



Monitoring, reporting and verification (MRV) of carbon benefits from reducing deforestation

OECD Climate Change &
Biodiversity Workshop,
26 March 2008

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MRV will be central to delivering effective financing mechanisms

Reducing emissions from deforestation (and degradation) – REDD will require:

Agreement on clear goals

 *e.g. Significantly reduce emissions from deforestation & degradation*

Strong national & international capacity to monitor, manage and evaluate performance over time

 *Eligibility criteria and prioritisation*

Monitoring Function (1): Historical Data to Establish Baselines / Reference Rates

- Essential to assess additionality and performance of financing mechanism
- Proposals focus on historical reference points ... but projections are also relevant
- Proposals suggest national and/or project level baselinesbut national baselines more effective to limit leakage

Monitoring Function (2): Historical, Current & Projected Emissions Data to Assess Leakage

- Leakage is a key problem
- Refers to shifting location of deforestation/degradation due to isolated control
- Large estimates of national leakage suggest that deforestation activity shifts location easily
 - Need national level (rather than project level) accounting for good GHG emission performance

Some conclusions on methodology

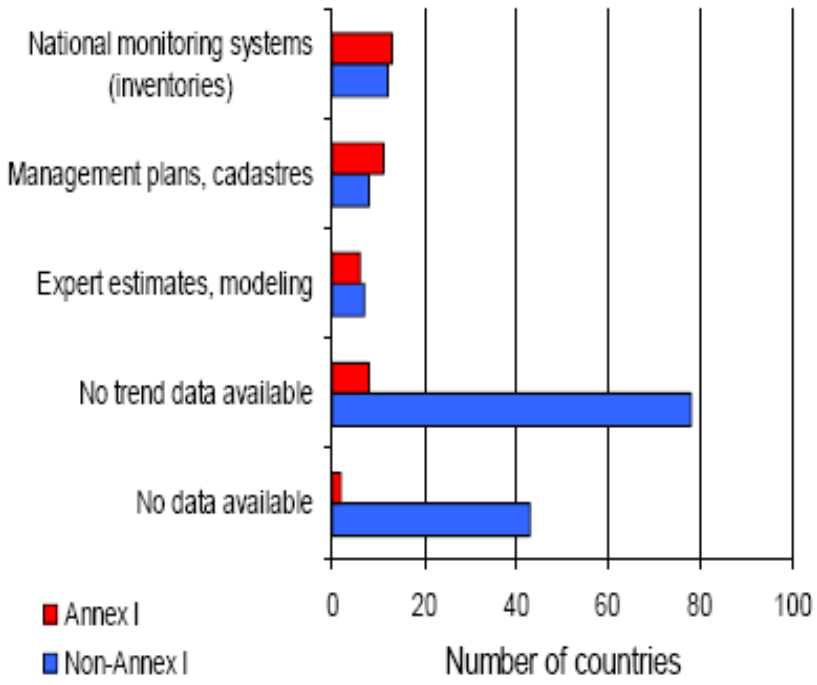
- Giving value to environmental services (REDD) requires adequate and consistent methods to measure emissions
- Much progress in the last decade producing methodologies, reflected in IPCC Guidelines:
 - confident tools to determine and represent areas deforested at national and subnational level, with different degrees of resolution, from the early 90's
 - Trends in deforested areas can be determined
 - There are robust methodologies to estimate emissions and removals from different C pools and non-CO₂ gases, but depending on the availability of data the uncertainties can be high.
- Projecting emissions from past deforestation (or for degradation) is more challenging

Monitoring Emissions: Current Status

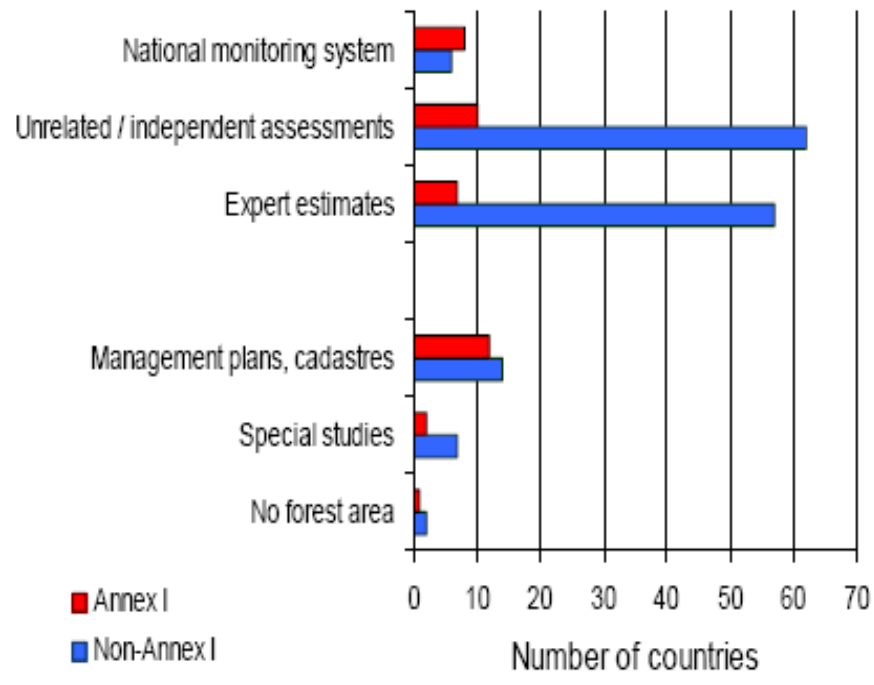
- Monitoring RED(D) is crucial to ensure objectives of a financing mechanism are being met
- Requires time series data on changes in forest area and changes in carbon stocks
 - Forest area data are available but not always compiled
 - Data are lacking on changes in carbon stocks

Weak data availability on forest area change, even less on data on C-stock changes in most non-Annex I countries

a) Forest Area Change



b) Carbon Stock Changes or Trends



Few inventories in Non-Annex I countries, but many preparing 2nd National Communication

Country	Deforested area, average 2000-2005, kHa	Inventory submission
1. Brasil	3,10	1990, 1994
2. Indonesia	1,87	1990, 1994
3. Sudan	0,59	1995
4. Myanmar	0,47	NA
5. Zambia	0,45	1994
6. Tanzania	0,41	1990, 1994
7. Nigeria	0,41	1994
8. DR Congo	0,32	1994
9. Zimbabwe	0,31	1994
10. Venezuela	0,29	1999
Top 10	8,22	

Large uncertainties about magnitude of emissions & even sign of change, in Non-Annex I countries

Country	UNFCCC inventory submission – year(s) covered	LUCF GHG emissions. most recent year (UNFCCC) Mt CO ₂ e	LUCF GHG emissions(CAIT) MtCO ₂ most recent year
Brazil	1990, 1994	818	1,550.1
Indonesia	1990, 1994	164	2,554.7
Sudan	1995	17.8	29.6
Myanmar	NA	NA	424
DR Congo	1994	-176.8	303.1
Zambia	1994	3.6	224.9
Tanzania	1990, 1994	913.6	13.9
Nigeria	1994	105.0	186
Zimbabwe	1994	-62.2	45.3
Venezuela	1999	-14.3	146.1
Top 10 Total			

Important differences between reporting requirements

Annex I	Non Annex I
<ul style="list-style-type: none">- Targets.- Requirement to use IPCC Guidelines- Emissions from LULUCF not included in the Assigned Amounts- Lands to report ARD are identified in 1990 to 2005 to report til 2012.- Report every year (15 years accumulated) based of IPCC Guidelines, using Common Reporting Format, reviewed annually by UNFCCC Expert Review Teams	<ul style="list-style-type: none">- No targets- No requirements to report in a standarized manner, including Common Reporting Format- No need to report annually.- No Review by UNFCCC Expert Review Team- Few National Communications and inventories submitted by Countries (1, or 2)

Monitoring Emissions: Current Status (2)

- National inventories in developing countries are limited: no historical trends, high uncertainty
- Insufficient data and institutional capacity currently under FCCC (internationally) or in-country (nationally) to support monitoring of RED(D)

Conclusions

- Methodologies exist to estimate forest sector emissions
- Better data at national scale requires national inventory systems, capacity and resources, e.g. for:
 - (Purchase &) use of satellite data, ground truthing, field work to estimate carbon stocks, develop local emission factor
- Internationally harmonised reporting and review = higher quality emission data
- Incentives needed such as eligibility for financing
- 5-7 years lead time for high quality national emission inventories

“If you can measure it, you can manage it”

For more information see:

Annex I Expert Group working paper:

- Karousakis & Corfee-Morlot, 2007,
Financing Mechanisms to Reduce
Emissions from Deforestation

www.oecd.org/env/cc

Acknowledgments: inputs on methodologies
from **Walter Oyantcabel (MGAP/GIEC)**