infobrief

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Enhancing transparency in the land-use sector

Exploring the role of independent monitoring approaches

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Key messages

There is a need for independent monitoring approaches (i.e. unbiased data, tools and methods) that stakeholders involved in land-use sector mitigation activities can rely on for their own goals, but which would also be perceived as transparent and legitimate by others and support accountability of all stakeholders in the framework of the Paris Agreement.

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

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Post-Paris, the land use sector & monitoring

1. Forests strong in Paris agreement (Art. 5) versus efforts should not harm food production (Art.2)
2. Land use sector is unique in its large negative emissions potential (1,5 -2 degree target):
   - Forests & soils - only proven Carbon Capture & Storage
3. Bottom-up process
4. Monitoring issues:
   - Regular stock-taking by countries
   - Transparency
   - Stimulating and implementing activities
5. Role of independent monitoring approaches

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Independent monitoring...	**All stakeholders**	Government (Annex I)	Government (Non-Annex I)	Intergovernmental organization	Non-governmental organization	Commercial organization (private sector)	Public company (state-owned)	Research institute and university	Donor agency	Local stakeholder	Journalism / media
…provides information that is **increasing transparency, building confidence and broadening participation for multiple stakeholders.**	**55%**	39%	54%	54%	68%	65%	38%	53%	67%	54%	43%
…can be defined as **methods, data and tools** to estimate greenhouse gas emissions from land activities that are **additional to mandated monitoring by governments**.	**54%**	58%	56%	51%	54%	45%	75%	53%	78%	62%	29%
…provides information that is **accurate, reliable and customizable**.	**54%**	35%	50%	68%	67%	55%	38%	52%	56%	54%	43%
…provides information that is **supporting countries to fill data and capacity gaps.**	**49%**	42%	50%	54%	58%	45%	25%	48%	44%	46%	57%
…provides data that can serve the purpose of independent verification by UNFCCC roster of experts for reviewing the annual submissions of greenhouse gas (GHG) inventories.	**43%**	49%	39%	62%	40%	47%	38%	43%	22%	15%	29%
…provides information that is potentially serving as authoritative reference for many kinds of stakeholders.	**43%**	38%	35%	51%	53%	39%	25%	41%	33%	46%	57%
…provides information that is independent from commercial interests.	**41%**	33%	24%	49%	52%	39%	13%	44%	33%	46%	57%
…provides underpinning science to improve data.	**40%**	33%	37%	46%	39%	26%	25%	48%	44%	39%	43%
…ensures that stakeholders, e.g. REDD+ countries, can have ownership and control over datasets and methods and consider them legitimate.	**38%**	23%	44%	41%	43%	43%	0%	39%	22%	62%	29%
Number of responses	533	69	54	37	106	51	8	179	9	13	7

Colour code according to rank of percentages (1 = highest ranked percentage, 9 = lowest ranked percentage)

1	2	3	4	5	6	7	8	9

Defining independent monitoring

- Stakeholders have different perspectives; it is not a specific tool, or a one-serves-all approach
- Embraces diversity with the purpose of increasing transparency, and broadening stakeholder participation and confidence
- Key elements:
  1. transparency in data sources, definitions, methodologies and assumptions;
  2. free and open methods, data, and tools, which are 'barrier free' to all stakeholders;
  3. increased participation and accountability of stakeholders;
  4. complementarity to mandated reporting by countries;
  5. promotion of accuracy, consistency, completeness and comparability of greenhouse gas (GHG) emission estimates

Addressing key challenges and stakeholders

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Recommendations to countries and UNFCCC

- Transparency is a great opportunity: builds confidence and legitimacy
- Transparency can cause (initial) frustration but will enhance quality: things will become more serious and be ready and open for surprises
- Transparency requires capacity : circumstances vary, and enhancing transparency requires flexibility (step-wise)
- Transparency reduces ignorance: take advantage of the diversity of (independent) datasets and approaches

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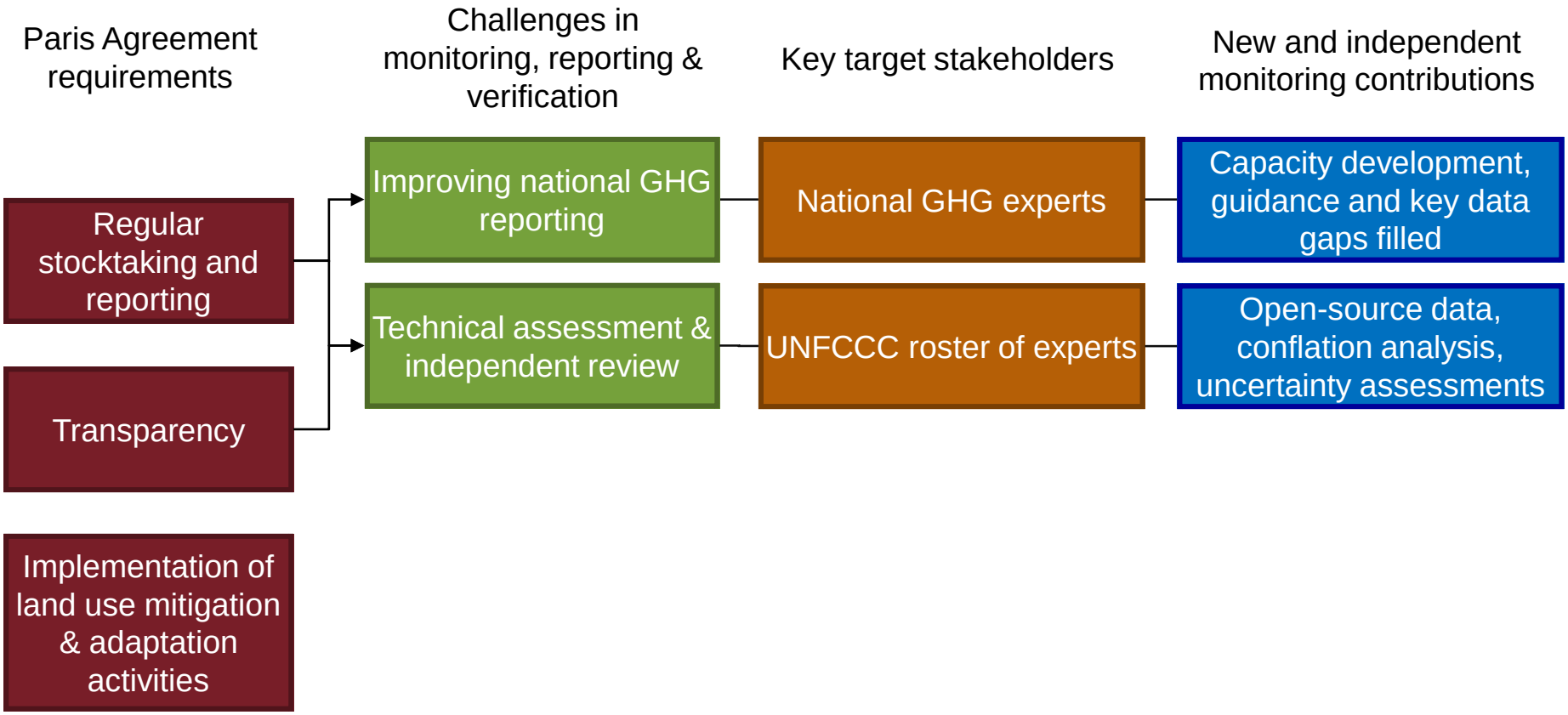
Addressing key challenges and stakeholders



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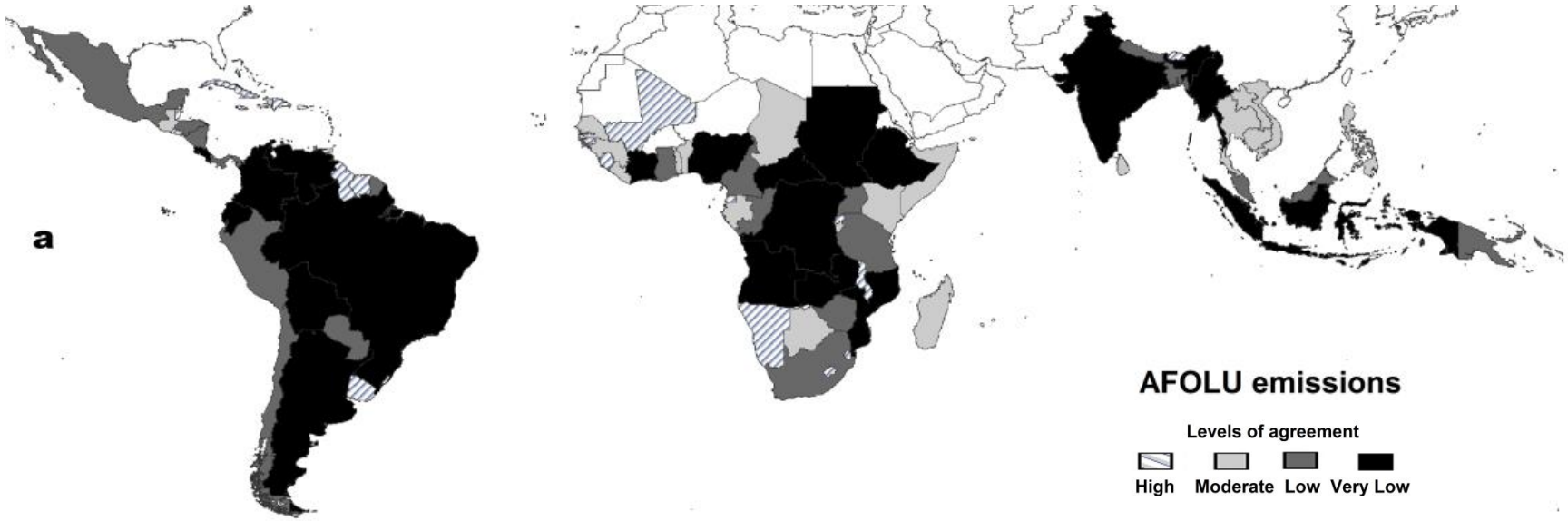
Diversity in AFOLU databases



- Country level agreement for agriculture, forestry and other land-use emissions for the FAOSTAT, EDGAR and 'Hotspots' databases
- Source: Roman-Cuesta et al., 2016, Biogeosciences
- Disagreements stem from differences in conceptual frameworks, definitions, methods and assumptions, etc.

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Recommendations to expert communities

- Better dialog between communities involved in producing emissions estimates in the land use sector
- Independent monitoring important for preparing harmonized reference data for technical assessments
- International expert community need to develop better guidance and training materials on how to use global datasets (i.e. complementarity, uncertainties, etc.)
- IPCC Good practice guidelines need updates (i.e. land representation, REDD+, use of remote sensing)
- Open source data and tools

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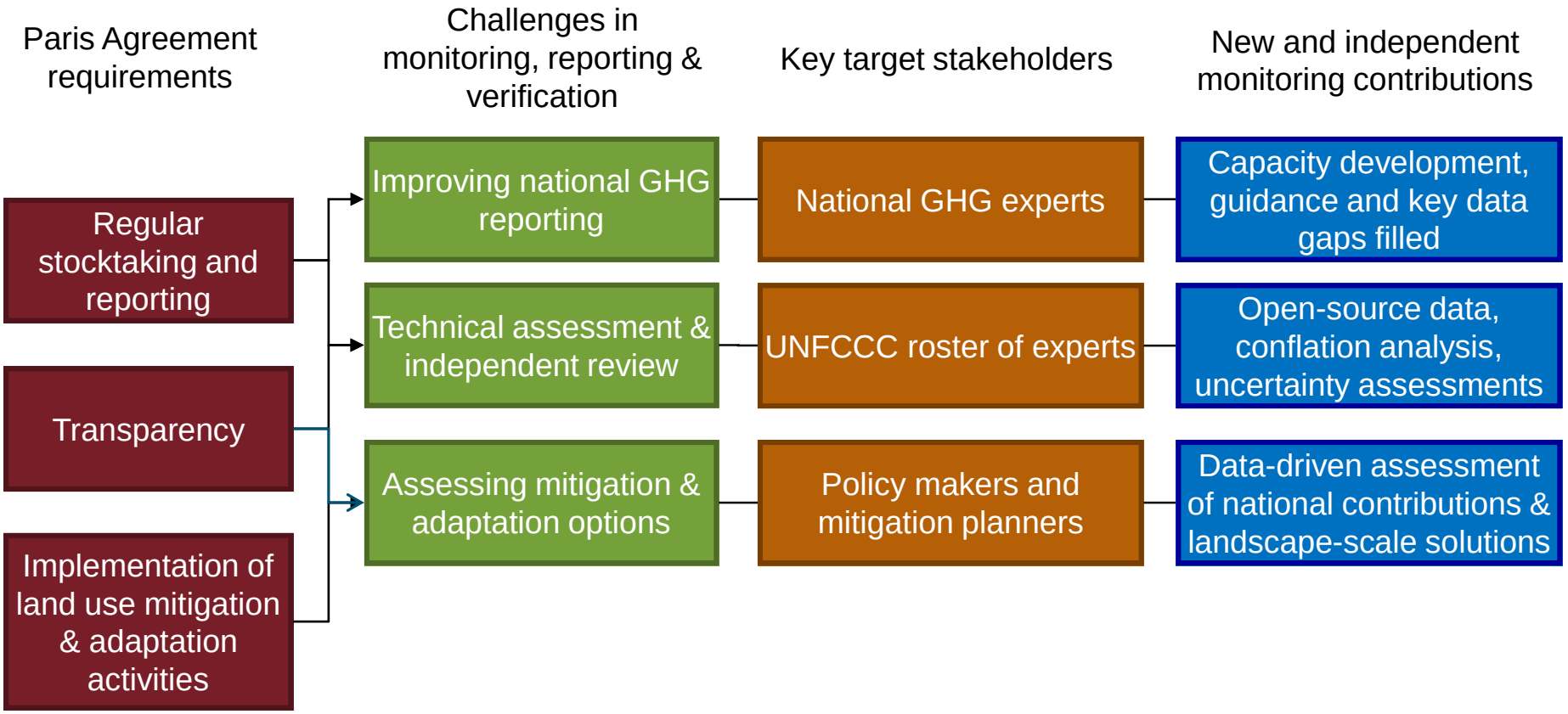
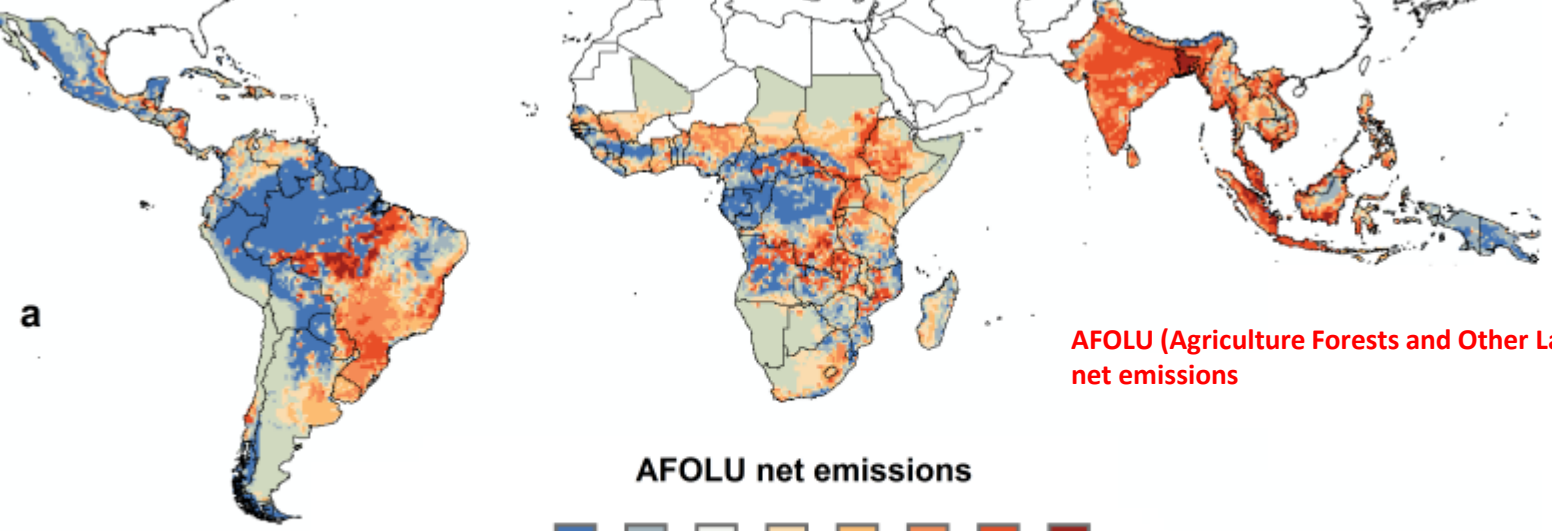
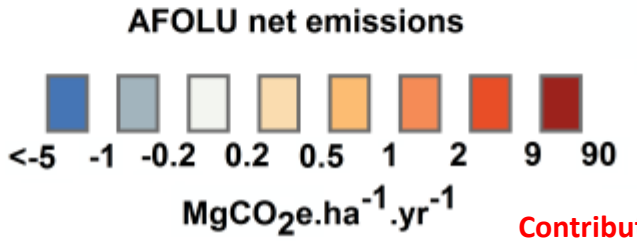
Addressing key challenges and stakeholders

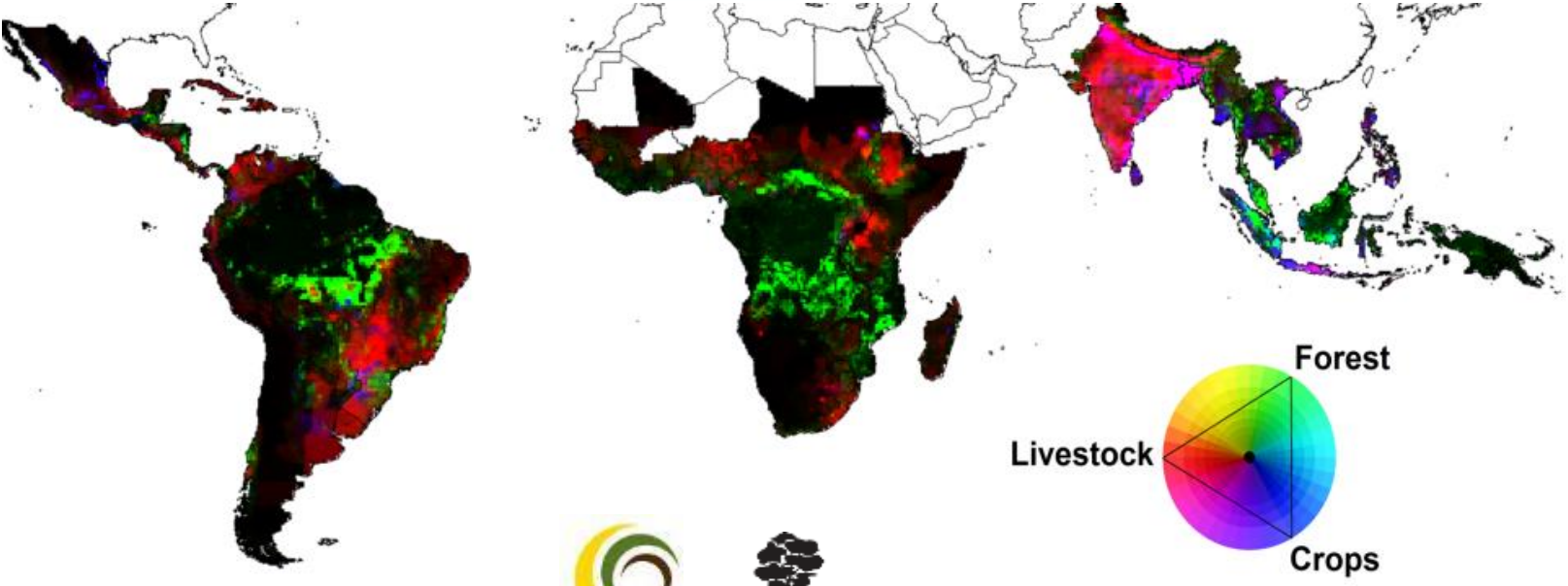




AFOLU (Agriculture Forests and Other Land Uses) net emissions



Contribution of emission sources per pixel (0.5°)



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Data available: http://lucid.wur.nl/

Roman et al., 2016, Biogeosciences

Recommendations for mitigation planning

- Information is needed to understand the needs and options of land use sector mitigation on national and local levels
- Landscape-scale solutions require assessment of synergies and trade-offs for active engagement:
  - REDD+
  - Climate Smart Agriculture
  - Restauration

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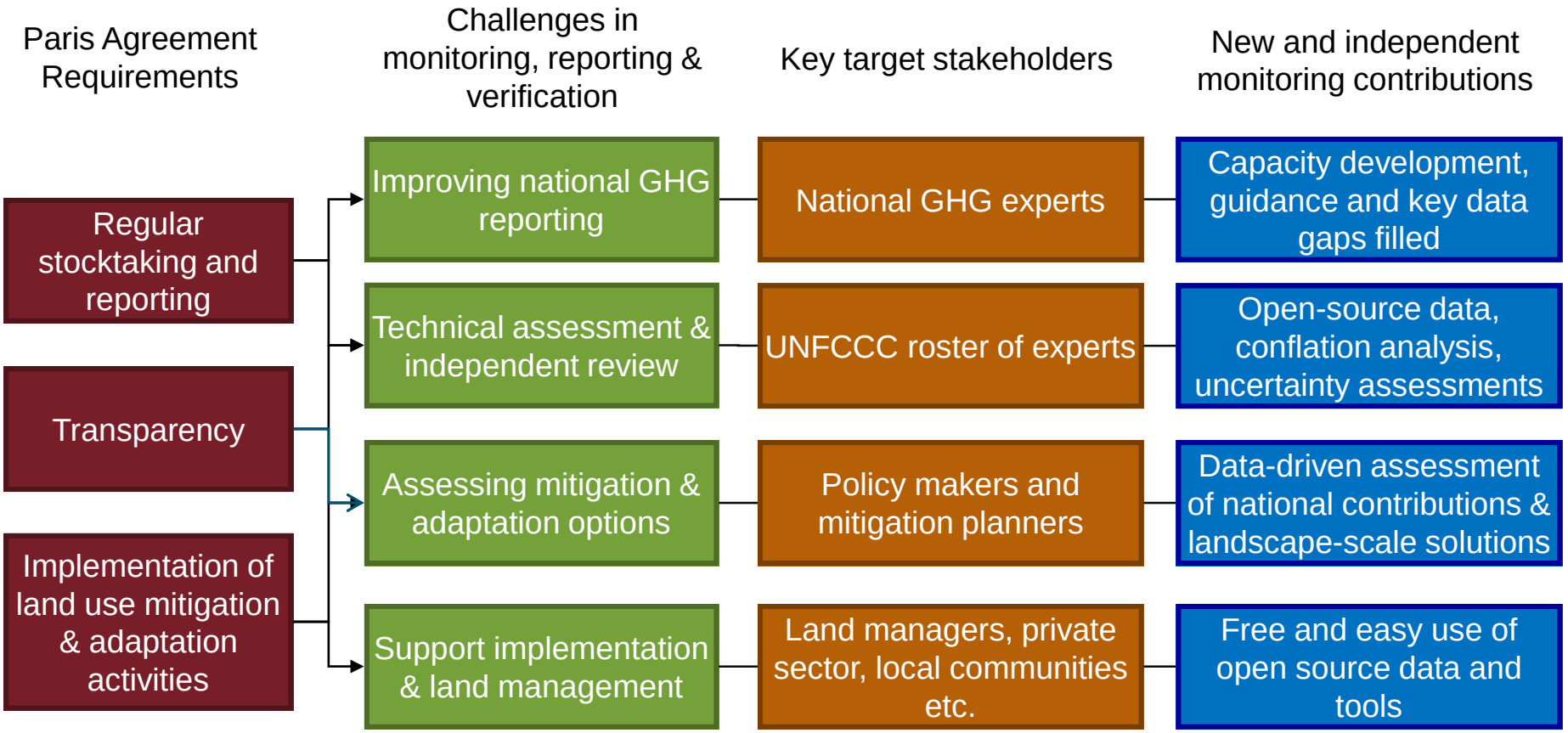
Addressing key challenges and stakeholders



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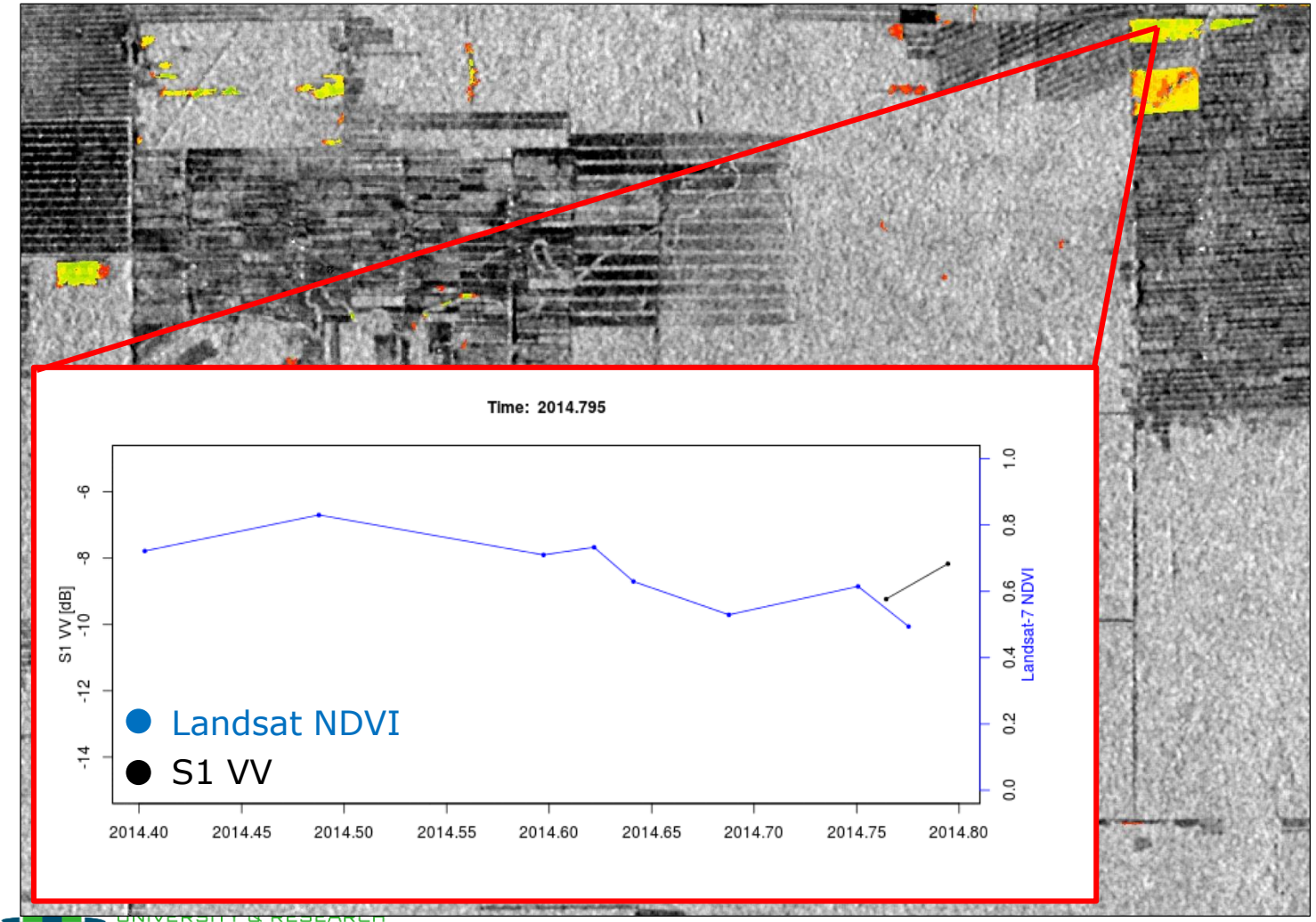
Combining Sentinel-1 & Landsat (Bolivia)

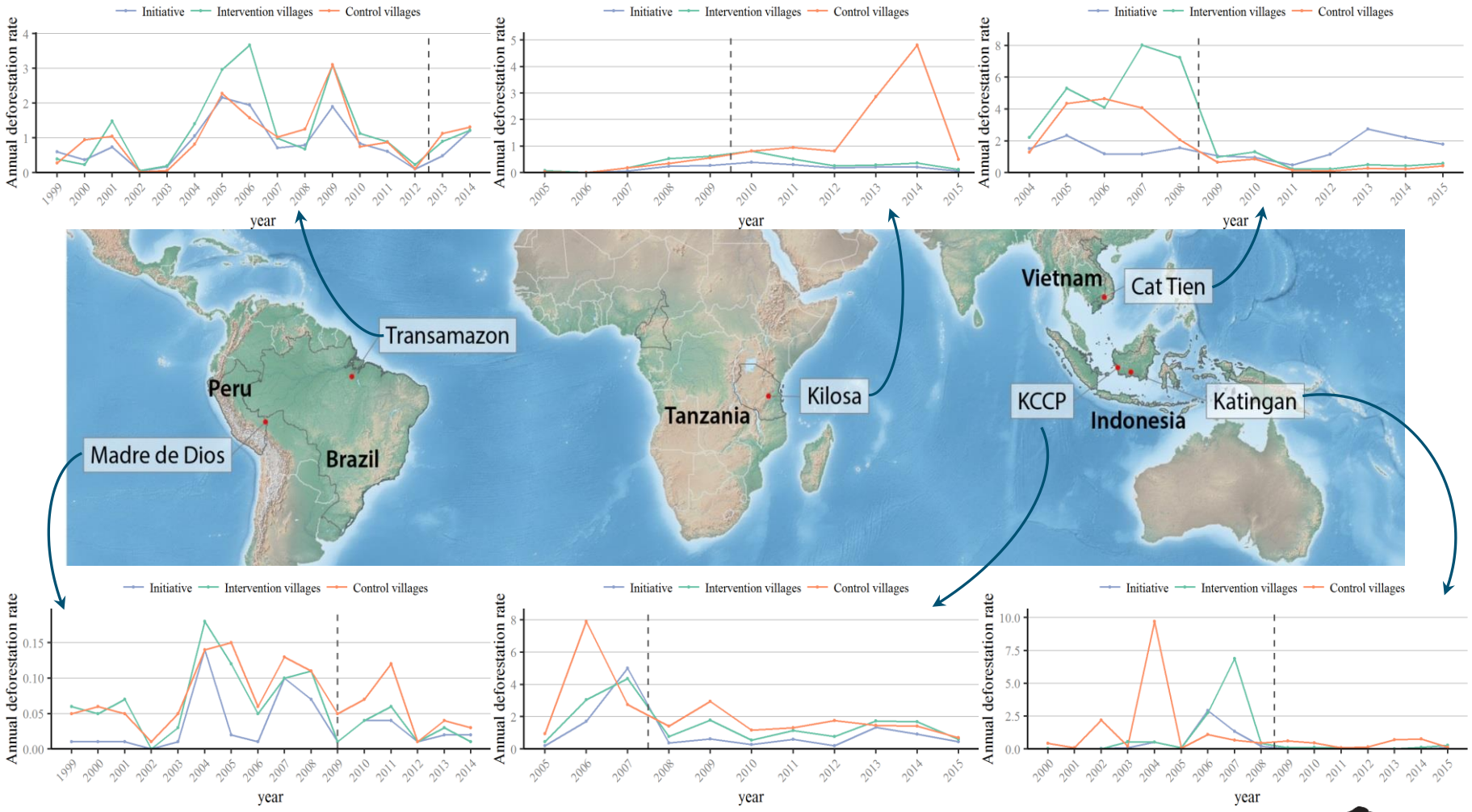
Fortnightly (two-weekly) monitoring 10/2015 – 04/2016



2015.288 (10-15)
2015.305 (11-01)
2015.319 (11-15)
2015.335 (12-01)
2015.349 (12-15)
2016.000 (01-01)
2016.015 (01-15)
2016.032 (02-01)
2016.047 (02-15)
2016.062 (03-01)
2016.076 (03-15)
2016.091 (04-01)
2016.105 (04-15)

Credit: Johannes Reiche

Performance at control, intervention, initiative level
(credit: Astrid Bos, Amy Duchelle)



Interactive monitoring system design

- Linking near-real time satellite observations with on the ground monitoring by local experts, communities, land managers etc.
- Create on environment of open exchange of information
- Operational monitoring in Kafa Biosphere Reserve, Ethiopia in near-real time mode since Oct. 2014
- Inception for system at national and local level in Peru – joint research incl. multi-level governance

http://www.wageningenur.nl/cbm

Pratihast et al., 2016, PLOS One

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SilvaCarbon

Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit

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Recommendations for implementation

- Independent monitoring is not a “system”, it is a variety of practices
- A participatory and interactive environment creates open exchange and partnership
- No dataset is perfect, but local activities are real ... use as common ground
- Useful to be complementary to national reporting and promote IPCC principles
- Transparency takes effort but can lead to transformational changes

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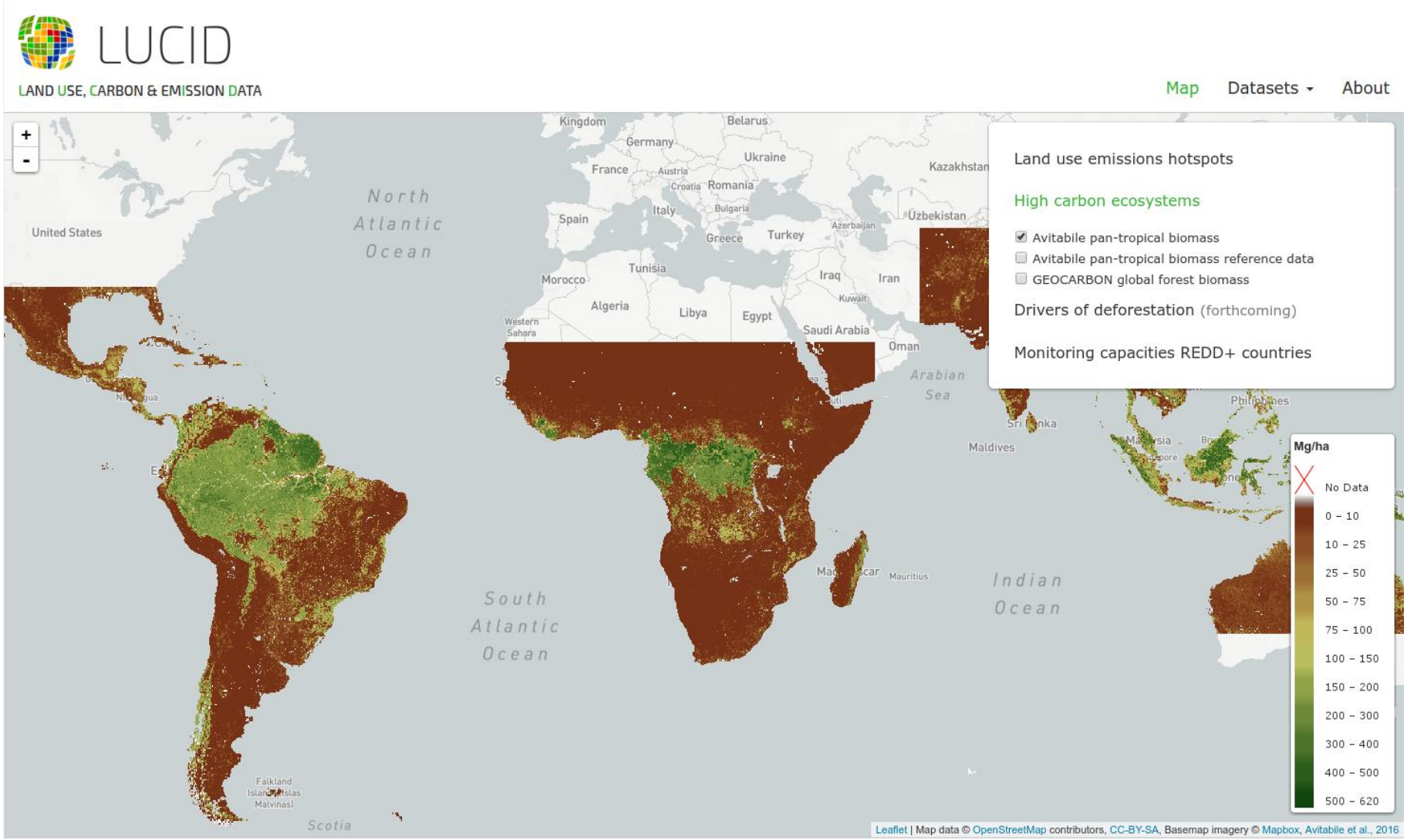
http://lucid.wur.nl



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