

REDD+, FLEGT and TLAS Integration Options

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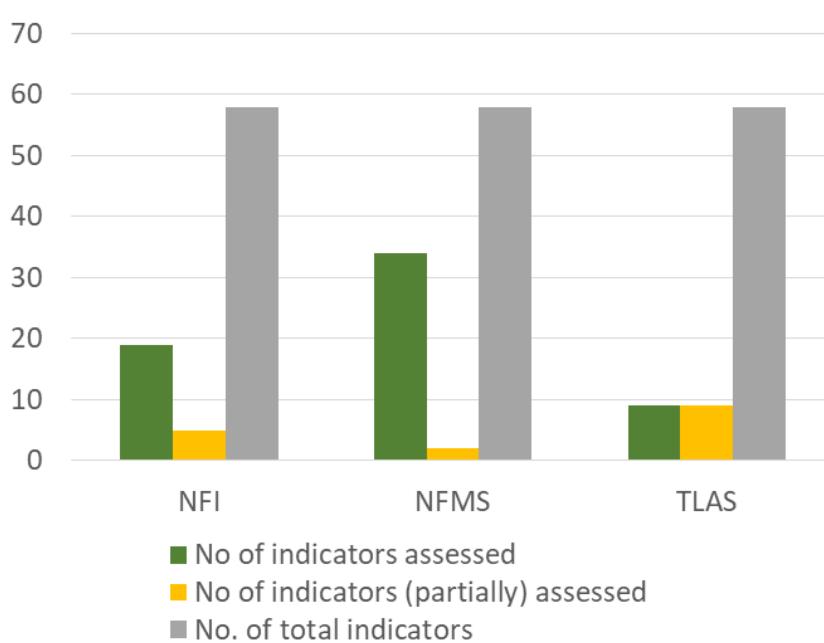
Harmonized assessments

Differences MRV/NFI Systems and TLAS

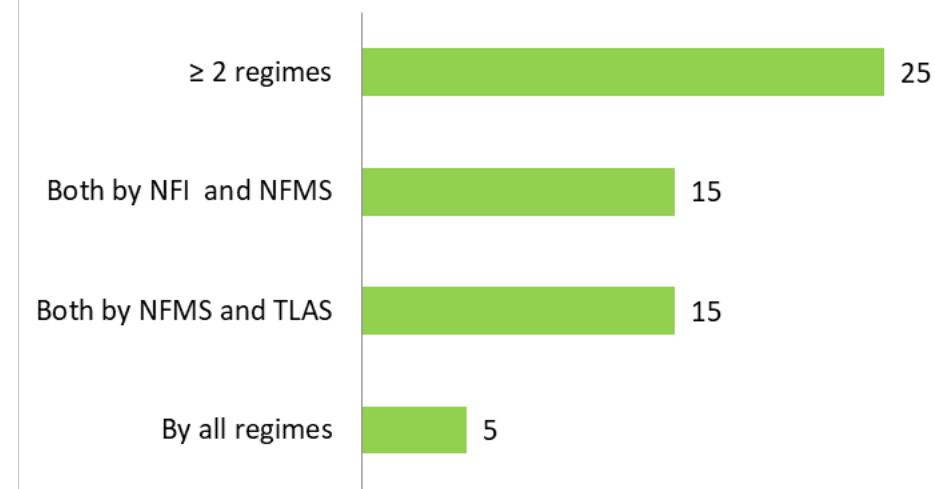
- Sampling versus total tallies
 - Differences in sampling frames
 - Attributes assessed
 - System of nomenclature
-
- Combining these systems into **one** integrated system is not an option
 - **Integrated process** of gathering, analysis, disseminating and sharing information

Harmonized assessments

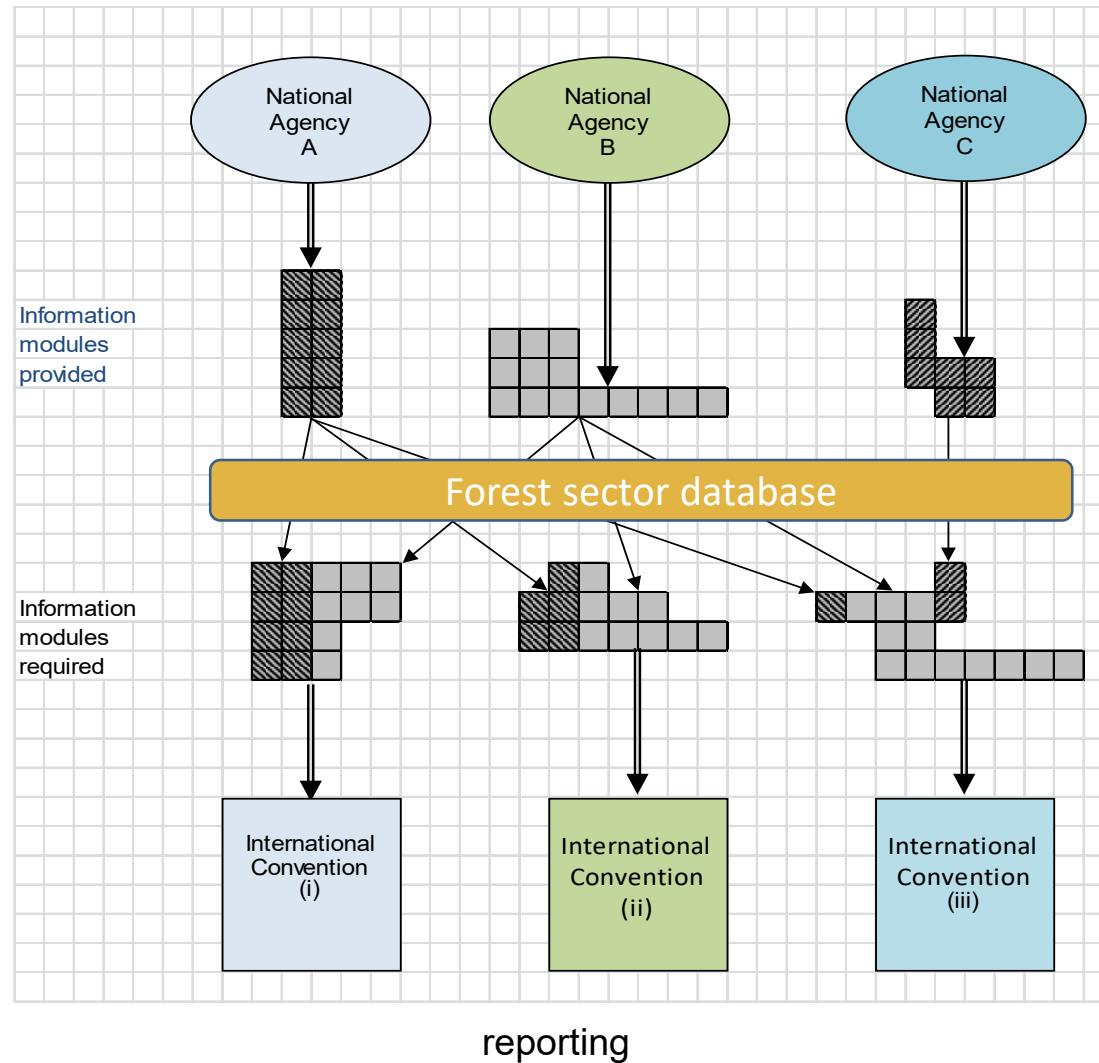
ITTO SFM indicators assessed by NFI, REDD+ NFMS
and TLAS



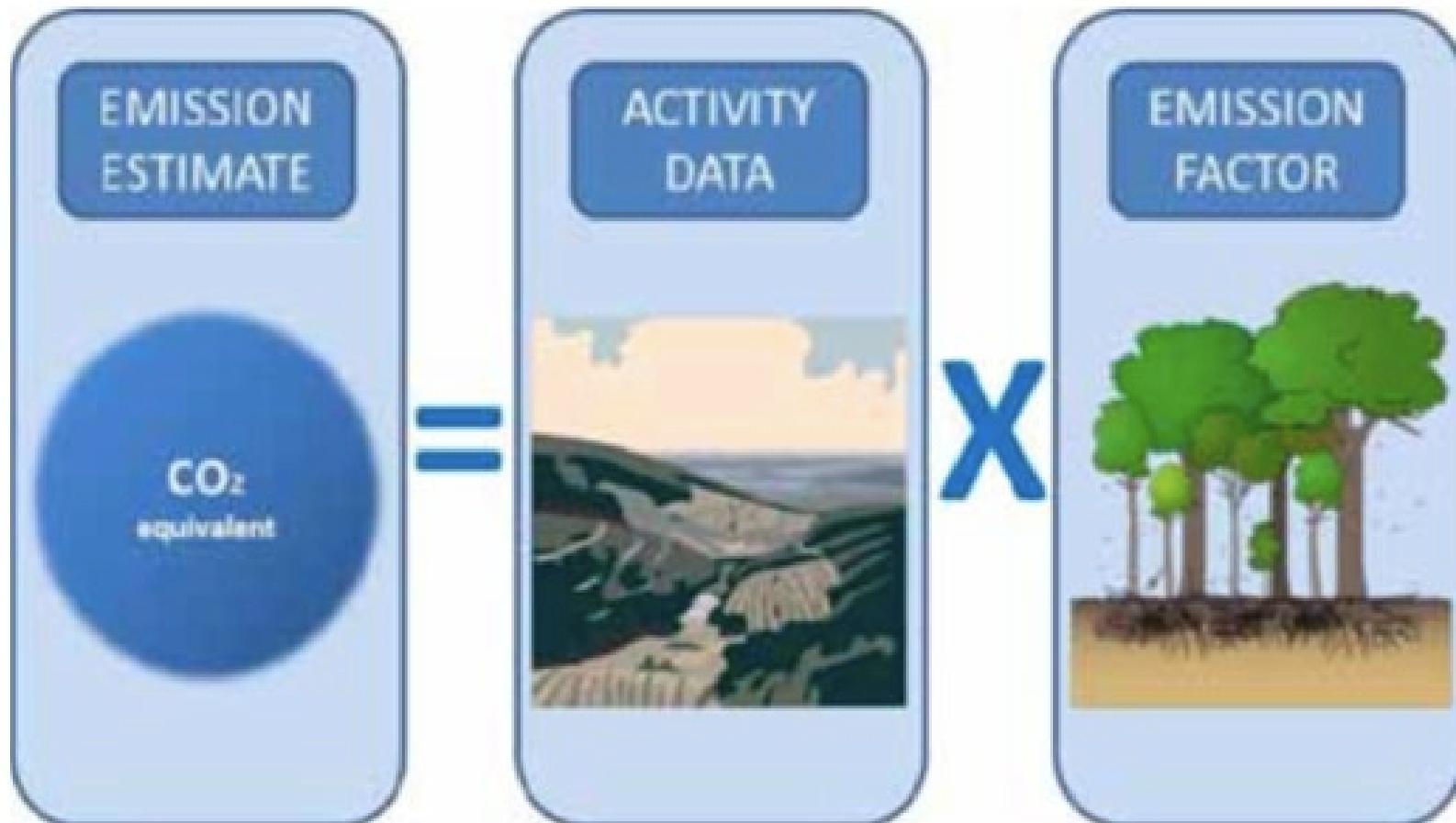
Frequency of the indicators assessed by different regimes



A model for a modular approach for harmonization



What is monitored?

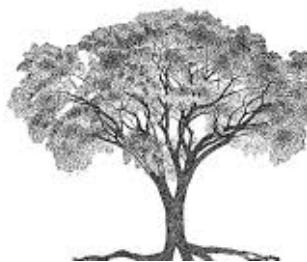


Source: FAO

How reliable are the calculated values?

Activity data

- Classification error



Emission factors

- Biomass function observation error
- Measurement error
- Sampling error
- Treatment bias

Estimate
100 tC/ha

Uncertainty analysis

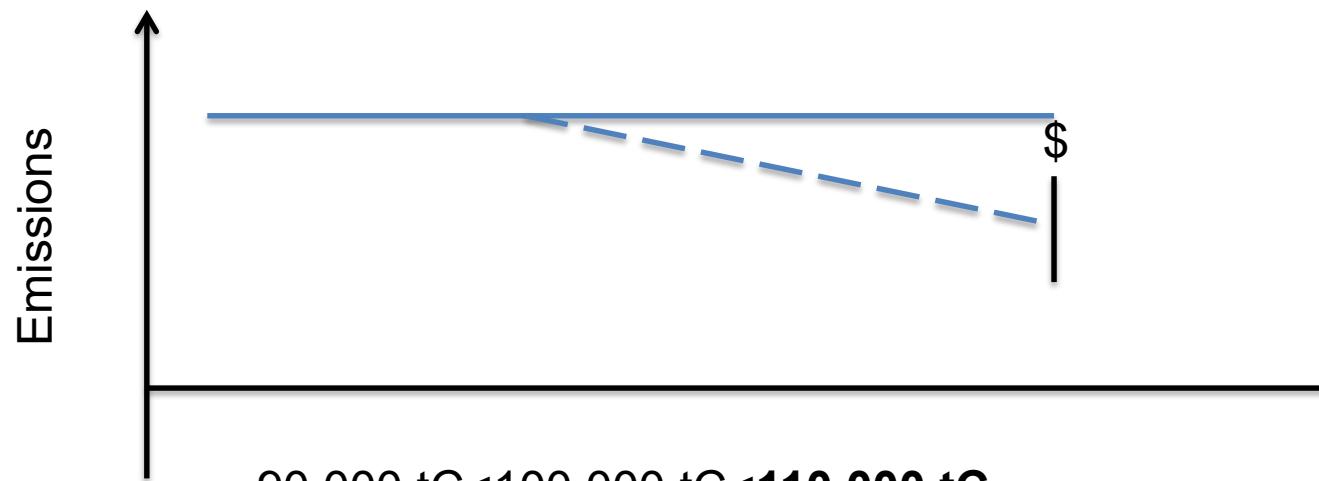
- Analytical
- Monte Carlo

Confidence interval

90 tC/ha < 100 tC/ha < 110 tC/ha

10 tC/ha < 100 tC/ha < 190 tC/ha

Why is the confidence interval important?



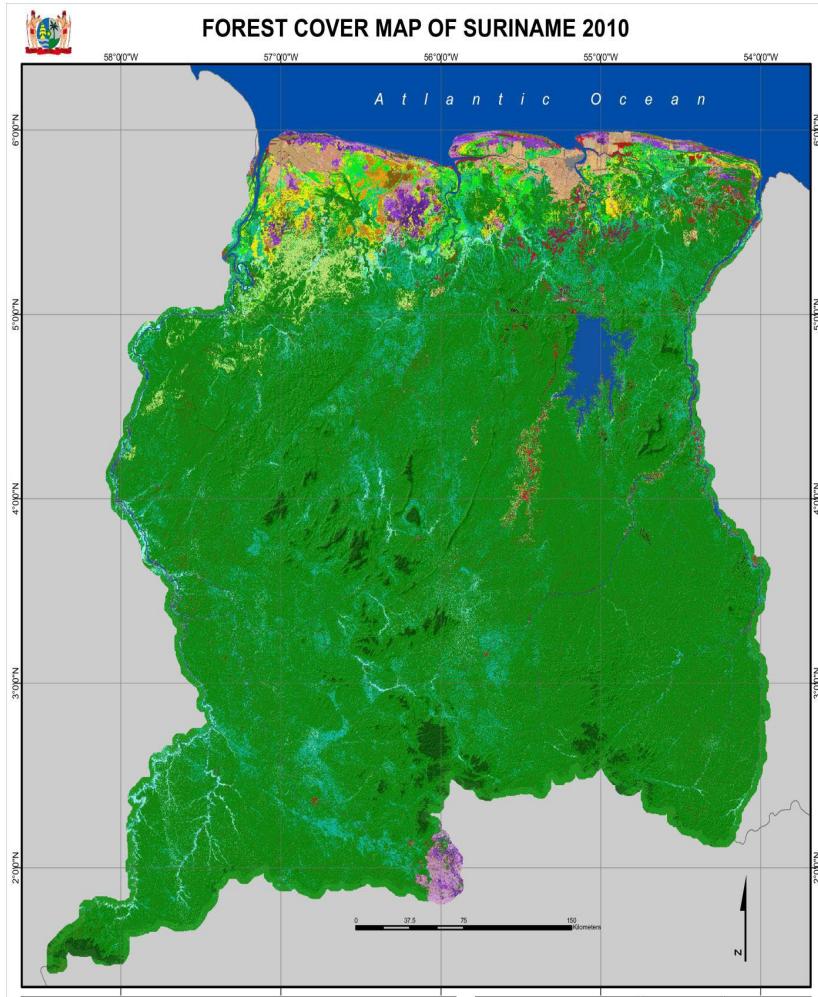
10,000 tC < 100,000 tC < 190,000 tC

Baseline: 200,000 tC

110,000 tC => 1.6 Mio US\$

190,000 tC => 180,000 US\$

A Simulation Study



Suriname

- HFLD-country
- Area under concession mgmt.: 5 Mio. ha

Attributes

- Logging intensity
- Area under degradation
- Fixed cost (Remote Sensing, Infrastructure)
- Variable cost (sample size)
- REDD+ payments per tCO₂

A Simulation Study

FRLs

Baseline scenario	Annual average emission percent	Emission percent for 5 year period
	[%]	[%]
B_glob	0.44	2.20
B_Guy	0.06	0.30
B_comb	0.25	1.25

Baseline scenarios generating ERs under given degradation and logging scenarios

Forest area degraded	Loss of C on logging sites	Percent total C-loss	Baseline scenario generating ERs
D001: 0.1%	L20: 20%	0.02%	B_glob; B_Guy; B_comb
	L50: 50%	0.05%	B_glob; B_Guy; B_comb
D01: 1%	L20: 20%	0.2%	B_glob; B_Guy; B_comb
	L50: 50%	0.5%	B_glob; B_comb
D10: 10%	L20: 20%	2%	B_glob
	L50: 50%	5%	none

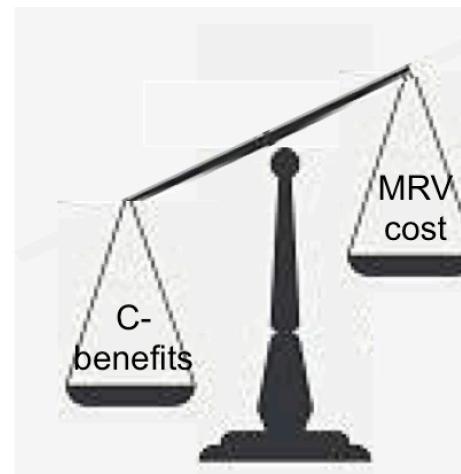
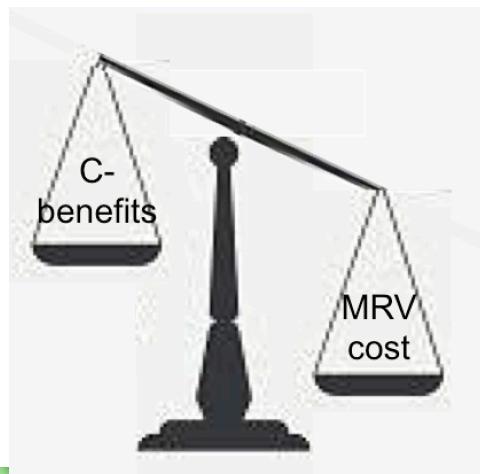
Carbon price requested to finance the MRV-system

Baseline	Fixed cost
B_glob	1.5 Mio US\$
	7 Mio US\$
B_Guy	1.5 Mio US\$
	7 Mio US\$
B_comb	1.5 Mio US\$
	7 Mio US\$

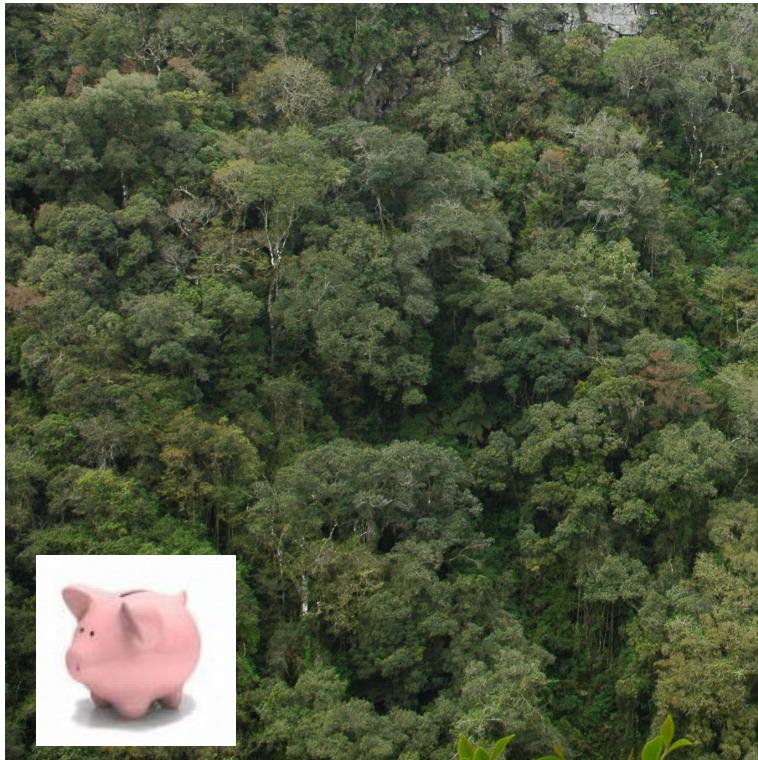
MRV activities are an investment

Goal

- **not** achieving the maximum *reliability*
- maximum *financial benefits* generated
- Payments = $f(\text{MRV costs, carbon price})$
- 5 USD/tCO₂ not sufficient
- At current C-price, REDD+ financially not viable for the HFLD countries



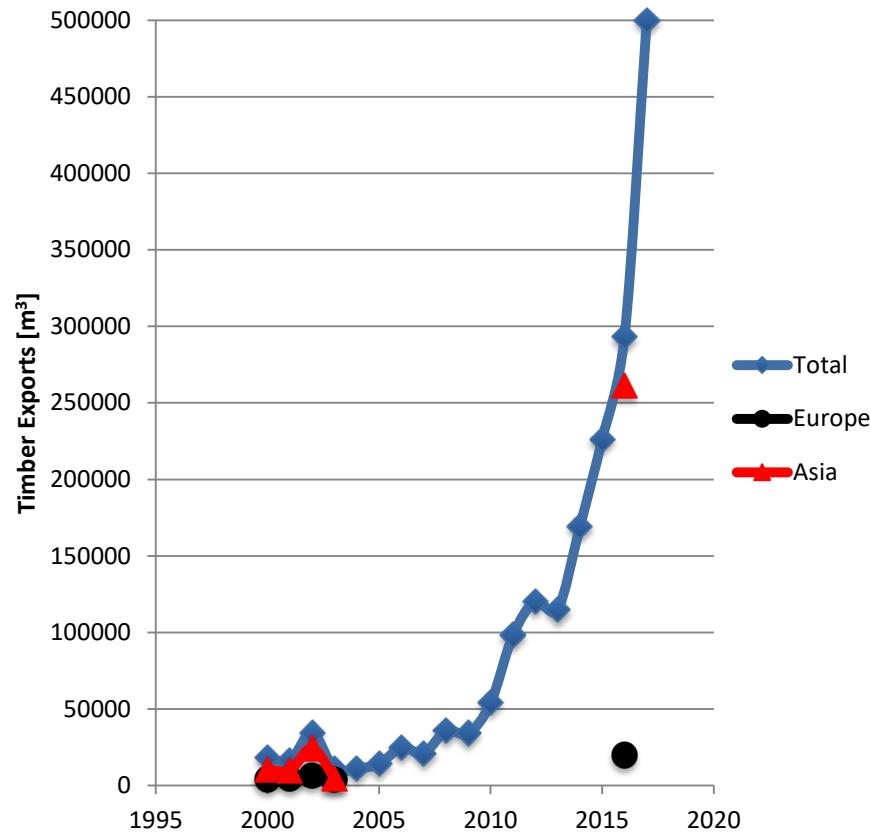
How would you decide?



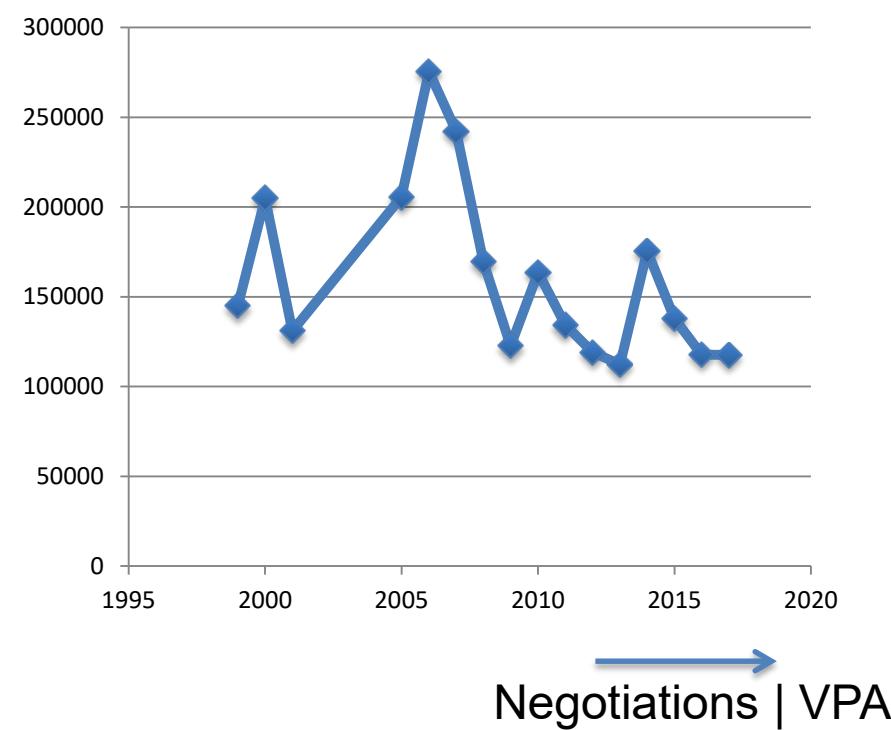
- Current C-price not attractive enough to prevent forest land conversion

FLEGT leakage

Non-VPA country



VPA country



Negotiations | VPA

Conversion Timber: Legal but not Sustainable



A dense tropical forest scene. In the foreground, there are several large tree trunks with thick, textured bark. One trunk on the right is particularly prominent, showing signs of age and weathering. The forest floor is covered in a variety of tropical plants, including large, broad leaves and smaller, more delicate foliage. Sunlight filters through the canopy of leaves at the top, creating bright highlights and deep shadows throughout the scene.

Thank You