

How forest and land use change observations support mitigation efforts

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Land use, carbon and emission data to support climate change mitigation efforts

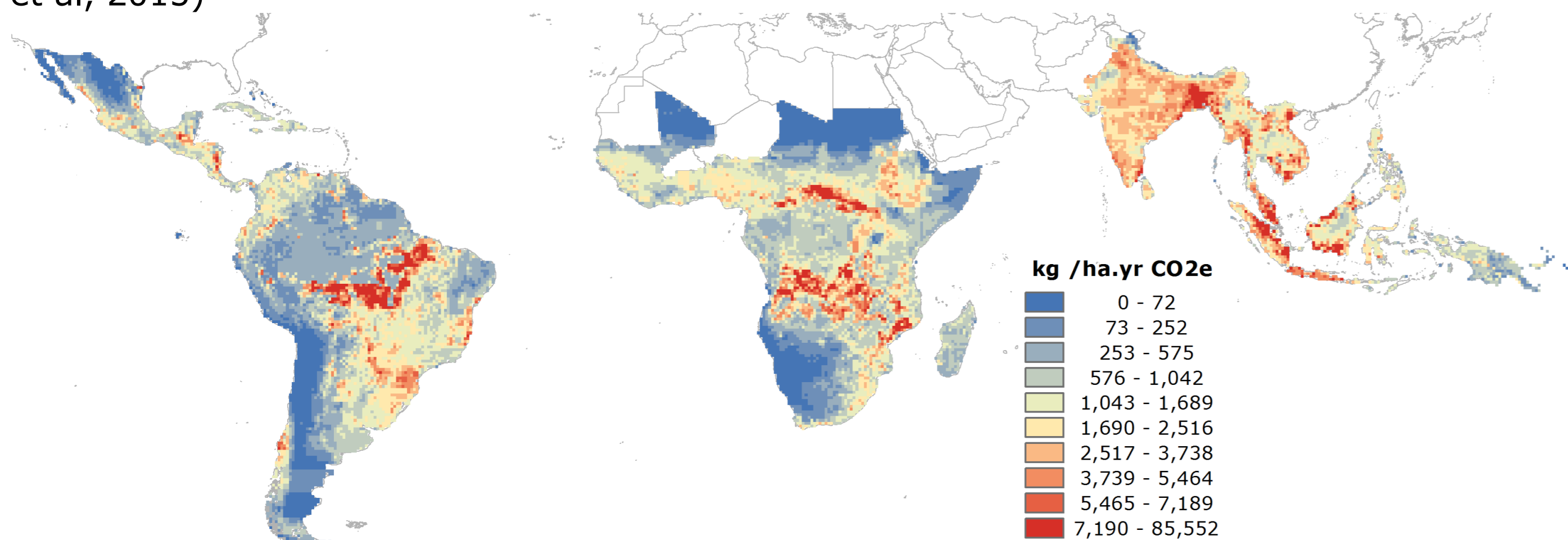
Online data portal - LUCID

The Land Use, Carbon & emission Data (LUCID) portal aims to provide better and more transparent global information on deforestation and drivers, (forest) carbon, land use change and greenhouse gas emissions to better understand and manage land change dynamics on multiple scales and to support climate change mitigation efforts.

lucid.wur.nl

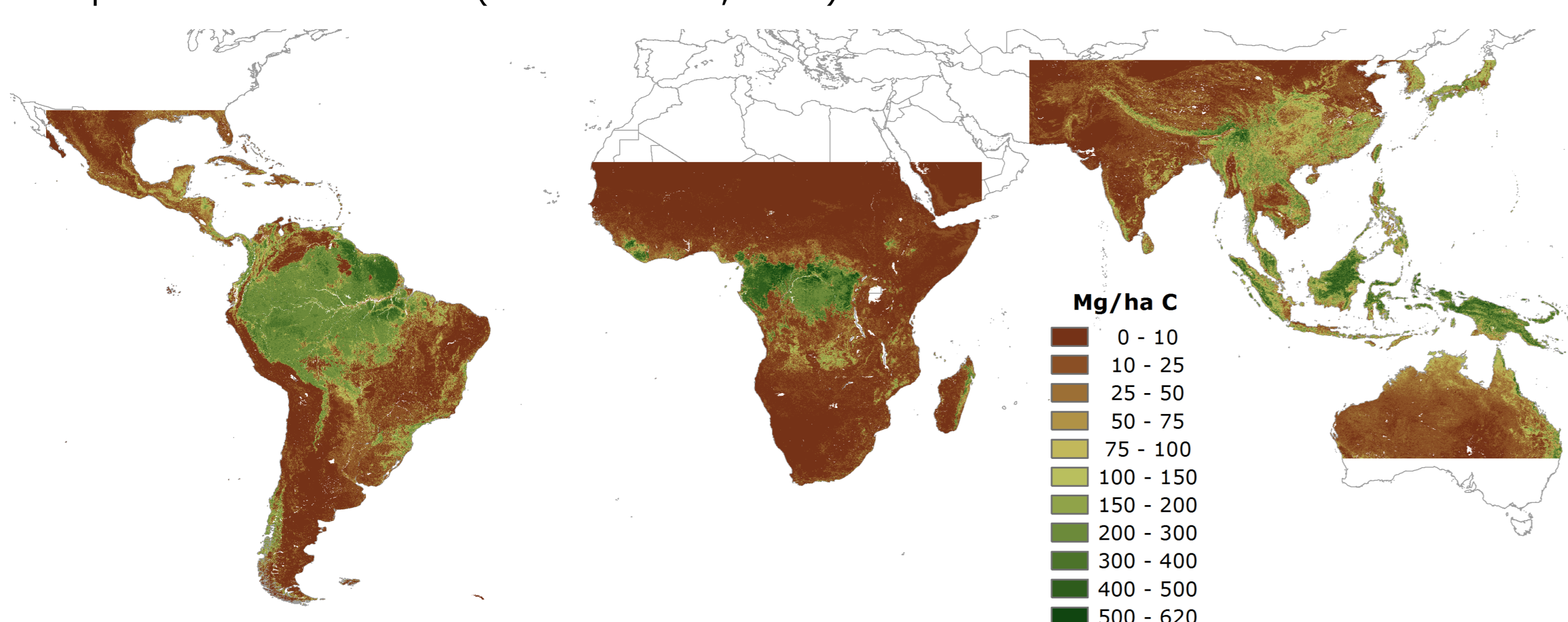
Land use emissions hotspots

Figure 1. Annual mean emissions for 2000-2005 of the AFOLU sector (CO₂, CH₄ and N₂O from deforestation, fire, wood harvesting, livestock, paddy rice, and cropland soils) (Roman-Cuesta et al, 2015)



High carbon ecosystems

Figure 2. An integrated pan-tropical map of aboveground biomass in woody vegetation using multiple reference datasets. (Avitabile et al., 2016)



Independent monitoring approaches

Independent monitoring is not a specific tool, one single system or a one-serves-all approach. It is rather a diversity of approaches and initiatives with the purpose to increase transparency; broaden stakeholder participation and confidence by providing free and open methods, data and tools complementary to mandated reporting by national governments.

Key elements, examples and recommendations:

"Enhancing transparency in the land use sector: the role of independent monitoring". Online at

<http://www.cifor.org/library/6256/enhancing-transparency-in-the-land-use-sector-exploring-the-role-of-independent-monitoring-approaches/>

Essential climate variables & mitigation in the land use sector

Background

1. The Essential Climate Variables (ECV) framework has resulted in focus and important progress for climate observations (steered by UNFCCC/GCOS)
2. ECV observation progress has largely focused on IPCC Working Group I – type users
3. Importance of terrestrial domain is increasing in climate science
4. Human dimension largely absent in ECVs; required for links to mitigation and adaptation
5. Implications from Paris Climate Agreement

Starting the dialogue between observation and mitigation community

GCOS/GOFC-GOLD Workshop on Observations for Climate Change Mitigation



- Representatives from UNFCCC, FAO, IPCC, ICRAF, ESA, etc.
- Focus on Land-based mitigation: land use and land management
- ECVs in the context of mitigation
- Users and data requirements
- Recommendations and actions

www.wmo.int/pages/prog/gcos/index.php?name=ObservationsforMitigation

Conclusions and way forward

Land-based mitigation as pilot to expand current ECV monitoring to include mitigation needs:

- Investments in monitoring and assessments
- Diversity vs. user needs

More attention of GCOS in future:

- Review existing (and consider new) Essential Climate Variables (ECVs) that are related to climate change mitigation;
- Identify and address gaps and requirements to support research into mitigation and better underpin large area land use sector emissions/removals estimation;

Paris climate agreement: bottom up process

- Reporting requirements (NDCs etc.)
- Transparency and "independent monitoring"