Updating the Portuguese FMRL

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A technical correction of the Forest Management Reference Level needs to be carried out to ensure "*consistency between the methods and data used to determine the proposed forest reference level in the national forestry accounting plan and those used in the reporting for managed forest land*" (Art. 8, §5)

Main changes in *methods and data* introduced in LULUCF reporting (2022)

data

LU and LUC

- New LU map for 2018 for mainland Portugal
  - Revisions of previous LU maps (1995, 2007, 2010, 2015)
  - QA/QC check for mistakes or very improbable LU changes
- New CLC map for 2018 for the Autonomous Regions of Azores and Madeira
  - Revision and consistency check with previous CLC maps (1990, 2000, 2006, 2012)

methods and data

Harvest

- Reconciliation of total carbon stocks derived from the National Forest Inventory and those from the GHG Inventory
  - 2 categories were created
    - "Declared Harvest"
    - "Other Harvest"

data

EFs for Permanent Crops

- Use of EFs from Project LIFE MediNet

Main changes in *methods and data* introduced in LULUCF reporting (2022)

methods

Shrublands

- Reclassification of "Shrublands" as subcategory of "Grasslands"
  - Previously "Other Land"
  - Recommendation of UNFCCC review process

methods and data

Fire area per LU

- Reinforcing consistency with LU information
  - Now estimated by overlapping COS maps with the Annual Burnt Area maps

methods

E&R from burnt Shrublands and Permanent Crops

- Inclusion of CO2 emissions and subsequent removals in burnt Shrublands and Permanent Crops
  - Previously not reported (considered to be in equilibrium)

Main changes in *methods and data* introduced after 2022

data

Information updates

- Harvest data
- HWP data
- Burnt area data
- …

methods and data

Mistakes correction

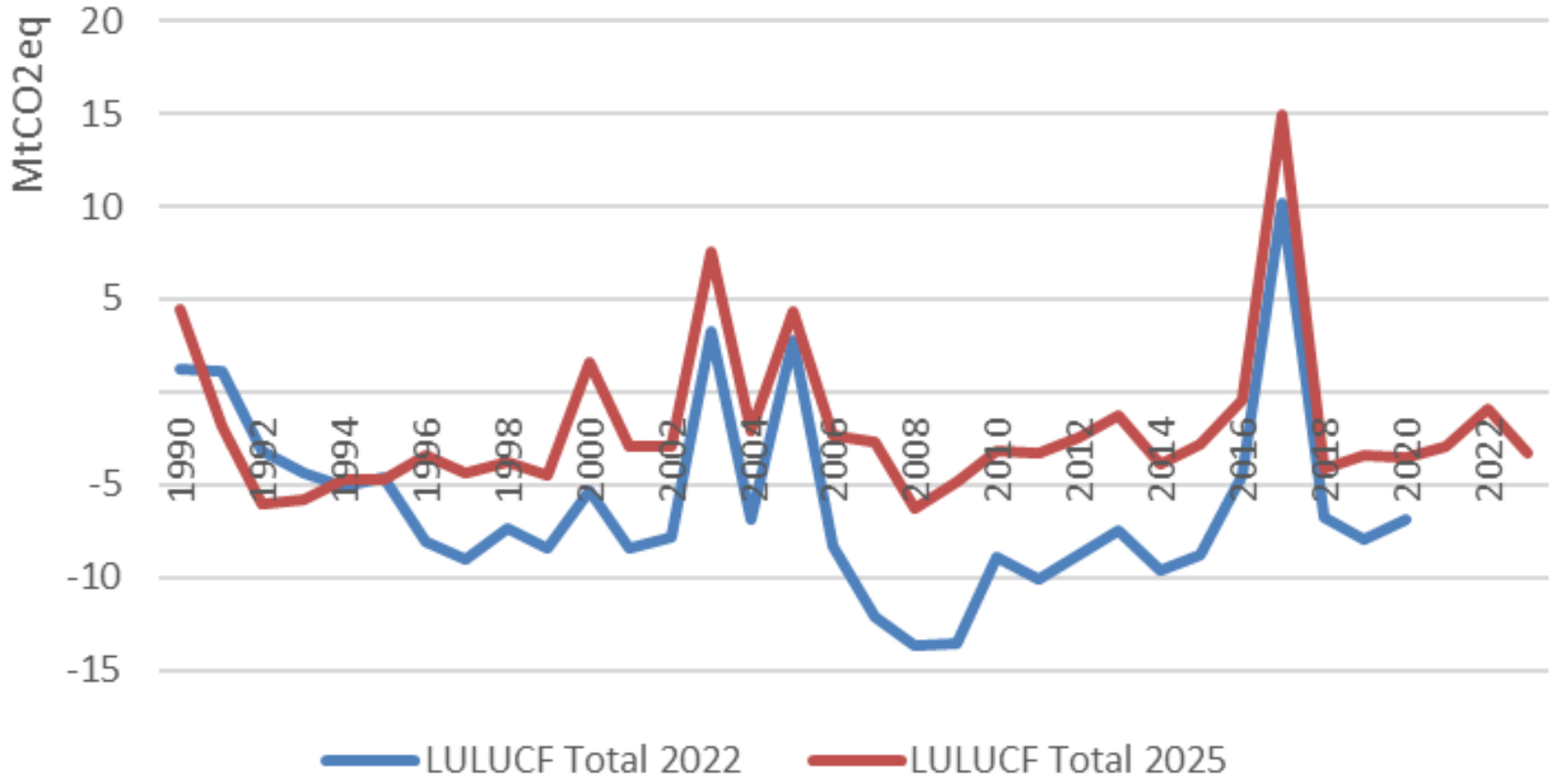
- Correction of (minor) mistakes in methods and data detected in QA/QC processes

data

GWP CH4 and N2O

- Updated from IPCC AR4 to IPCC AR5

Impact of changes in *methods and data* on LULUCF totals



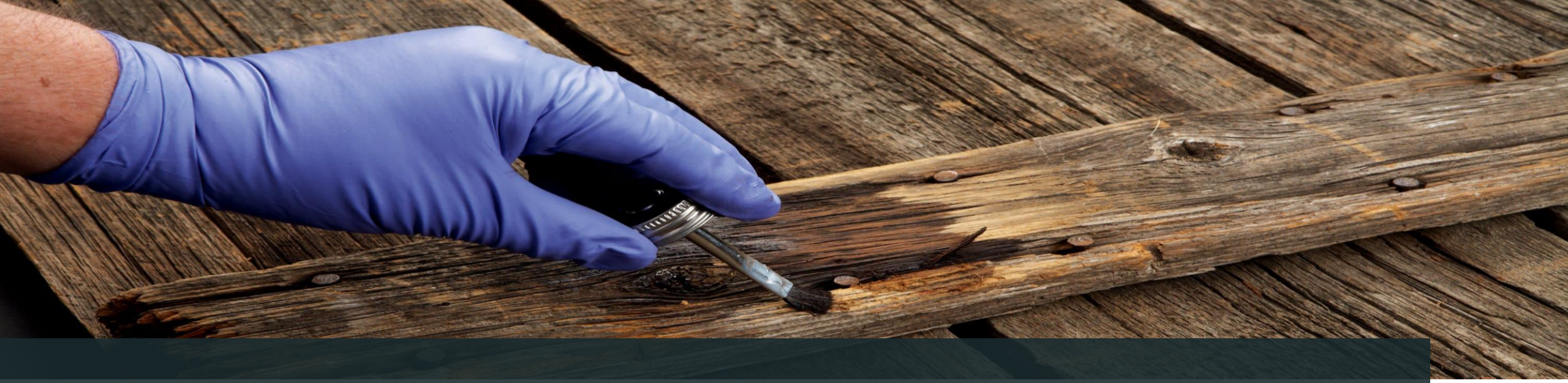
Average annual E&R 1990-2020

2022 submission

- -3.8 Mt/y

2025 submission

- -1.9 Mt/y



Impact on FMRL

Impact on FMRL

Original FMRL		
Element	Average 2000-2009	FMRL (w/HWP)
4.A.1 Forest Land Remaining Forest Land - Net CO2 emissions	**7 215**	**11 468**
Living biomass - CO2 Gains	25 596	**30 932**
Living biomass - CO2 Losses	-18 421	**-19 351**
Dead Wood - Net CO2 emissions	IE	**IE**
Litter - Net CO2 emissions	-49	**-26**
Mineral Soils - Net CO2 emissions	89	-87
Organic Soils - Net CO2 emissions	NO	**NO**
4.G Harvested Wood Products	**700**	**609**
4(I) Dir.&Indir. N2O emissions from N inputs to soils	**IE**	**IE**
4(II) Emissions and removals from drainage and rewetting	**NO**	**NO**
4(III) Dir N2O emissions from N mineralization/immobilization associated with loss/gain of SOC	**-21**	**-13**
4(IV) Indirect N2O	**-5**	**-2**
4(V) Biomass burning (CO2, CH4, N2O)	**-1 536**	**-897**
Net-Removals	**6 353**	**11 165**

Revised FMRL		
Element	Average 2000-2009	FMRL (w/HWP)
4.A.1 Forest Land Remaining Forest Land - Net CO2 emissions	**991**	**3 070**
Living biomass - CO2 Gains	22 059	**26 878**
Living biomass - CO2 Losses	-21 058	**-24 195**
Dead Wood - Net CO2 emissions	IE	**IE**
Litter - Net CO2 emissions	37	**28**
Mineral Soils - Net CO2 emissions	-48	**360**
Organic Soils - Net CO2 emissions	NO	**NO**
4.G Harvested Wood Products	**1 125**	**979**
4(I) Dir.&Indir. N2O emissions from N inputs to soils	**IE**	**IE**
4(II) Emissions and removals from drainage and rewetting	**NO**	**NO**
4(III) Dir.&Indir. N2O emissions from N mineralization/immobilization associated with loss/gain of SOC	**-50**	**-36**
4(IV) Biomass burning (CO2, CH4, N2O)	**-1 907**	**-883**
Net-Removals	**158**	**3 129**

Technical Correction	**-8 036**

Approach to FMRL recalculation

FMRL recalculation implemented in the reporting calculation sheets

- Any data changes in historical data trigger authomatic updates to FMRL

Same assumptions as used in original FMRL

Forest area:

- Same as reported
  should it be same assumptions?

Background level of Natural Disturbances:

- Now based on the new time series 2001-2020

Living biomass emissions and removals

- Same assumptions; methods and data consistent with new reporting approach

Harvest data (declared and other harvest)

- Same assumptions; methods and data consistent with new reporting approach

Expected main changes in *methods and data* until 2027

data

LU and LUC

- New COS map (reference year 2022)
  - Revision of LUC data 2018-2022
  - Revision of estimates for 2022 onwards

data

Harvest

- New NFI (reference year 2025/2026?)
  - Revision of "Other Harvest" 2015-2025
  - Revision of estimates for 2025 onwards

Obrigado

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