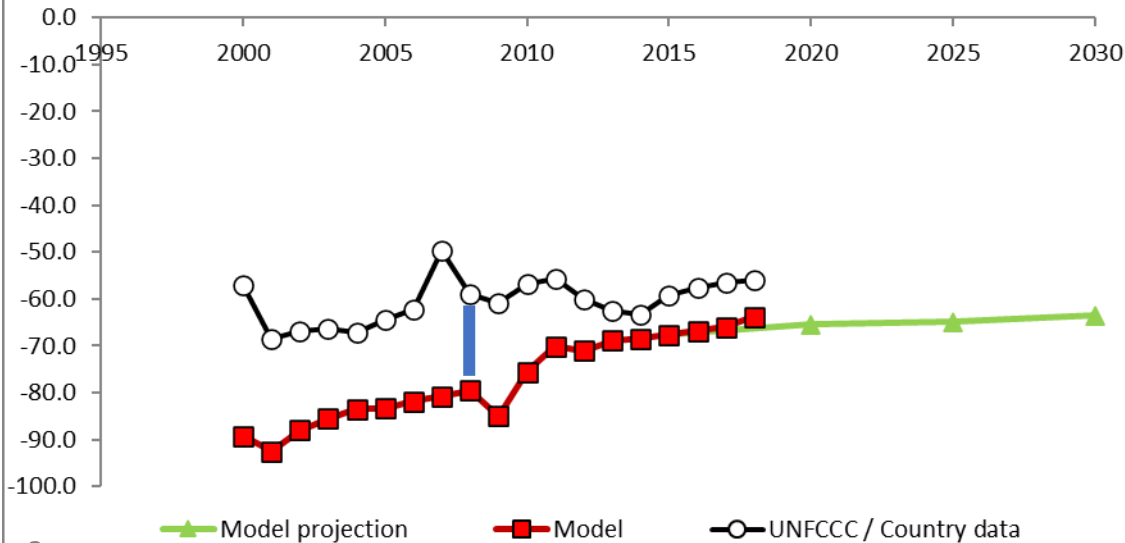
Emissions Total Forestland [MtCO<sub>2</sub>/yr]



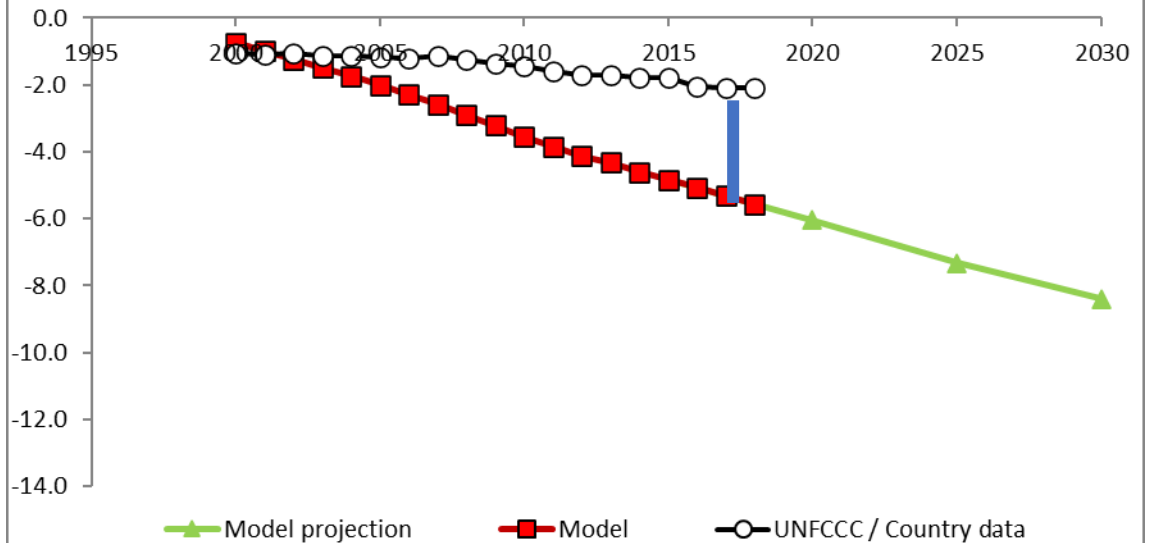
Emissions Deforestation [MtCO<sub>2</sub>/yr]



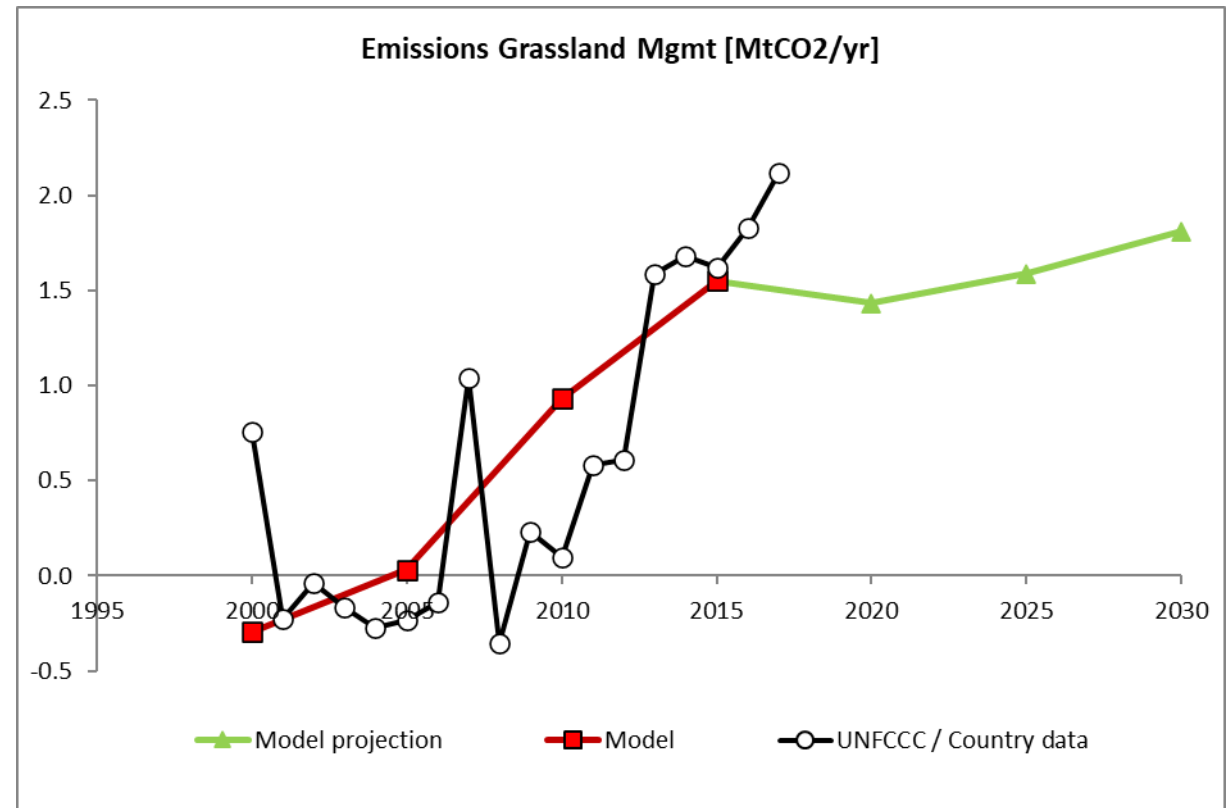
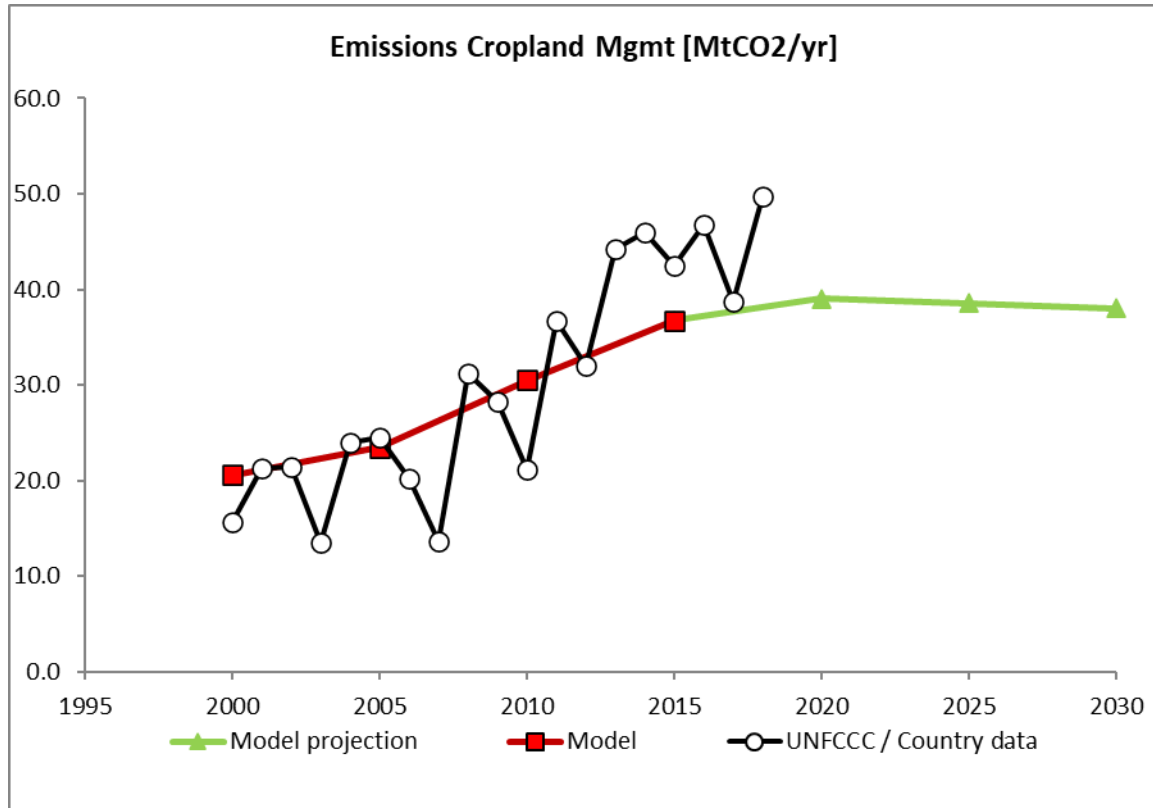
Emissions Forest Management [MtCO<sub>2</sub>/yr]



Emissions accumulated Afforestation [MtCO<sub>2</sub>/yr]

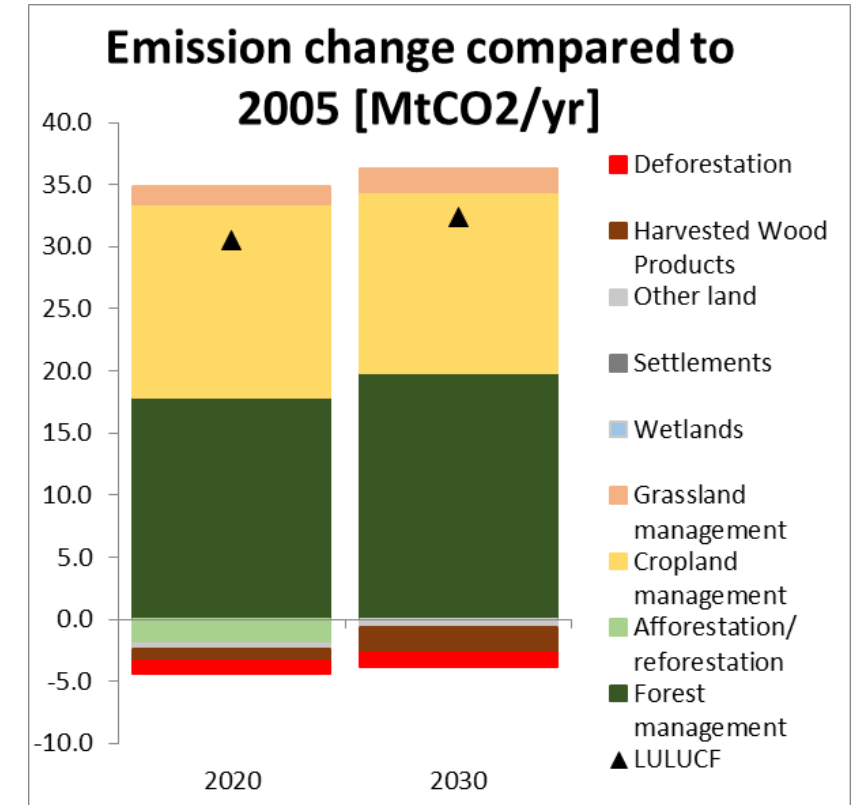
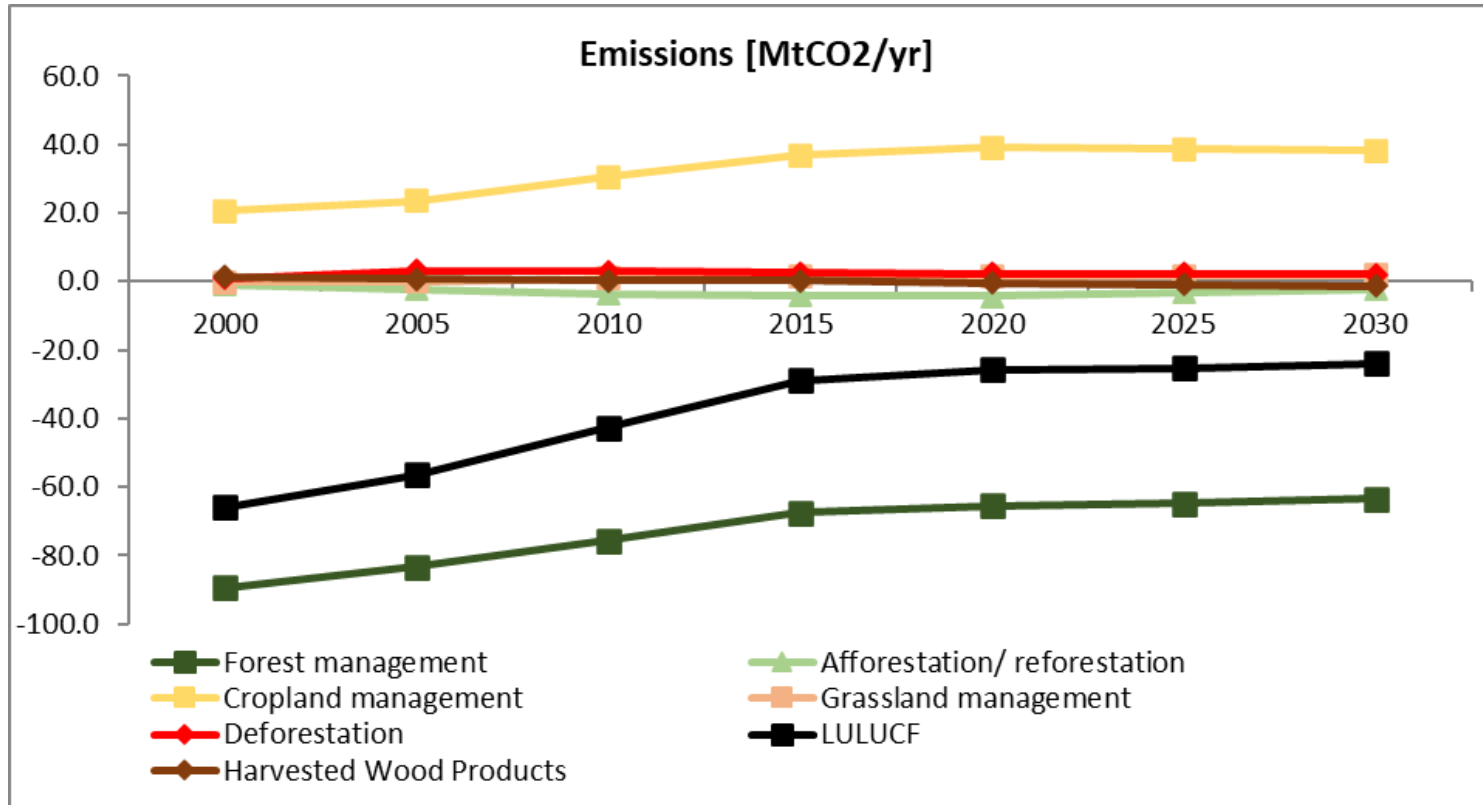


# Preliminary Cropland and Grassland management



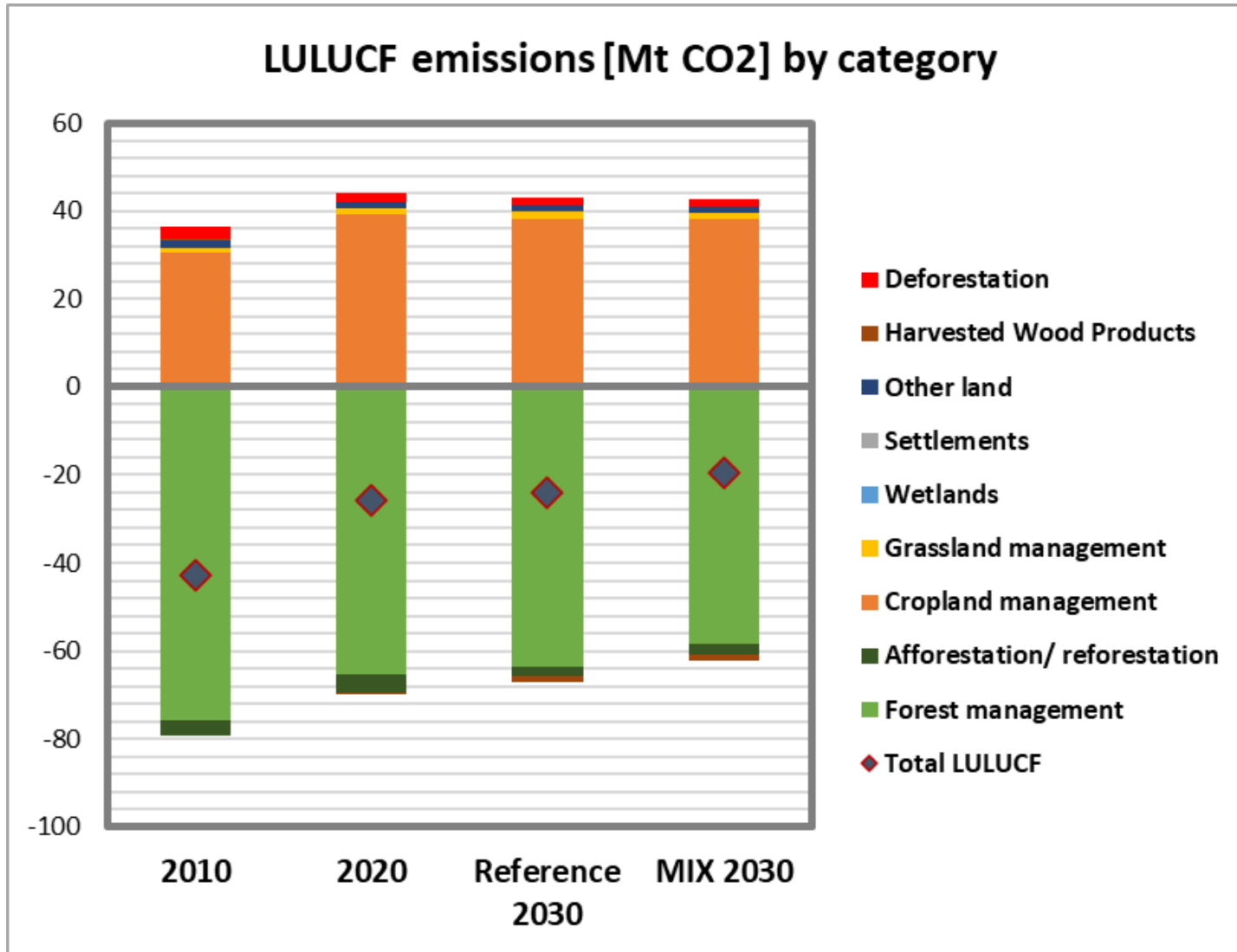
- Historical trend is calibrated - future trends mainly depend on emission factors multiplied with area.
- Relatively high uncertainty on future trends.

# Energy Community: Preliminary LULUCF emission reference scenario



- Modelled data
  - Calibrated to the partly available observed data (with some deviations)
  - Data gaps filled with model results

# Preliminary MIX scenario – Energy Community



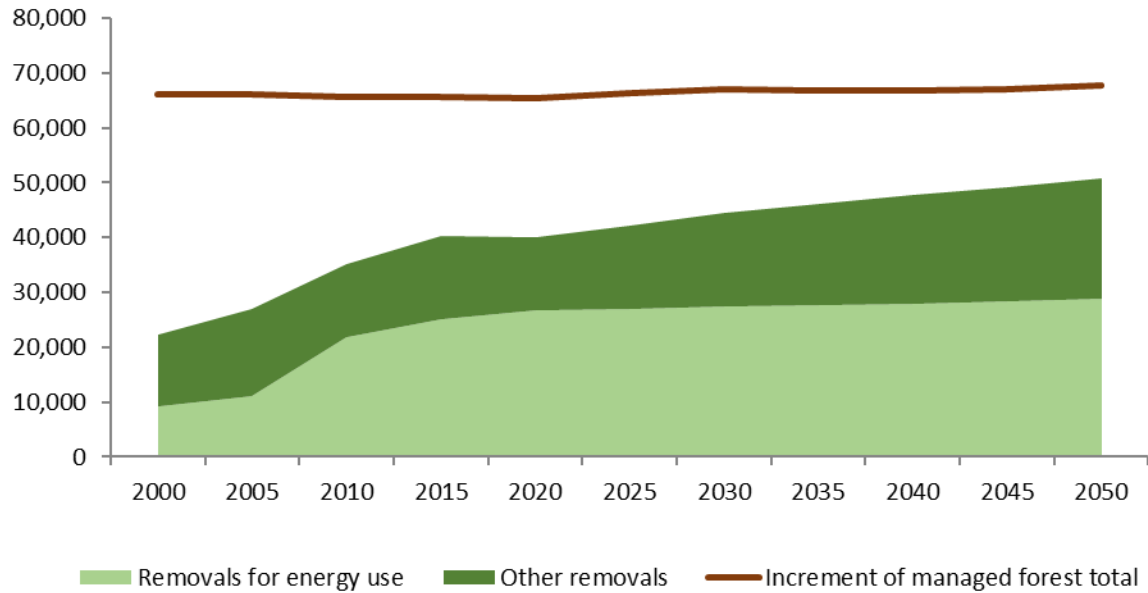
- Main difference between Reference and MIX: slightly reduced Forest Management sink
- Main reason is the higher demand for forest biomass from the energy sector (see next slide)
- Other categories rather stable

# Preliminary Wood harvests – Energy Community

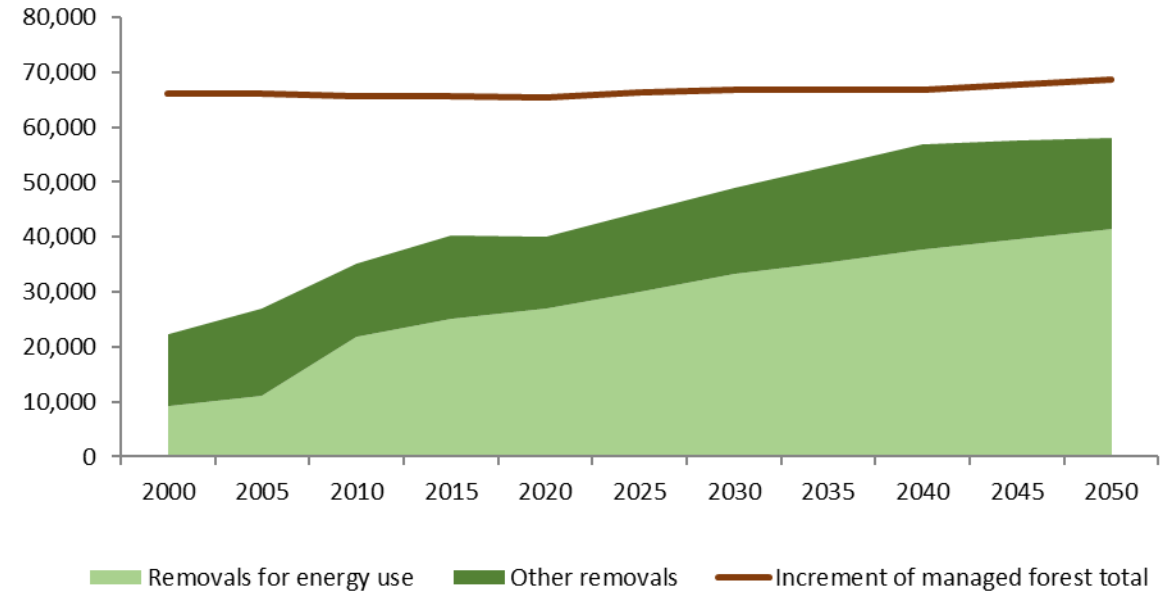
Reference

MIX scenario

Harvest removals and increment, o.b. [tm3]

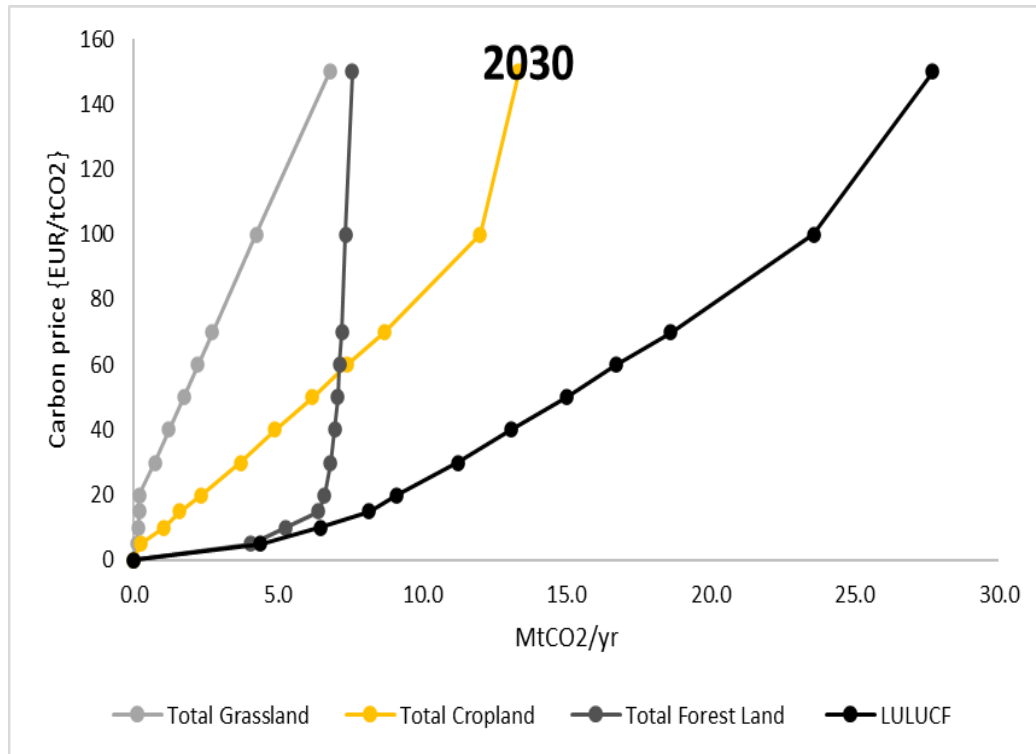


Harvest removals and increment, o.b. [tm3]

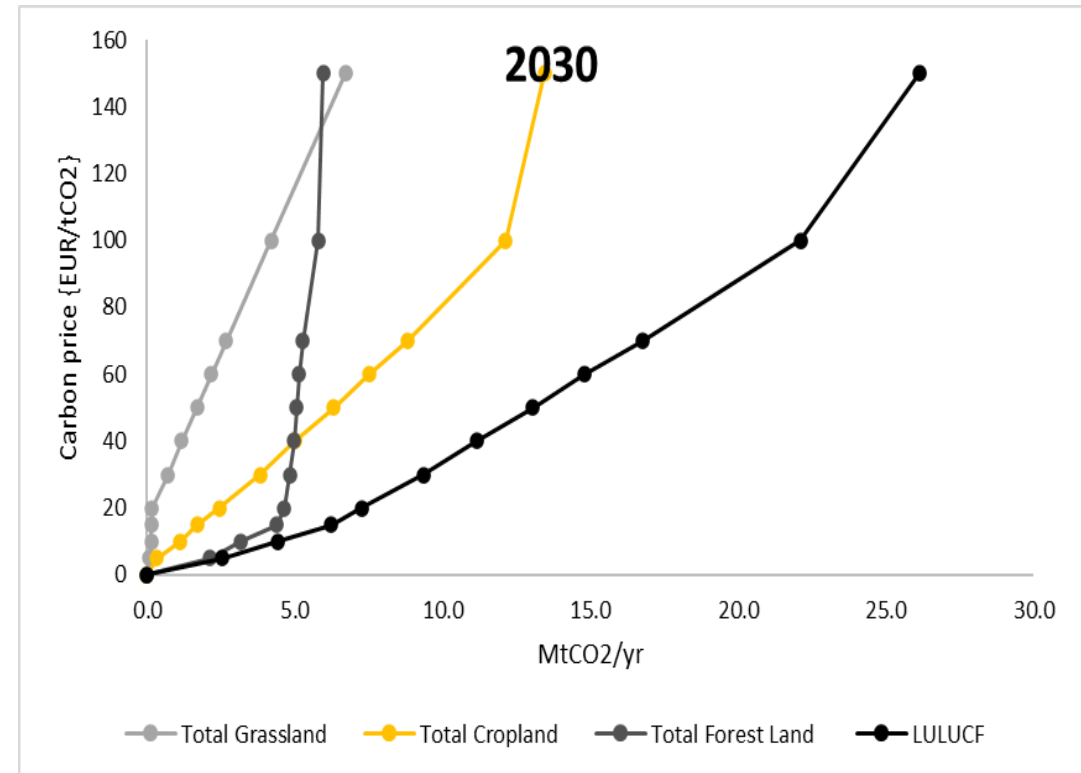


# Preliminary Marginal Abatement Cost Curves – Energy Community

Reference



MIX scenario



- Similar mitigation potential for both scenarios in 2030
- Slightly lower Forest land potentials – in line with the overall scenarios