

LULUCF IN GERMANY

Hannes Böttcher

Senior Researcher at Oeko-Institut

h.boettcher@oeko.de

Climate Diplomacy Week

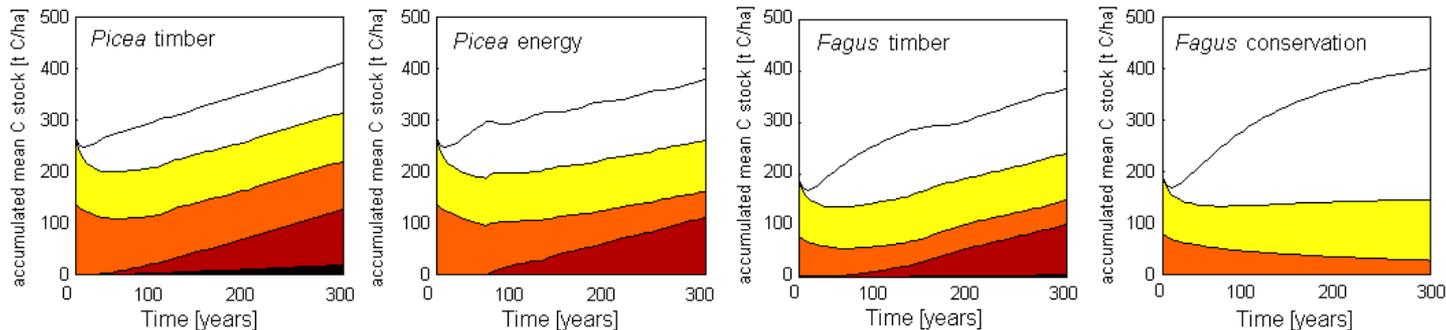
Helsinki, September 16, 2016

Challenges

1. Accounting: Legacy of complicated rules from Kyoto Protocol parallel to Convention reporting
2. Monitoring: Target hotspots of emissions
3. Environmental integrity: avoid negative impacts on environment (e.g. biodiversity)
4. Implementation: Mobilize potentials for emission reduction and sink enhancement
5. Cross compliance: Land use has multiple objectives that need to be considered

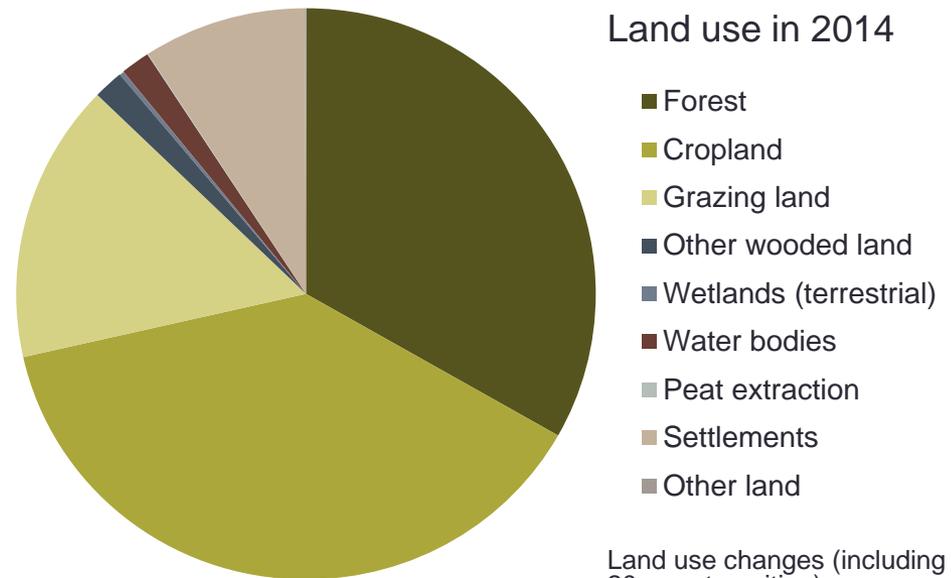
Forest management options for climate change mitigation

Management option	Impact on C stocks		
	Biomass	Soil	Products
Afforestation	↑	↓ ↑	→ ↑
Shortening of rotation	↓	→	↑
Prolongation of rotation	↑	→	↓
Thinning	↓ ↑	→	↑

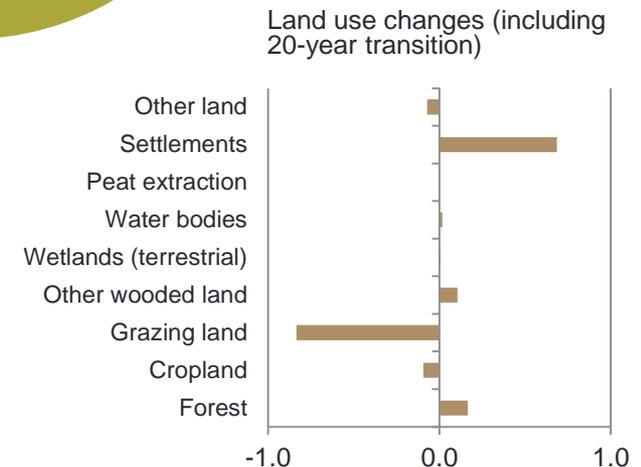


LULUCF sector in Germany

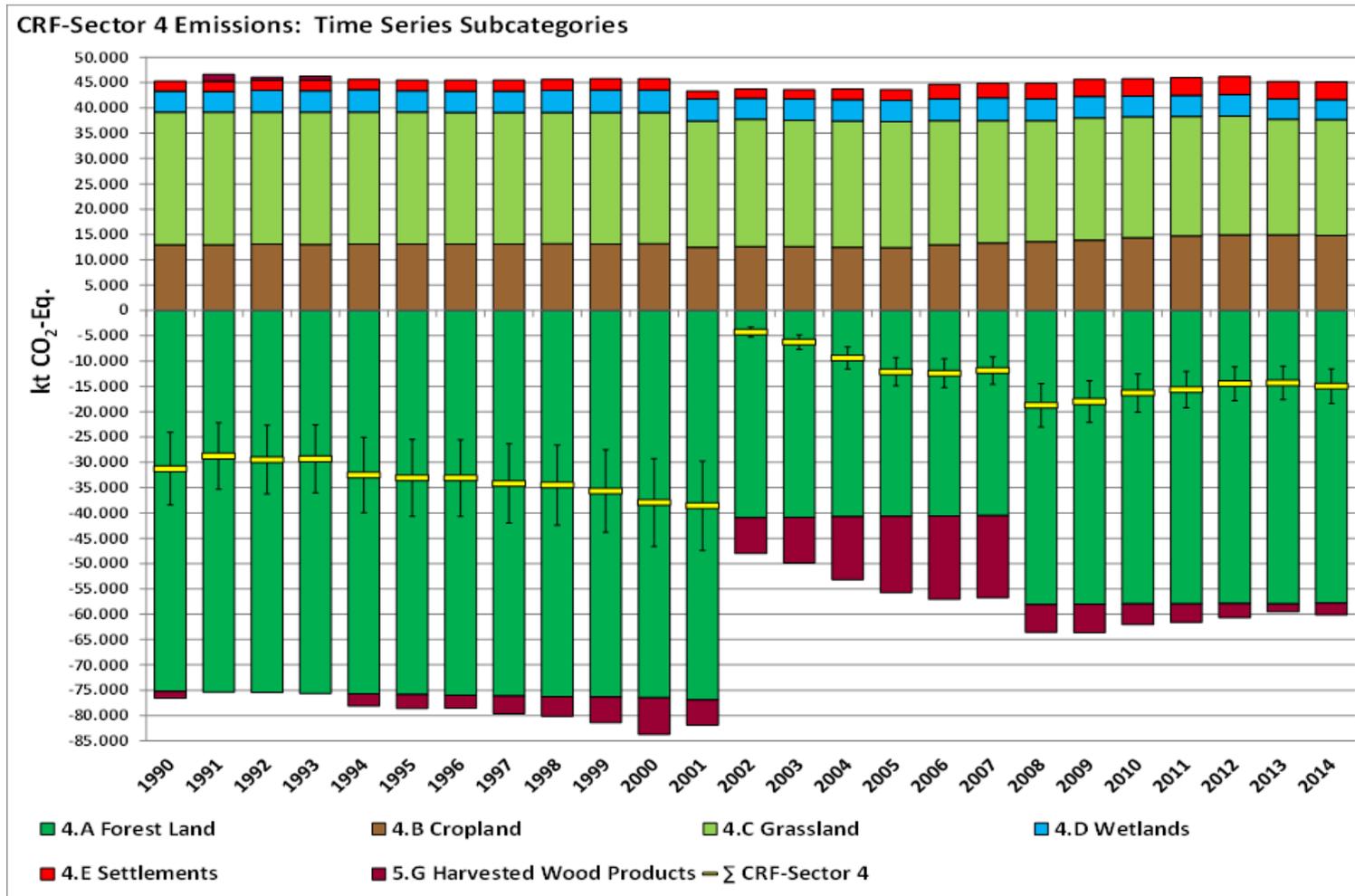
- Total emissions in DE decreased from 1,25 to 0,95 Gt CO₂-eq.
- LULUCF sink decreased from -31 to -15 Mt CO₂-eq.
- LULUCF sink amounts to 2-3% of annual emissions



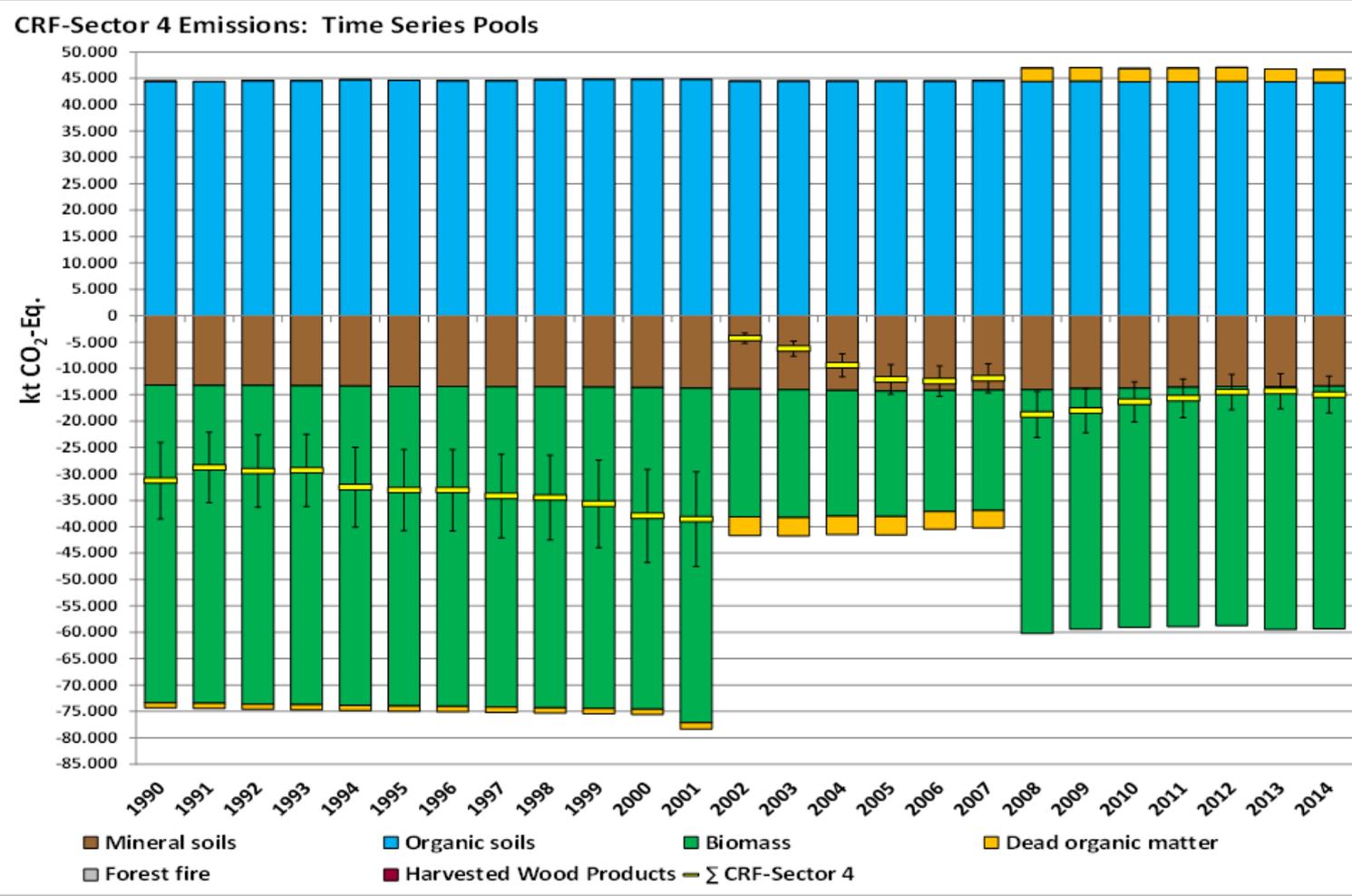
Year	Total forest area	Forest remaining forest	Annual Afforestation	Annual Deforestation
1990	10.766.646	10.738.559	28.086	15.142
2000	10.896.091	10.868.005	28.086	15.142
2005	10.926.466	10.916.787	9.679	3.604
2010	10.933.840	10.932.698	1.142	1.039



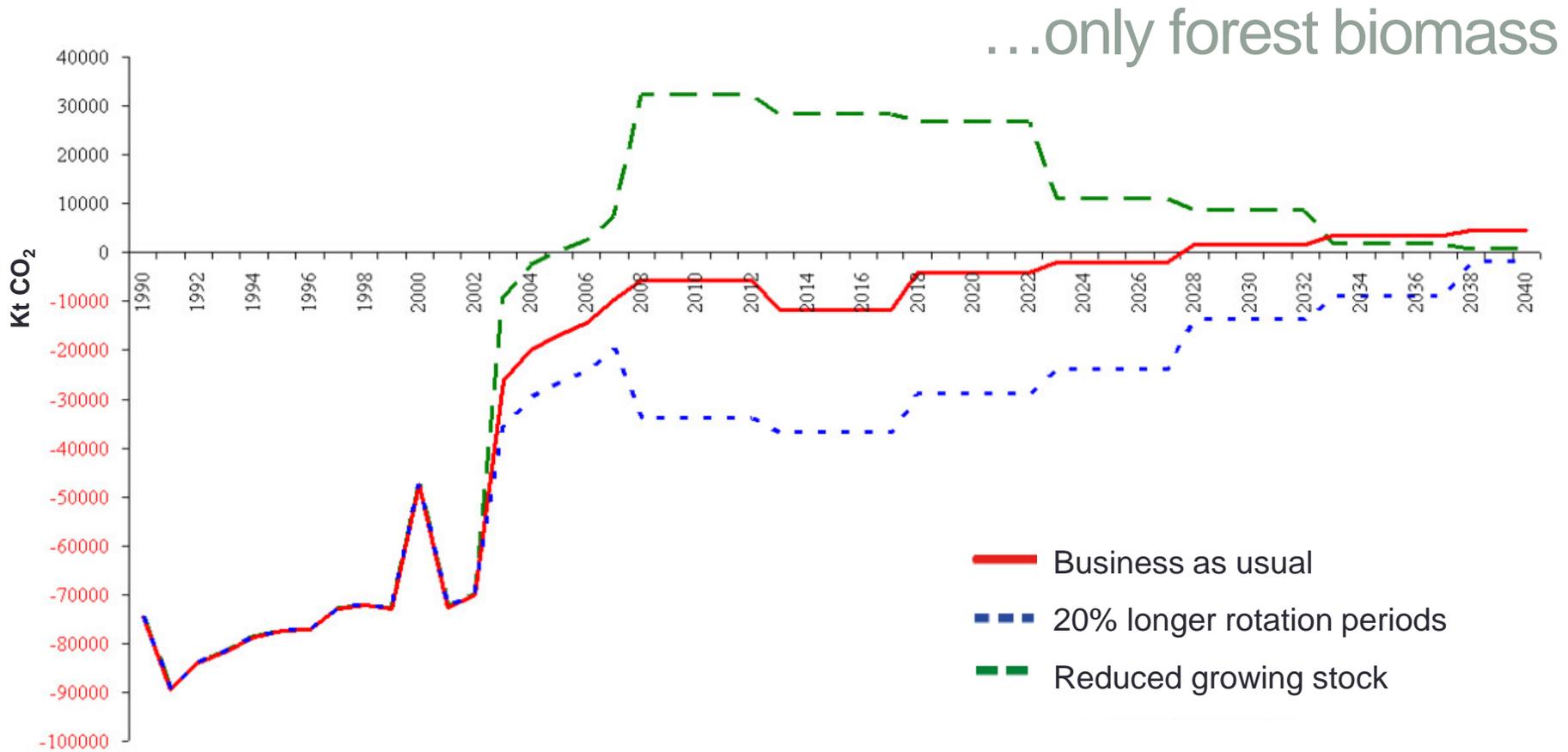
LULUCF emissions by land use



LULUCF emissions by sources/sinks

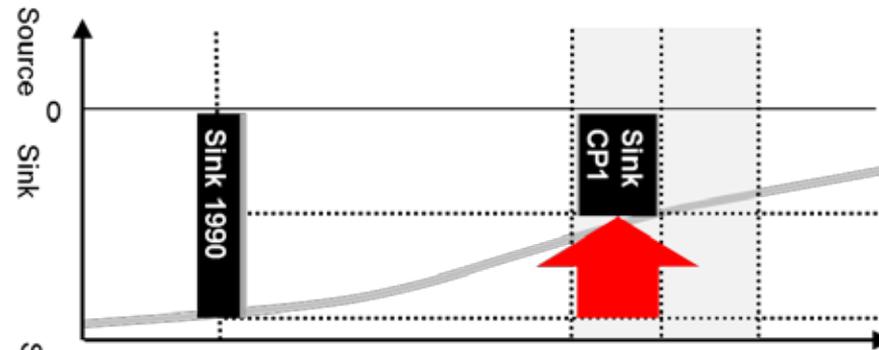


Projected forest management emissions and removals

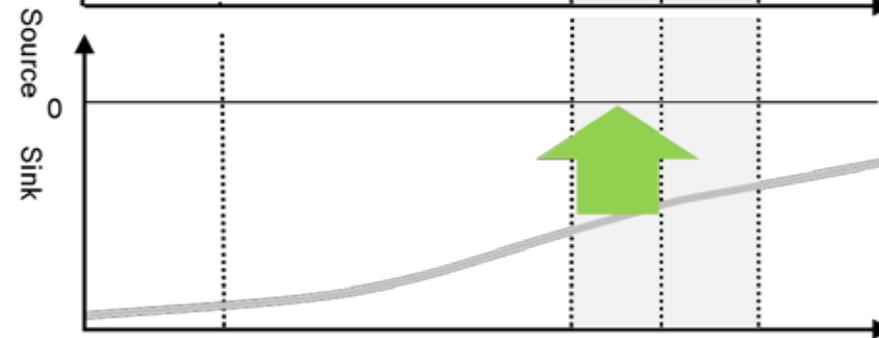


Accounting rules

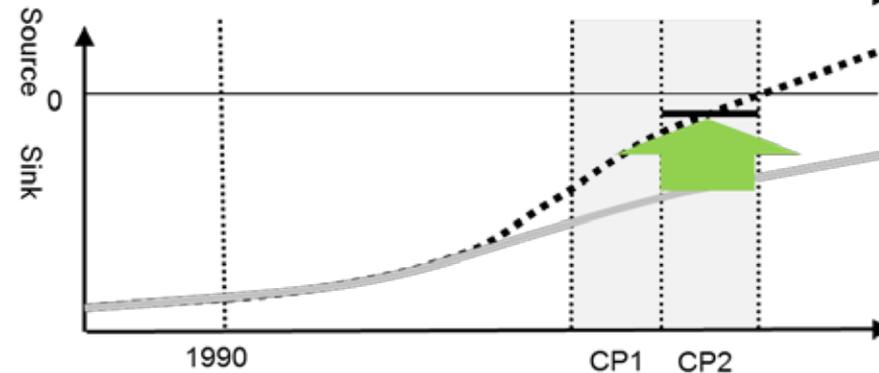
Net-net
accounting
(Copland,
Grazing land)



Gross-net
accounting
(Afforestation,
Deforestation)



Accounting
against a
reference level
(Forest
management)



- FM emissions/removals
- FM Reference Level
- FM projection
- ↑ Debits after accounting
- ↑ Credits after accounting

Solutions?

Is the EC LULUCF proposal fit for purpose?

1. Accounting: Streamlined reporting and accounting between Kyoto Protocol and Convention: from activities to managed land – still complicated
2. Monitoring: burden increases, more mandatory land categories, remains challenge for poorer countries
3. Environmental integrity: LULUCF has “only” a no-debit target; bioenergy accounting still not resolved (hidden in reference level)
4. Implementation: Still questionable how incentives can be set (e.g. Harvested Wood Products)
5. Cross compliance: Still lack of a comprehensive vision and policy framework for the sector at EU level (cannot be expected from the LULUCF proposal alone)

AFOLU AFTER PARIS

Hannes Böttcher

Senior Researcher at Oeko-Institut

h.boettcher@oeko.de

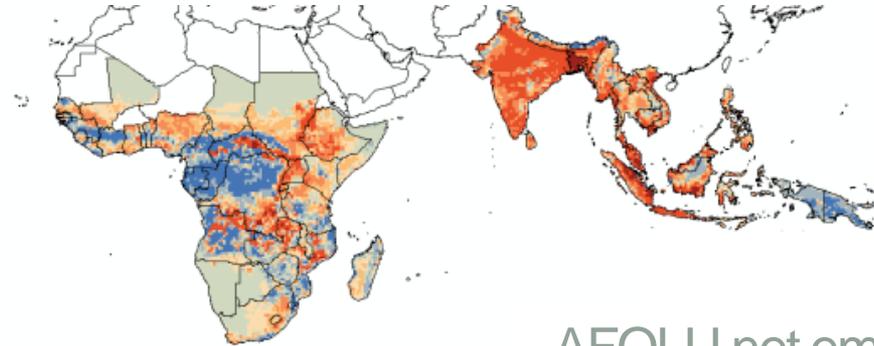
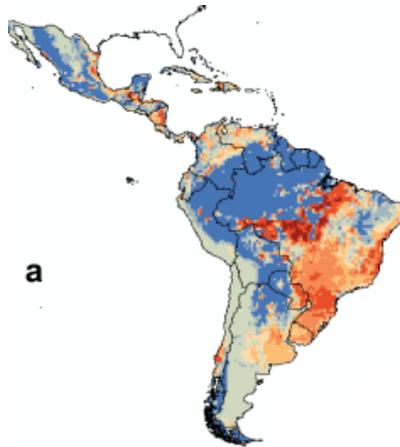
Climate Diplomacy Week

Helsinki, September 16, 2016

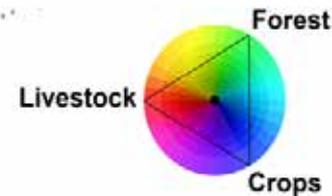
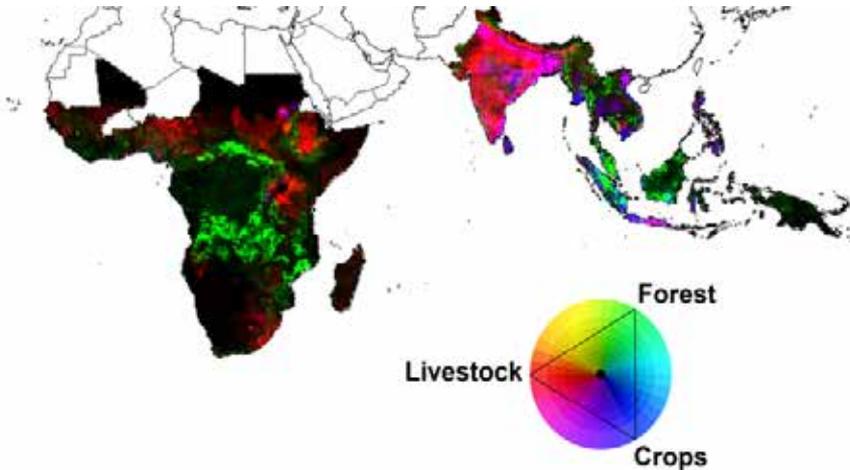
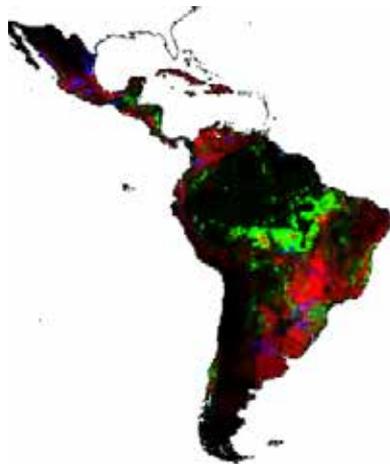
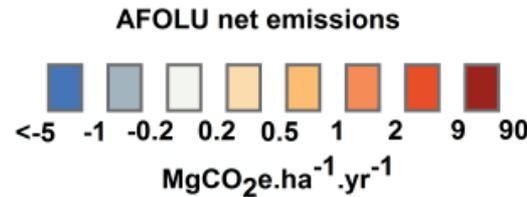
Challenges

1. Transparency: Paris Agreement calls for more transparency regarding nationally determined contributions but also reporting and accounting rules
2. Monitoring: while most Kyoto countries have systems in place, non-Annex1 countries need to increase capacities, at the same time more and more bottom-up approaches by countries: how to verify and compare efforts?
3. Target: Paris Agreement requires an economy-wide no-debit target after 2050 (“balance of sources and sinks”)
4. Mitigation: emission drivers are very diverse and can be global or local
5. Sustainability: Integration of land use mitigation activities with development objectives (e.g. SDGs) and equity

Global emission hotspots and drivers

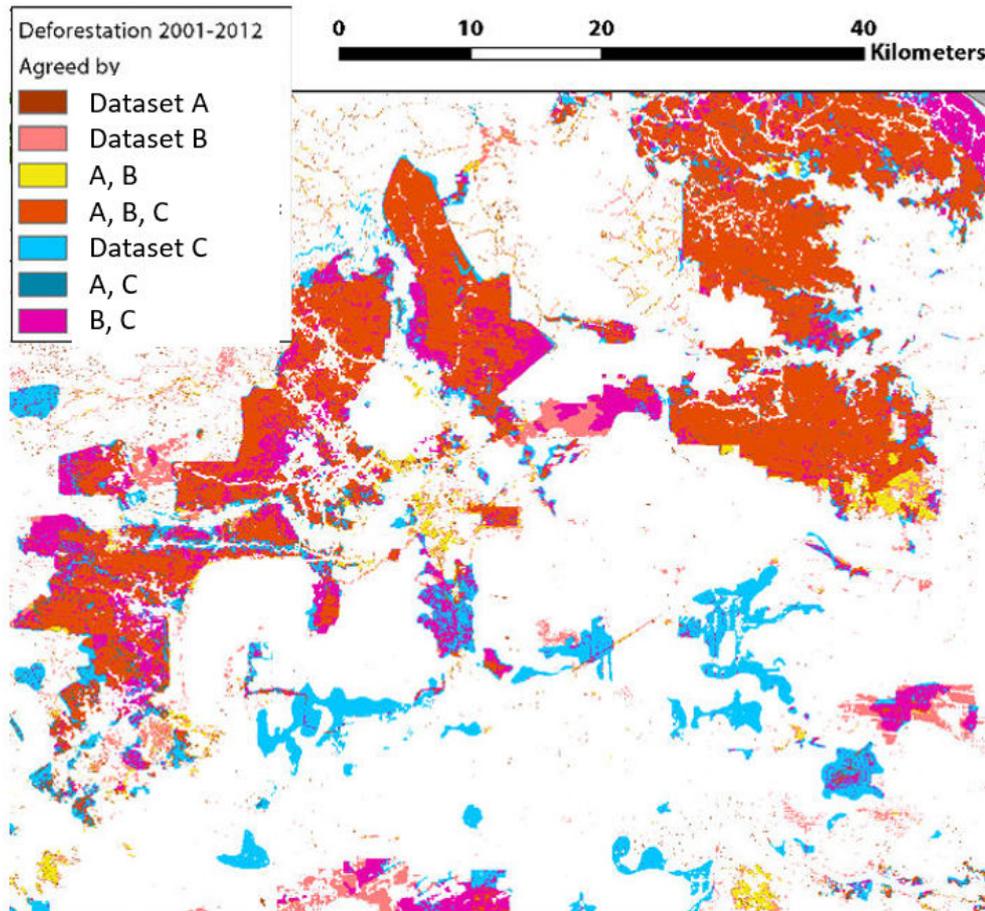


AFOLU net emissions



Contribution of emission sources per pixel (0.5°)

Disagreeing maps of deforestation



Increasing monitoring capacities

Forest area change monitoring capacities for FAO FRA 2015

a. Difference in capacities between 2005 and 2010



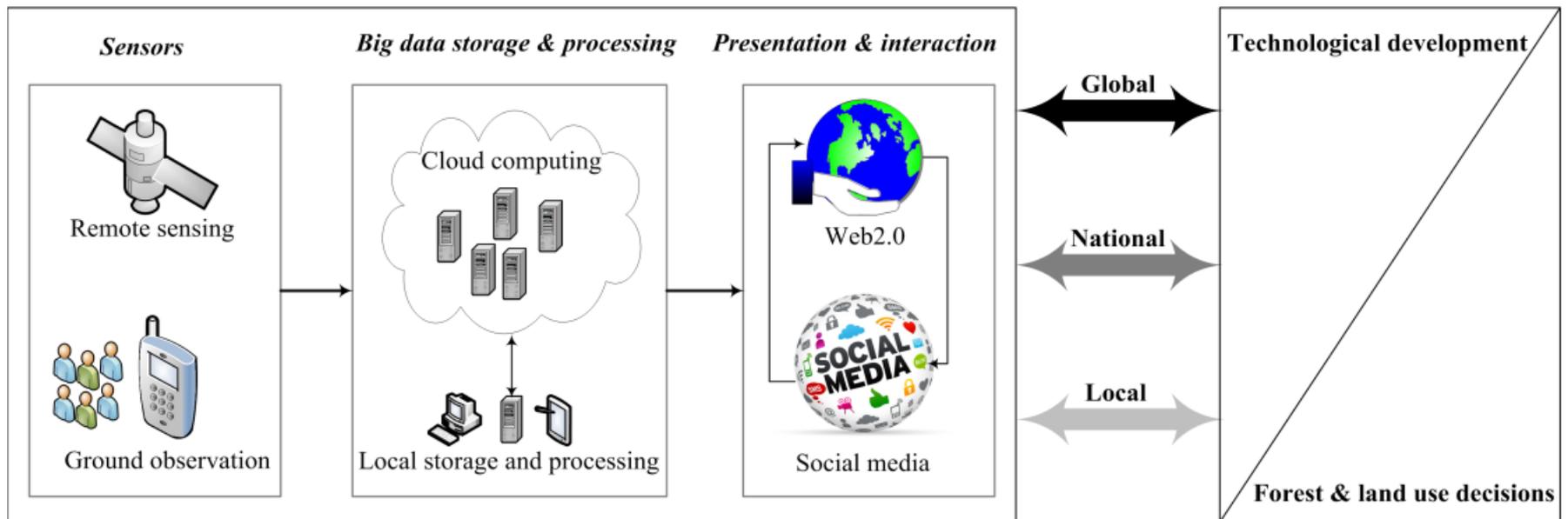
b. Difference in capacities between 2010 and 2015



Participatory approaches

Emerging technologies for forest monitoring

Participatory monitoring & management



Solutions?

Is the EU approach a suitable model for advancing the Paris Agreement?

1. Transparency: Mandatory stakeholder consultations for developing forest accounting plans and reference levels
2. Monitoring: Making methods, models and data freely available (e.g. Global Forest Watch, Copernicus) allows for **independent** monitoring opportunities by third parties, needs to be developed further also in EU
3. Target: Accounting in 2050 will have to look very differently, stronger emphasis on gross LULUCF sink
4. Mitigation: pressure on forests will increase: resource basis versus carbon sink
5. Sustainability: Opportunities in the land use sector should not distract countries from emission reductions in other sectors (priority), more integration of policies, rather stand-alone LULUCF proposal not a good model

Preparing for mid of the century...

