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From Independent to Transparent Monitoring for Climate and Development

Building **Trust** and **Consensus** around Greenhouse Gas Data for Increased **Accountability** of Mitigation in the Land Use Sector

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Background

- Many activities and initiatives to improve emission factors and area estimates at national and international levels (e.g. Global Forest Watch)
- Increased demand for independent land use monitoring information:
 - National decision makers seeking to implement REDD+/LULUCF
 - NGOs/local communities seeking to validate local activities
 - Practitioners developing or improving AFOLU monitoring systems
 - REDD+ donors and investors seeking tor reduce their risk
- -> Politics of numbers!
- -> Users' perspective is often: more numbers = more confusion
- Project by European Commission DG CLIMA, Dec 2014 Mar 2017: How can independent monitoring build trust and consensus around GHG data?



Definition of Independent Monitoring And reported challenges

... authoritative, objective sources of information that are unbiased and independent from national/industry interest, that are free and open and can increase transparency and participation.

- Technical constraints
- Difficulties regarding data use and interpretation
- Issues of access and capacities
- Lack of awareness and capacities to use





Interest in data related to non GHG topics

	Govern- mental N=141	Local stakehol- ders N=10	NGO's N=91	Companies N=48	Research N=163	Other N=44
Ecosystem services	43.3%	50.0%	61.5%	52.1%	44.2%	63.6%
Natural disturbances	36.9%	30.0%	34.1%	29.2%	28.8%	36.4%
Livelihoods	29.8%	60.0%	45.1%	20.8%	28.8%	47.7%
Agricultural crop productivity	28.4%	30.0%	41.8%	29.2%	33.1%	34.1%
Land tenure	28.4%	40.0%	38.5%	41.7%	30.7%	47.7%
Economic data	24.8%	20.0%	48.4%	41.7%	20.9%	52.3%



Many tools are available... Examples



Nr: 106.238, Lat: 3.511

http://www.geo-wiki.org

SIMPLE DEFORESTATION VIEWER



Comparison of numbers is still a challenge for users! Examples

Areas of agreement and disagreement when comparing three subnational datasets

Courtesy: Christopher Martius, CIFOR





Country level agreement for different sources of AFOLU emissions

"Hotspot analysis"

Roman-Cuesta et al. 2016



Key elements of independent monitoring

- 1: Transparency and clarity
- 2: Accuracy and uncertainty
- 3: Consistency and completeness
- 4: Comparability and interoperability
- 5: Complementarity and scale
- 6: Reproducibility and adaptability
- 7: Access and distribution
- 8: Participation and equity
- 9: Responsibility and accountability

→ Derived from stakeholder survey, case studies and literature

→ Ideally there should be no negative effects on key elements (trade-offs are unavoidable, e.g. lower accuracy for increased comparability and interoperability)



From independent to transparent monitoring Priorities for action

Bubbles: influence on monitoring

Arrows: positive feedbacks (size = impact of feedback)



Own compilation with http://www.consideo.com/imodeler24.html



- Provide transparent data, incl. original data sources
- Definitions, methodologies and assumptions clearly described to facilitate replication and assessment
- Include accuracy assessments and uncertainties
- Methods for data production publicly available and preferably published in peer-reviewed papers
- Data systems require regular update of data and consistent estimates over time; including long-term sustainability of production
- Institutional background of data producer needs to be visible and understood by all stakeholders involved



Recommendations

To government agencies, national inventory experts and reviewers

- Countries need to be aware of limitations of global datasets to avoid misuse or misinterpretation, especially for open and ready-to-use data and tools for independent monitoring
- Countries should build and maintain institutional capacity capable of using independent monitoring approaches
- Data and tools and related documentation used in producing GHG inventory should become open source as much as possible



General conclusions from the project

- Independent information on GHG emissions from land use activities gets more and more important and user needs are diverse (despite some universal needs: e.g. open access and accuracy assessments)
- Independent monitoring can build trust. Trust can be built only slowly and by presenting practical examples and increasing transparency of processes how to get from data to information and decision making in general
- Increasing transparency requires consideration of all identified key elements of independent monitoring, but priorities need be set for specific stakeholders
- Important co-benefits with other SDGs provide opportunities for decreasing costs and broadening participation

Thank you!

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- Study to be published as EC Report in early 2018
- Leaflets available at the door





Project references

- Sy, V. de; et al. (2016). Enhancing transparency in the land-use sector: Exploring the role of independent monitoring approaches: Center for International Forestry Research (CIFOR).
- Schepaschenko D.G. et al. (2015) Estimation of Forest Area and its Dynamics in Russia Based on Synthesis of Remote Sensing Products. Contemporary Problems of Ecology, 8(7): 811–817.
- Gaveau, D.et al. (2016). Rapid conversions and avoided deforestation: examining four decades of industrial plantation expansion in Borneo. Scientific reports, 6, p.32017. doi:10.1038/srep32017.
- Roman-Cuesta, R et al. (2016). Multi-gas and multi-source comparisons of six land use emission datasets and AFOLU estimates in the Fifth Assessment Report, for the tropics for 2000–2005. Biogeosciences, 13(20), pp. 5799–5819. doi:10.5194/bg-13-5799-2016.
- Roman-Cuesta, R. et al. (2016). Hotspots of gross emissions from the land use sector: Patterns, uncertainties, and leading emission sources for the period 2000–2005 in the tropics. Biogeosciences, 13(14), pp. 4253–4269. doi:10.5194/bg-13-4253-2016.
- Romijn, E.; et al. (in prep.) Independent monitoring of GHG emissions from the land use sector What do stakeholders need and think? To be submitted to Environmental Science and Policy