REDD+ Implementation and SFM

Tokyo, 6-7 February 2014

REDD+ in landscapes: drivers of deforestation, institutions and jurisdictions

L. Verchot, . Angelsen, M. Brockhaus, N. De Sy, M. Herold, N. Hosonuma, M. Kanninen, K. Korhonen-Kurki, A. Larson, A. Ravikumar, A. Wijaya

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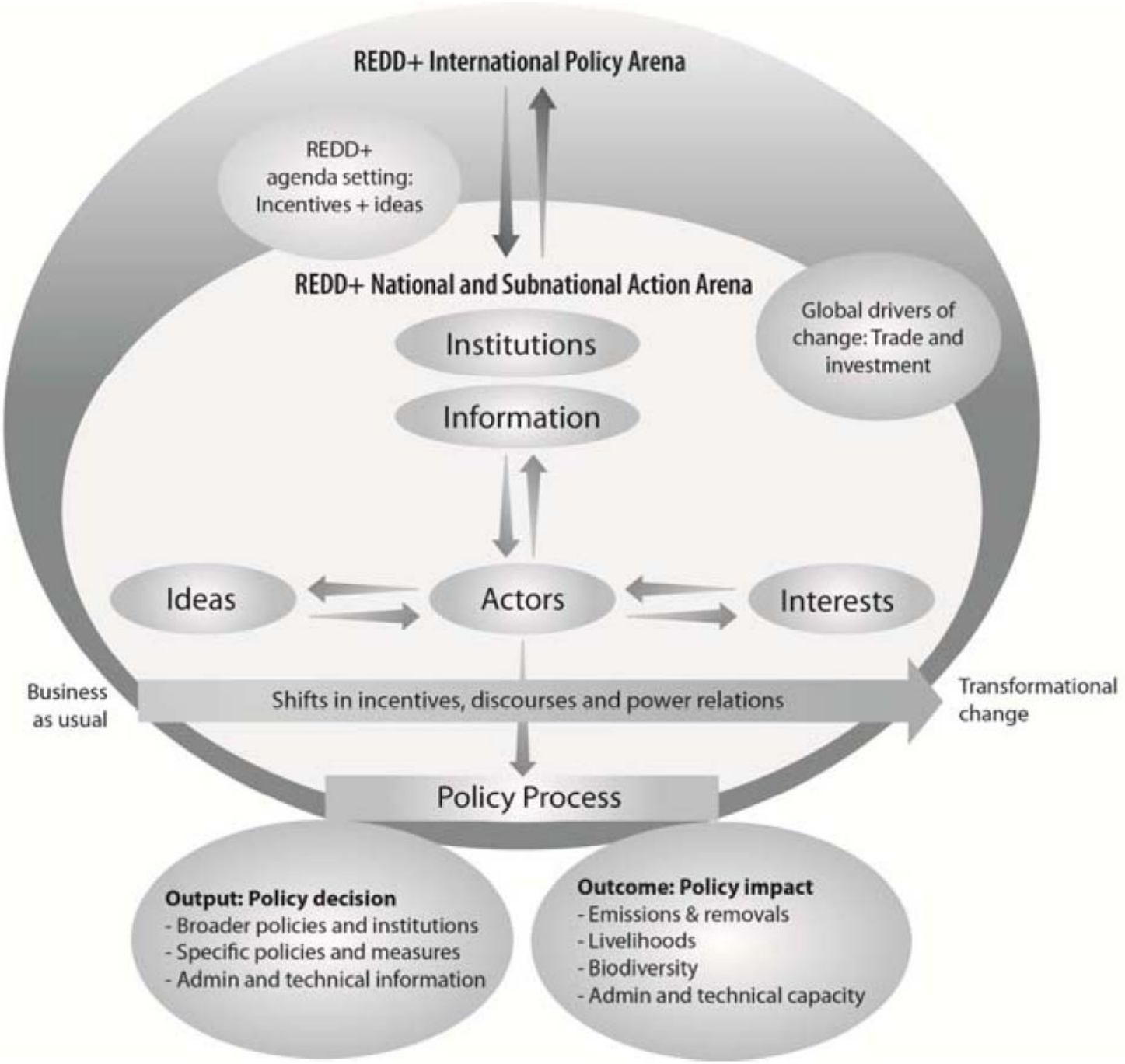
REDD+ International Policy Arena
REDD+
agenda setting:
Incentives + ideas
REDD+ National and Subnational Action Arena
Global drivers of change: Trade and investment
Institutions
Information
Ideas
Actors
Interests
Business as usual
Shifts in incentives, discourses and power relations
Transformational change
Policy Process
Output: Policy decision
- Broader policies and institutions
- Specific policies and measures
- Admin and technical information
Outcome: Policy impact
- Emissions & removals
- Livelihoods
- Biodiversity
- Admin and technical capacity

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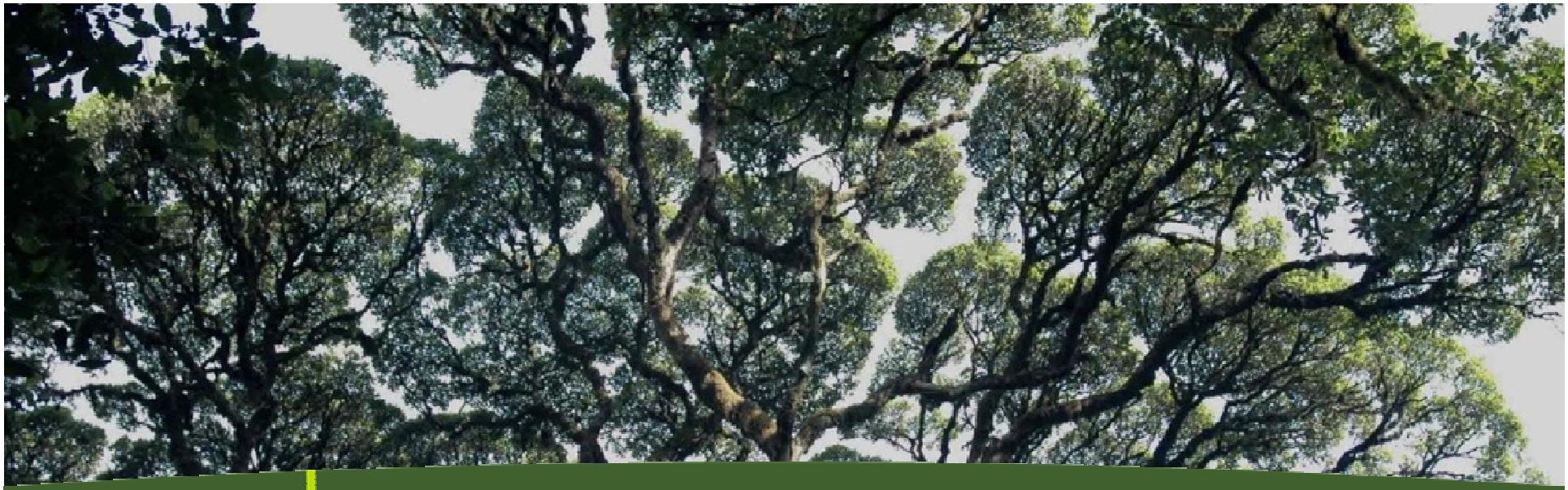
GIAR



REDD

Examples of transformational change

- Changes in economic, regulatory and governance frameworks, including the devolution of rights to local users;
- Removals of perverse incentives, such as subsidies and concessions that serve selective economic interests and stimulate deforestation and forest degradation; and
- Reforms of forest industry policies and regulations that effectively reduce unsustainable extraction

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climate policy

research article

Enabling factors for establishing REDD+ in a context of weak governance

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REDD

Both institutional and agency factors affect the direction of REDD+ policies

Institutions: the formal and informal regulations, rules and norms that are established over time and that are not easily changed or transformed

Policy arena: framed by institutions and shaped by the actions of the actors. It is characterized by hierarchical or inclusive processes, involving a range of powerful actors, which can foster or prevent certain policies and influence policy formulation

Analysis: Two-step QCA

Outcome variable: ***Establishment of comprehensive policies targeting transformational change in the REDD+ policy domain (phase II)***

Successes: Indonesia, Vietnam, Brazil

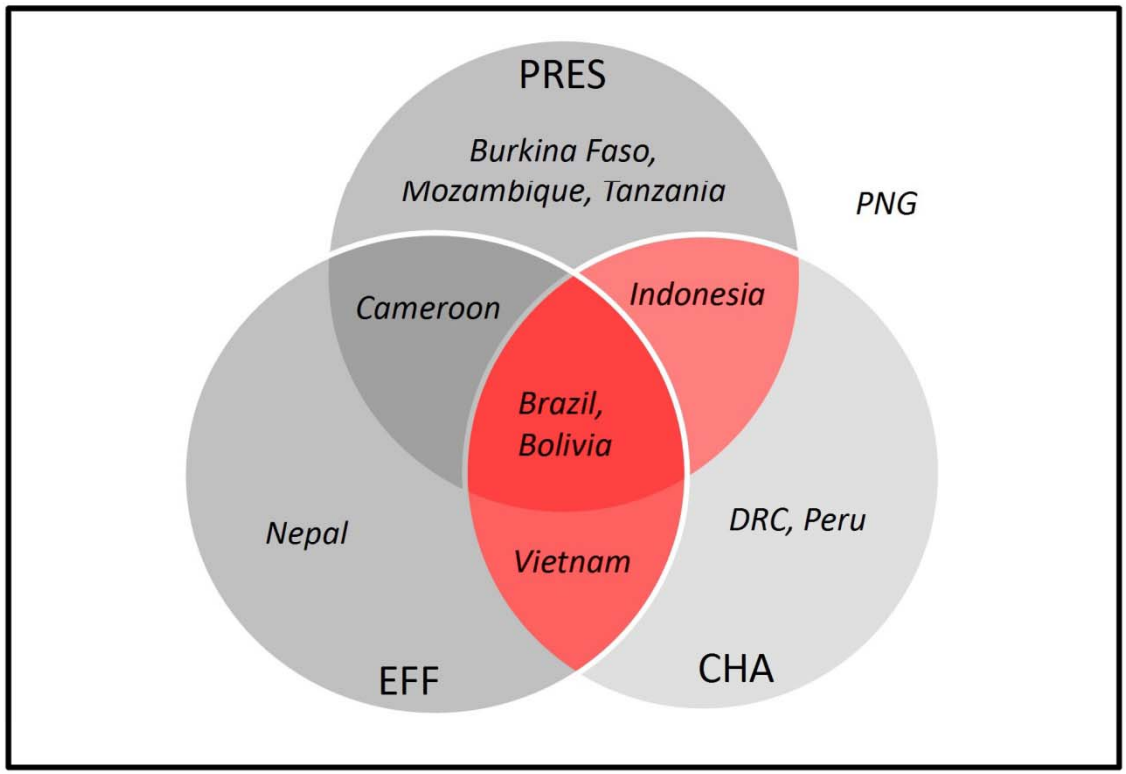
Six factors divided into two categories to explain outcome

- Institutional setting:
  - pressure from forest-resource shortage
  - effective forest legislation, policy and governance
  - previously initiated policy change

- The policy arena:
  - national ownership
  - transformational coalitions
  - inclusiveness of the policy process

QCA Step 1: Institutional setting results

Pressure on forests
Effective forest legislation
Previously initiated change



Results I: Institutional setting

The results reveal path dependencies and institutional stickiness in all the study countries:

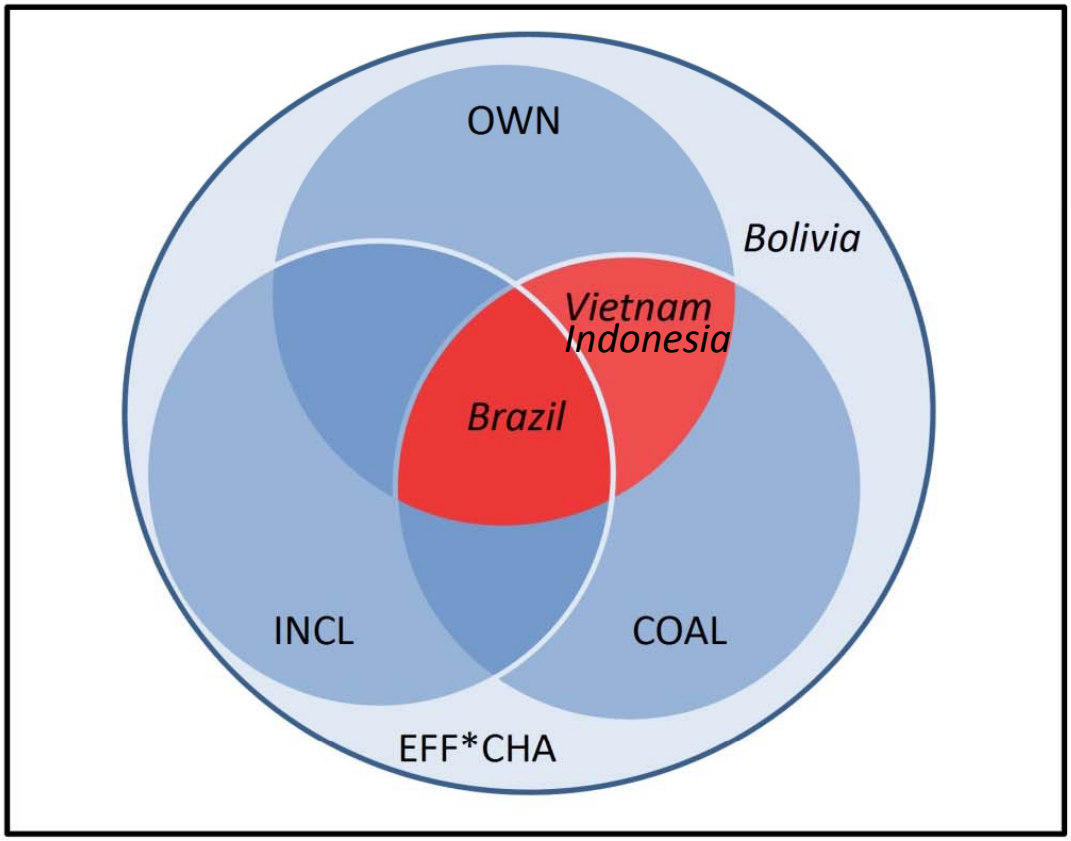
- **Only countries already undertaking institutional change (CHA) have been able to establish REDD+ policies in a relatively short period**

  but only in the presence of either

  - high pressure from forest-resource shortages (**PRES**: Brazil and Indonesia)
  - or key features of effective forest legislation, policy and governance (**EFF**: Vietnam).

QCA Step 2: Policy arena results

National ownership of process
Inclusive process
Coalitions for change



Note: Indonesia has the alternative configuration for enabling environment(PRES*eff*CHA) and the policy arena configuration is *OWN*COAL*incl

Results II: Policy arena

Where an enabling institutional setting is in place (*EFF*CHA* or *PRES*eff*CHA*), two conditions of the policy arena proved to be crucial for all three successful countries (Brazil, Vietnam and Indonesia):

- **National ownership (OWN)**
- **Transformational coalitions (COAL)**

Countries that have these two conditions of the policy arena, but not the enabling institutional setting (e.g. Peru and Mozambique), were not successful in establishing REDD+ yet.

The country with enabling policy conditions, but neither national ownership nor coalitions for transformation (Bolivia) was unsuccessful

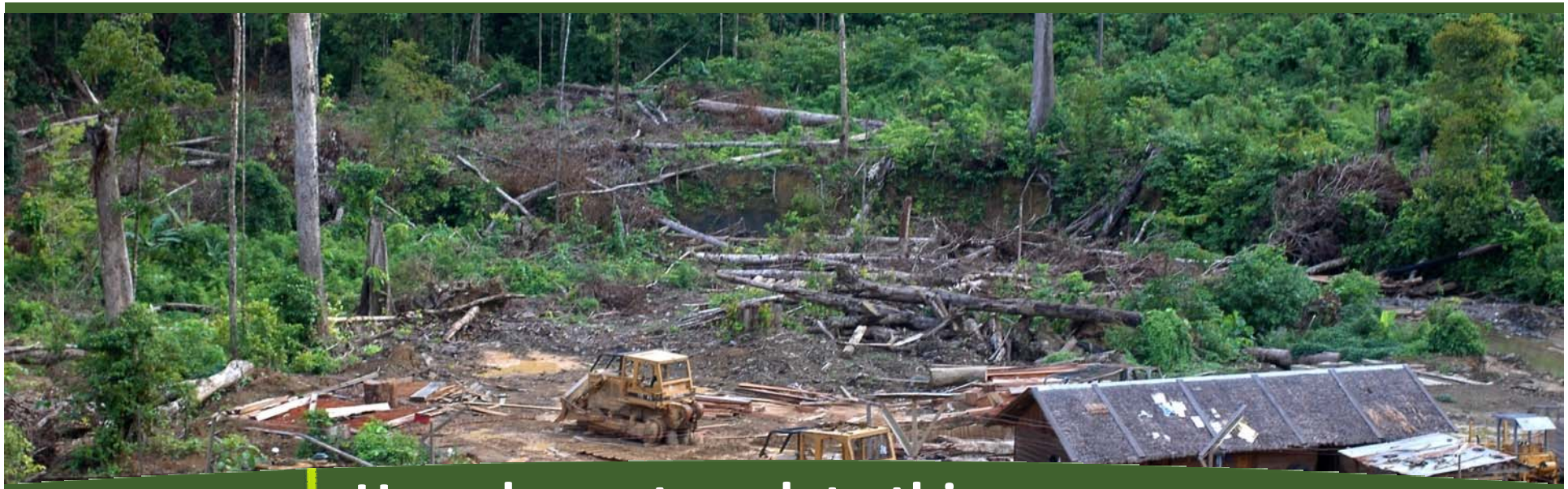
Factors affecting national REDD+ policies

Case	Institutional setting			Policy arena			Outcome
	PRES	EFF	CHA	OWN	COAL	INCL	REDD
Bolivia	1	1	1	0	0	0	0
Brazil	1	1	1	1	1	1	1
Burkina Faso	1	0	0	0	0	0	0
Cameroon	1	1	0	0	0	0	0
DRC	0	0	1	0	1	1	0
Indonesia	1	0	1	1	1	0	1
Mozambique	1	0	0	1	1	1	0
Nepal	0	1	0	0	1	1	0
Peru	0	0	1	1	1	1	0
PNG	0	0	0	0	1	0	0
Tanzania	0	0	0	0	1	1	0
Vietnam	0	1	1	1	1	0	1

Key Findings

Measuring progress: Some reflections

- **Context matters:** previously initiated institutional change allows for faster REDD+ design, but is not sufficient. There must either be pressure on forests or effective forest legislation, policy and governance in place.
- **Actor-related factors of national ownership and transformational coalitions are crucial:** but can only be effective in an enabling institutional setting

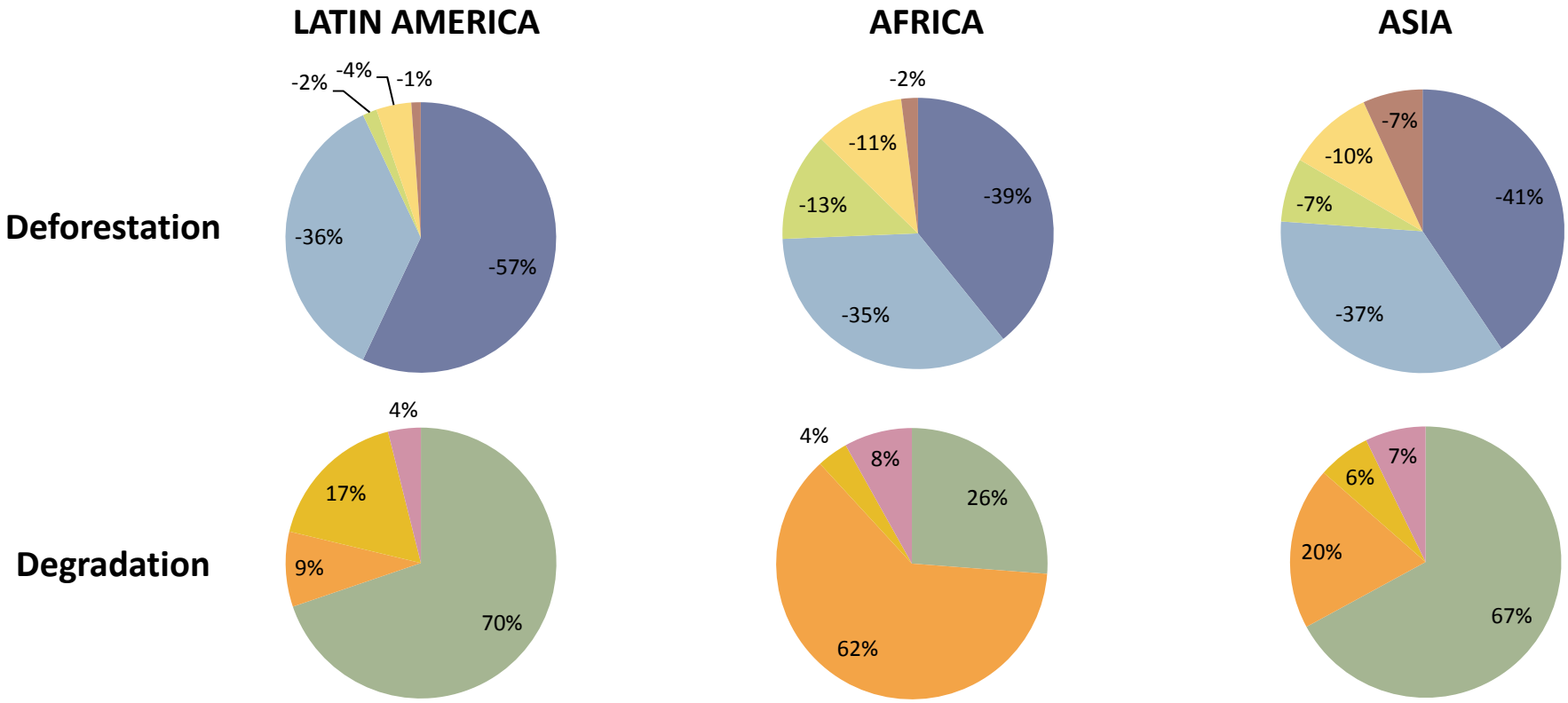


REDD Implementation

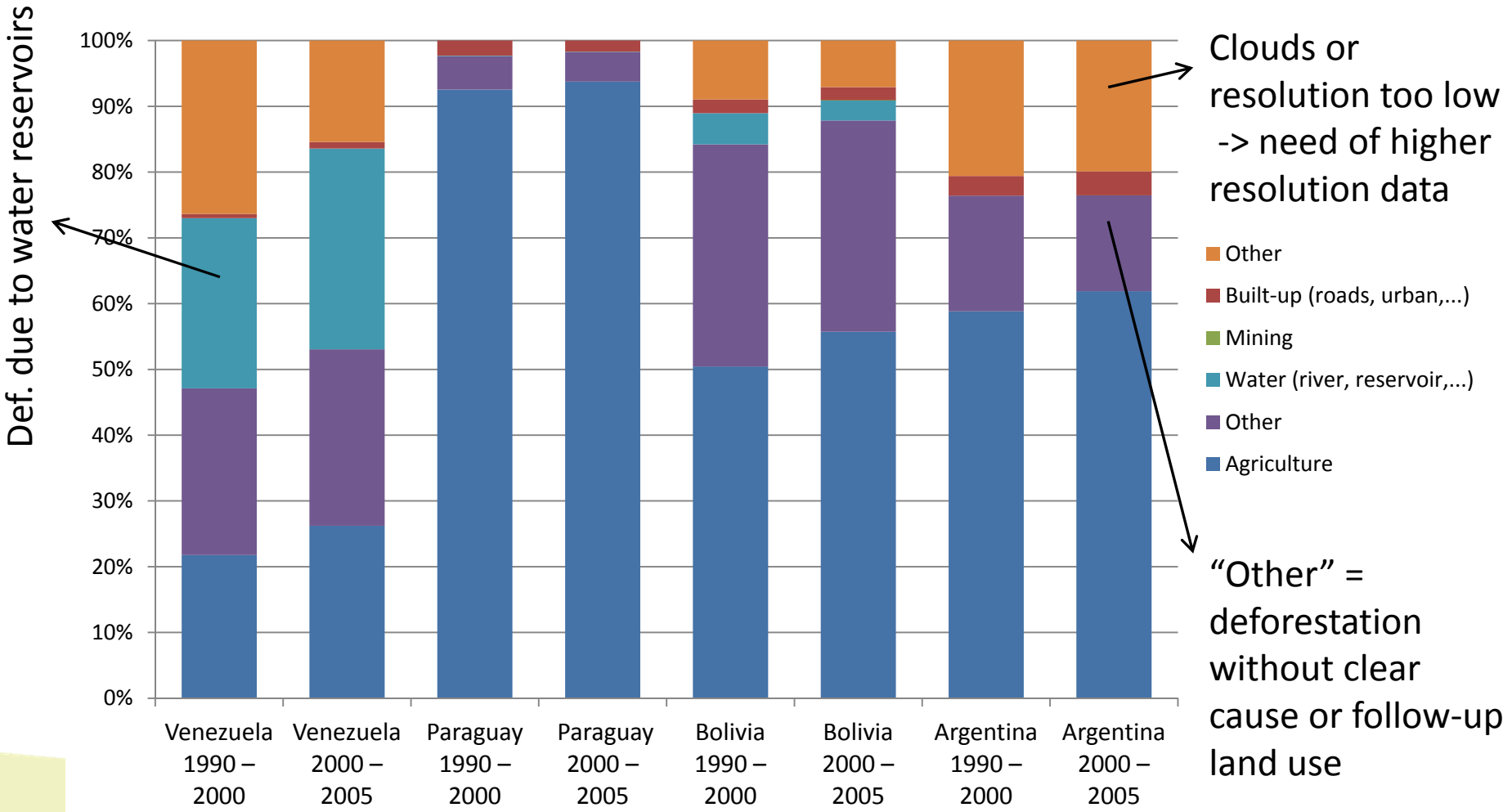
How do we translate this to the realities on the ground

- **Understanding drivers – for effective implementation**
- **Land-use planning**
- **Multiple jurisdictions in landscapes**

Apparent deforestation/degradation drivers for each continent



Apparent drivers of deforestation
Preliminary results – South America



REDD Implementation

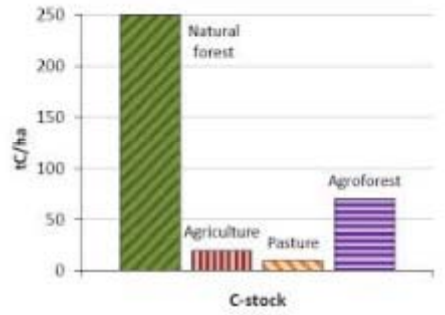
Most drivers of DD are not forest related

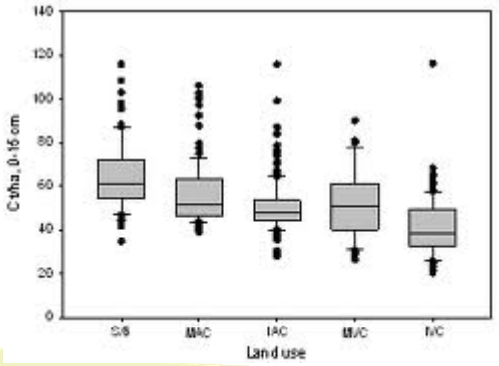
In seeking to address the drivers of deforestation and forest degradation, REDD+ necessarily challenges multiple established institutions and policies, and hence is likely to encounter resistance from existing institutional logics and actors.

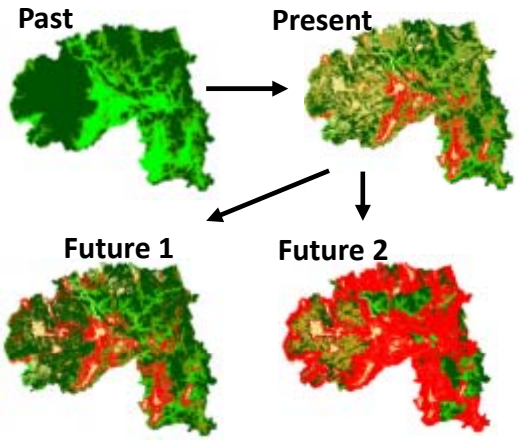
To do this, we must move beyond apparent drivers of DD and address the political economy of the status quo

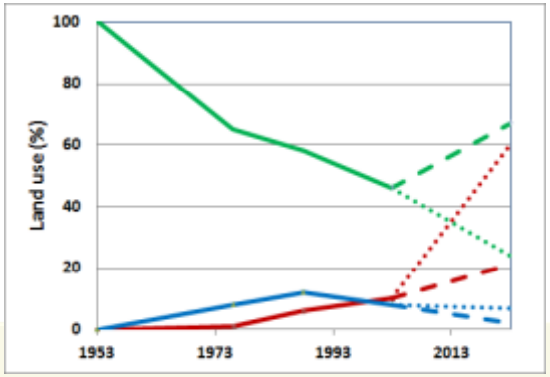
Projecting deforestation in landscapes

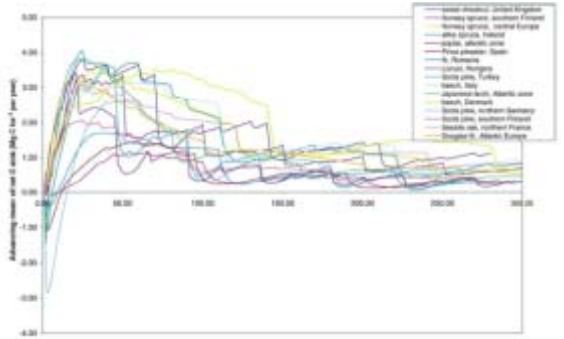
Carbon data for different land uses → Scenarios of land use change → Carbon outcomes in different land use scenarios

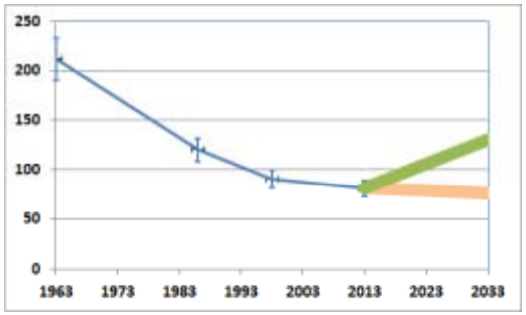












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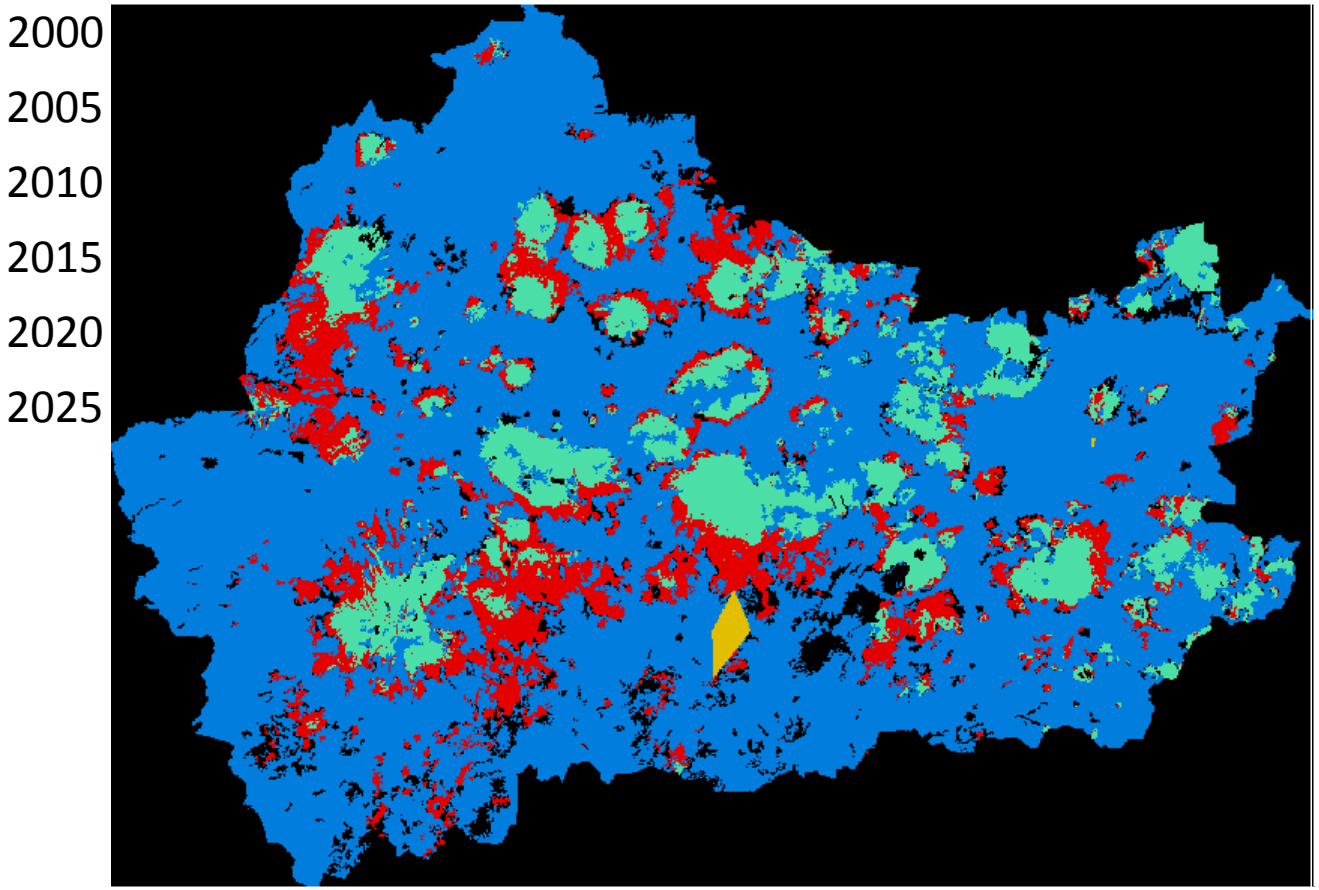
Land-use change matrix

Land-use in 2000

Land-use in 1993	Oak forest	Pasture	Scrub land	Pine forest	Pine-oak forest	Lakes	Agriculture	Fruit crops	Agriculture irrigated	No vegetation	Dry forest	Urban	Spruce forest	Planted forest	Total
Oak forest	5,470	3	86	2,014	1,697	0	259	153	0	0	2,286	6	16	0	11,988
Pasture	1	9,198	829	65	37	2	4,512	81	341	0	4,618	6	0	1	19,691
Scrub land	137	241	2,951	148	45	3	877	16	6	29	3,695	56	0	60	8,264
Pine forest	1,104	71	197	58,454	9,905	0	1,580	5,856	0	12	25,419	63	323	0	102,982
Pine-oak forest	1,507	21	44	6,912	62,779	0	1,334	2,429	33	24	12,480	6	174	0	87,745
Lakes	0	51	10	7	13	11,740	149	1	0	4	73	0	1	0	12,050
Agriculture	616	6,908	3,577	2,161	3,556	53	115,263	10,133	2,148	41	47,669	1,102	150	189	193,566
Fruit crops	115	80	5	2,261	630	23	402	22,669	28	23	2,176	336	1	0	28,149
Agriculture irrigated	0	995	15	1,018	577	3	1,917	507	12,646	0	3,884	288	4	12	21,866
No veg.	72	1	15	261	621	0	558	535	0	3,481	428	0	5	0	5,978
Dry forest	569	6,103	2,732	14,640	6,366	66	7,647	9,566	1,077	139	90,492	219	5	99	139,722
Urban	0	74	11	43	2	0	117	48	19	0	111	7,405	0	8	7,840
Spruce for.	18	0	2	173	296	0	12	17	0	0	500	0	6,707	0	7,725
Planted for.	0	1	11	8	2	0	37	0	1	1	107	12	0	400	580
Total	9,609	23,748	10,484	88,165	86,527	11,890	134,663	51,413	16,300	3,755	193,940	9,500	7,384	768	648,147

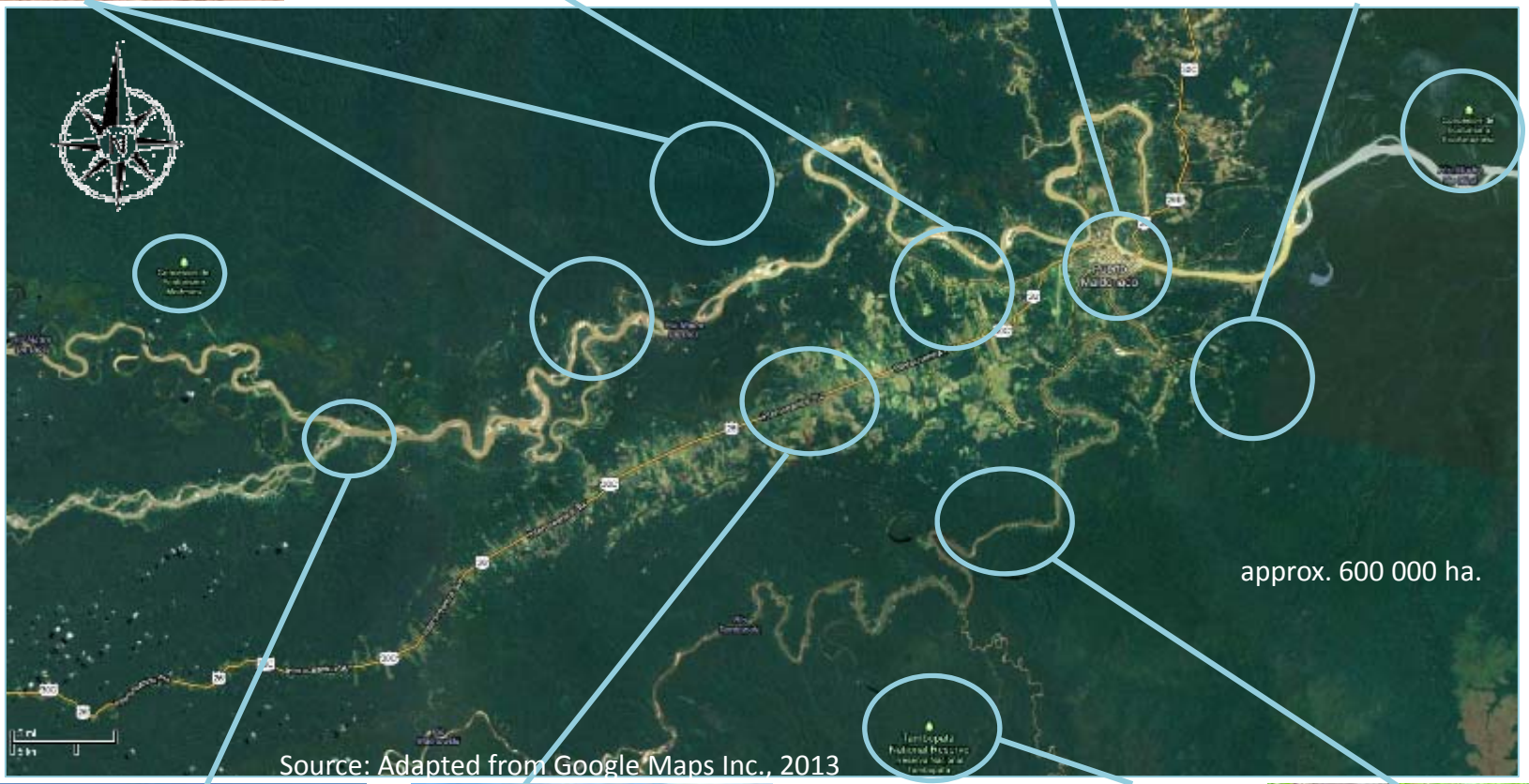
x 1000 Ha

Simulation of deforestation 2000-2025



Purépecha, Michoacán, Mexico

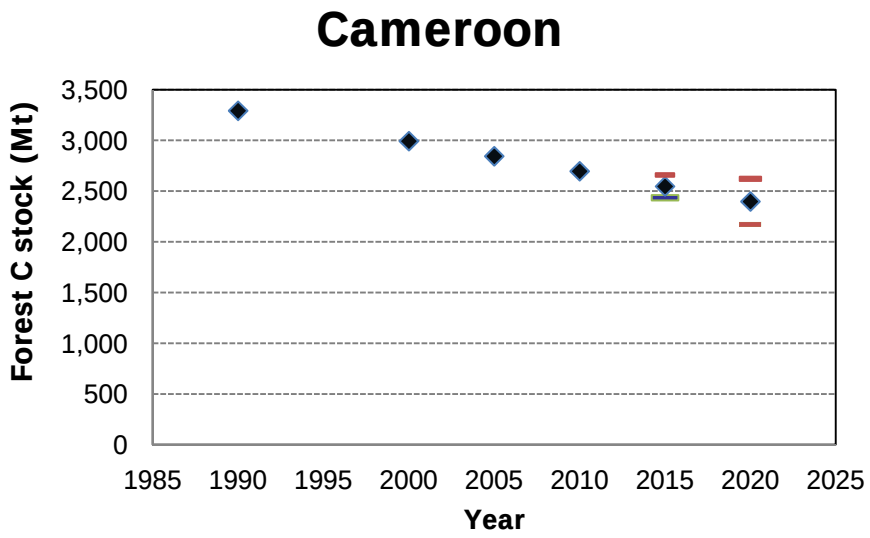


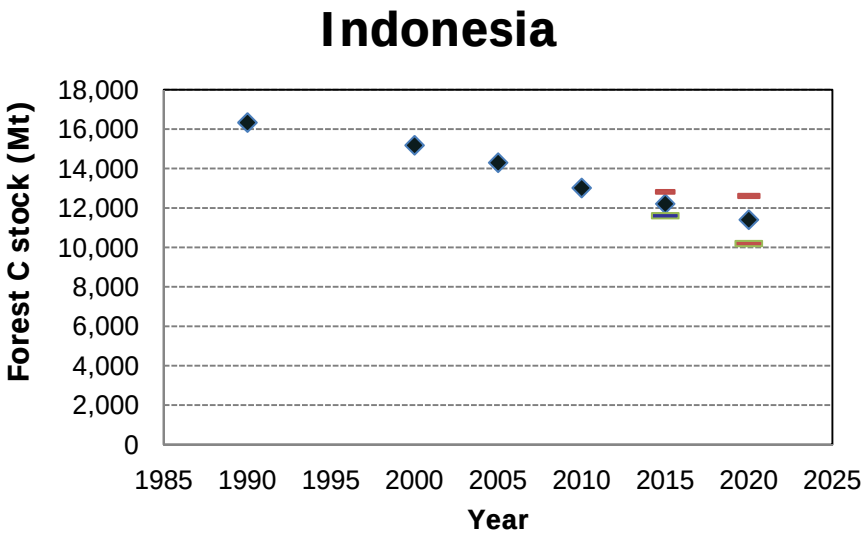



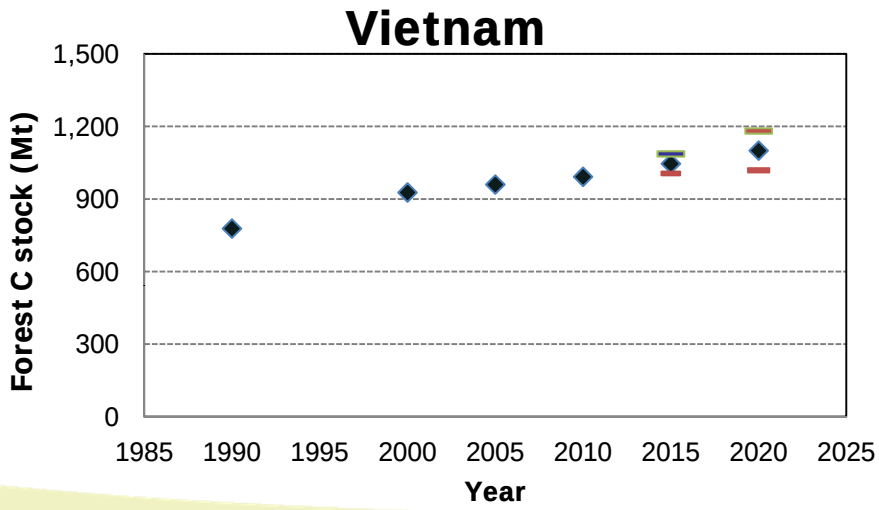
Source: Adapted from Google Maps Inc., 2013

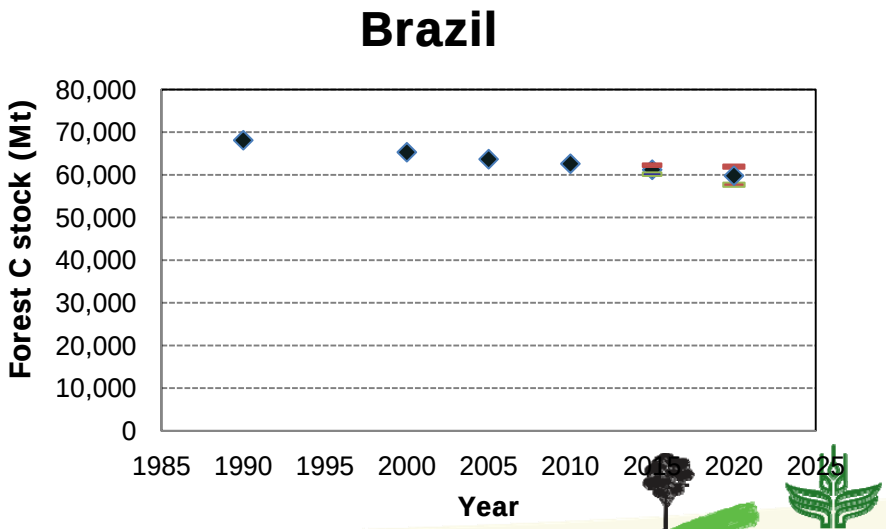



Simple REL for 4 countries using FAO FRA data





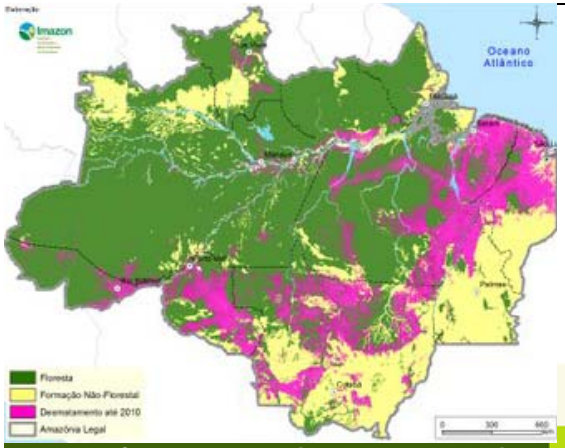




Step 2: Brazil

Predict deforestation rates for legal Amazon 2005- 2009

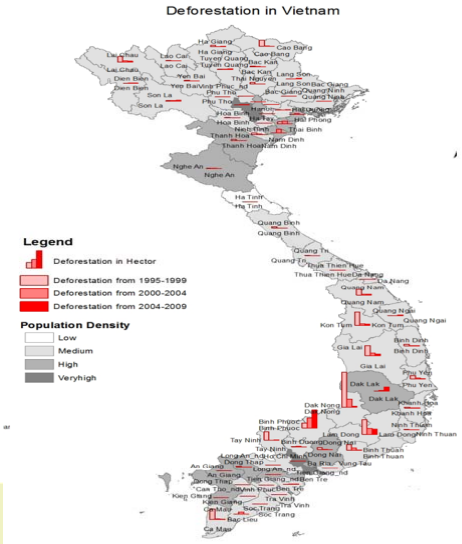
Category	Regression coefficient	
Deforestation rate (2000-2004)	0.395	
Trend variable	-0.136	-0.145
Deforestation dummy	-0.373	-0.773
Forest stock	2.18	4.756
Forest stock squared	-1.8	-3.826
Log per capita GDP	-0.034	-0.13
Agric GDP (%GDP)	0.28	0.28
Population density	0.081	-0.81
Road denisty	0.039	0.076
R^2	0.831	0.789
N	3595	3595



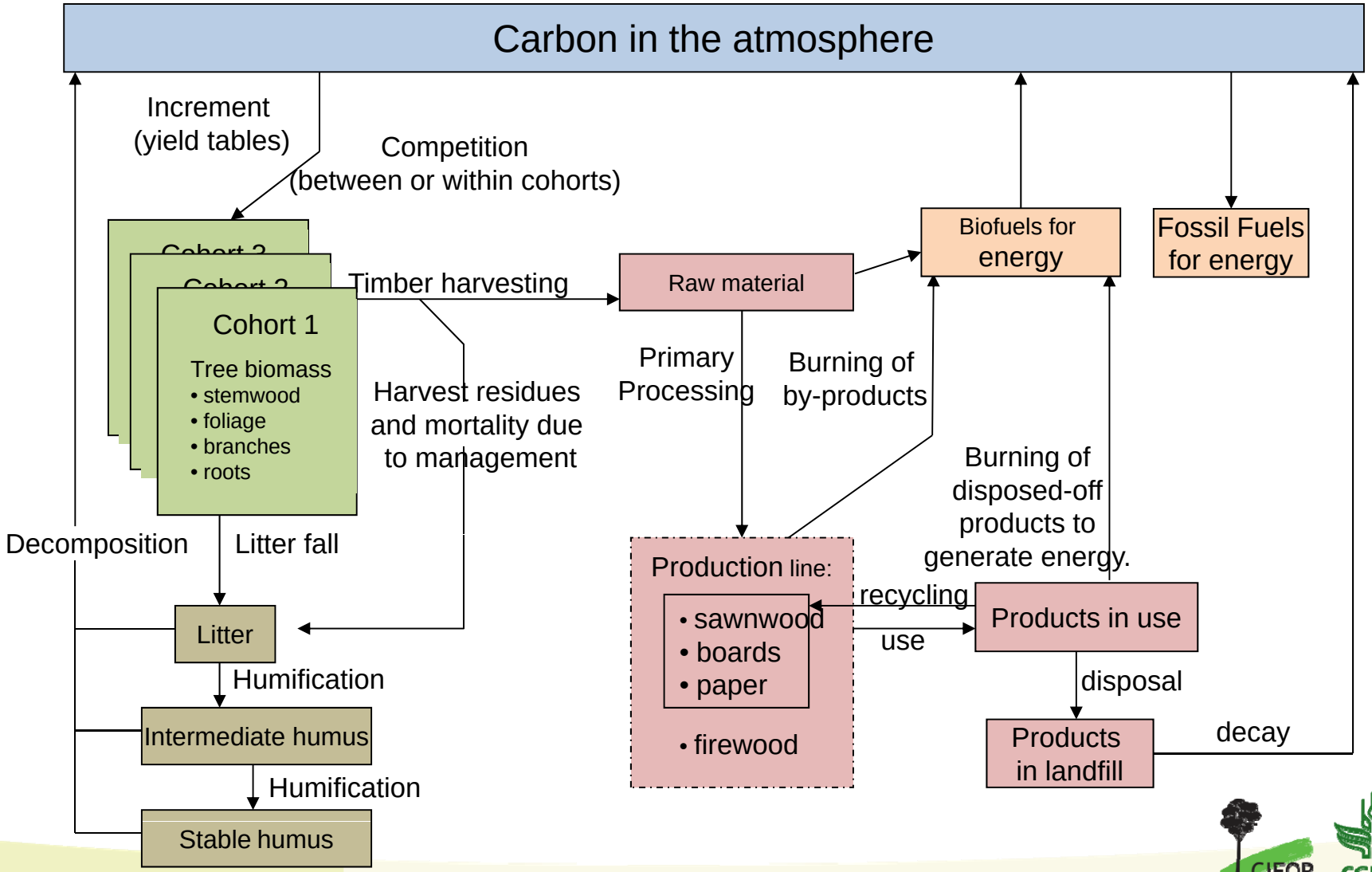
Step 2: Vietnam

Predict deforestation rates 2005- 2009

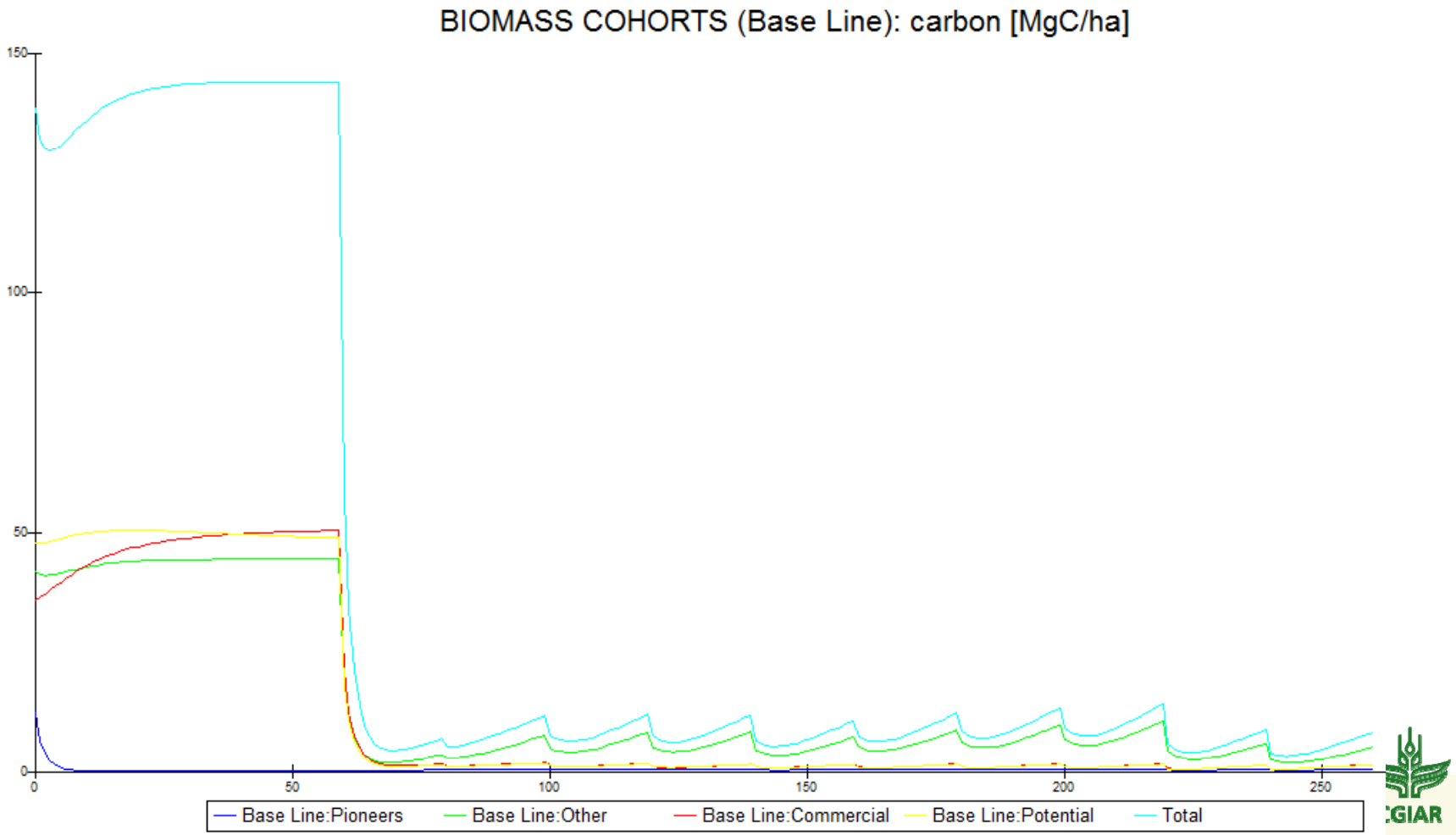
Category	Regression coefficient	
Deforestation rate (2000-2004)	1.464	
Trend variable	-0.006	0.003
Deforestation dummy	-0.011	-0.031
Forest stock	0.067	0.260
Forest stock squared	-0.189	-0.463
Population density	-1.177	1.036
Road denisty	0.004	-0.001
R^2	0.515	0.052
N	301	301



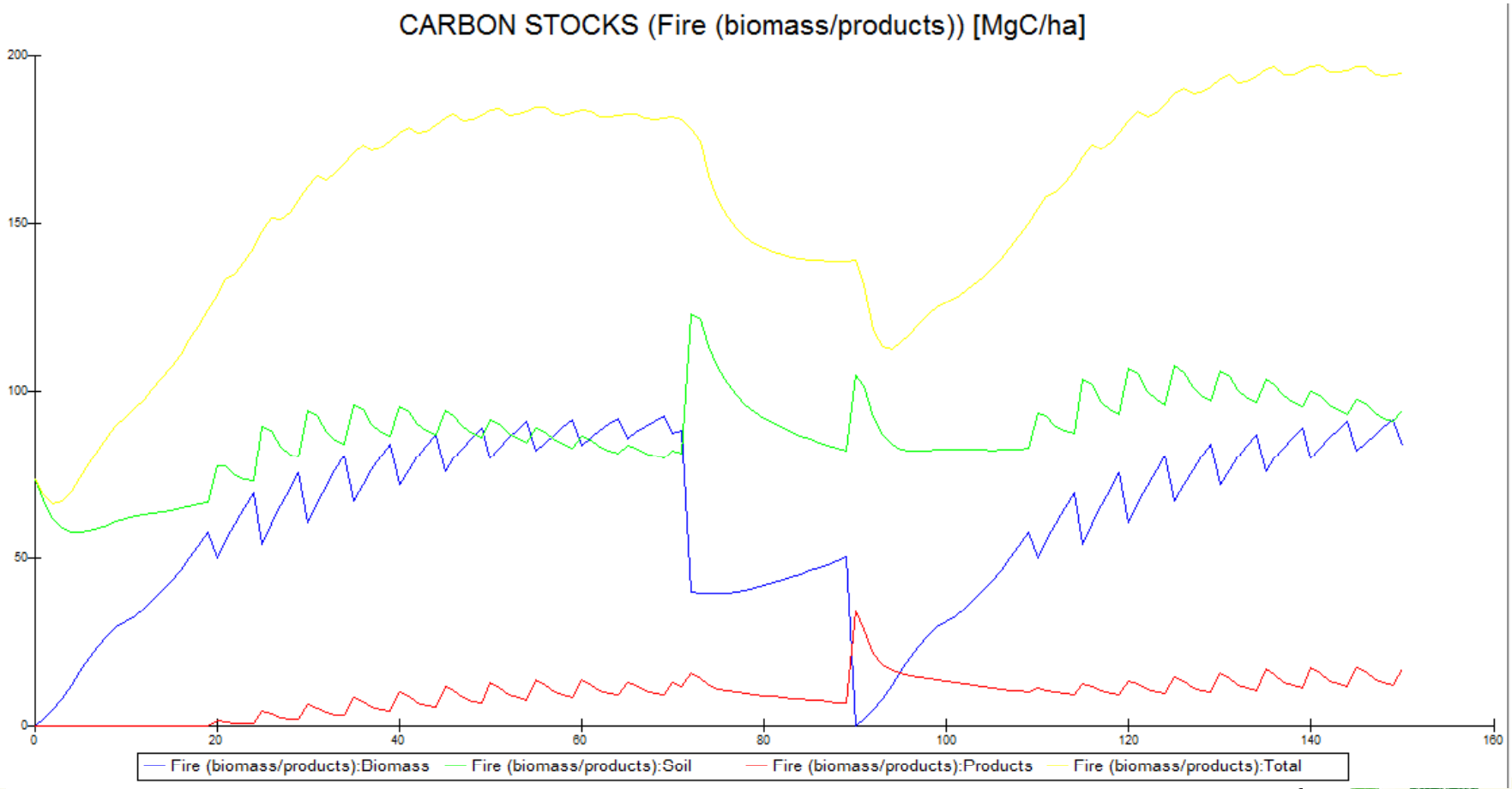
We have tools: CO_2FIX model structure



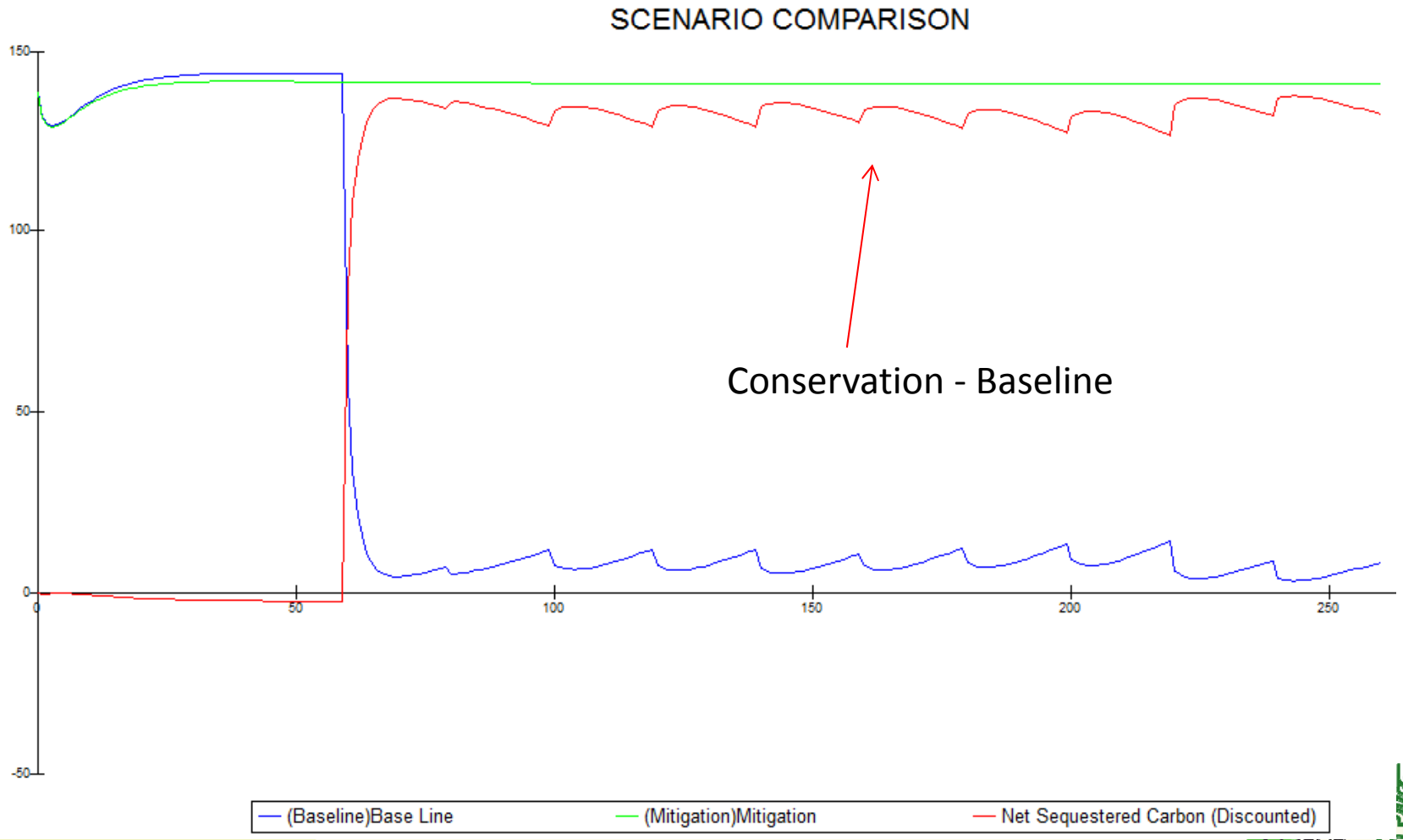
CO_2FIX REDD+ case: Baseline data from Costa Rica

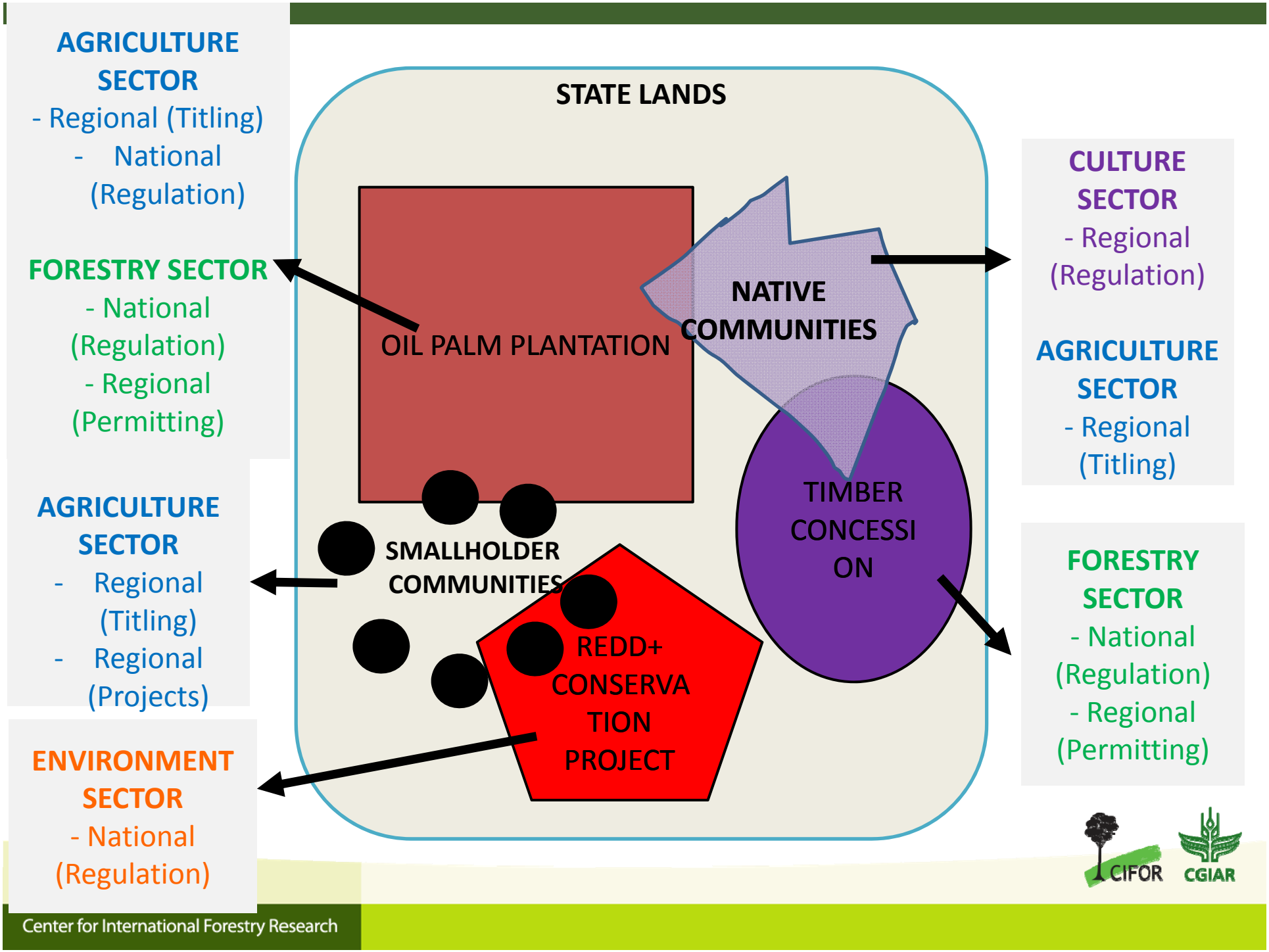


Disturbance (fire) and clearing modeled with the CO_2FIX model



We have the tools for land use planning and comparative analysis




AGRICULTURE SECTOR
- Regional (Titling)
- National (Regulation)
FORESTRY SECTOR
- National (Regulation)
- Regional (Permitting)
AGRICULTURE SECTOR
- Regional (Titling)
- Regional (Projects)
ENVIRONMENT SECTOR
- National (Regulation)
STATE LANDS
OIL PALM PLANTATION
NATIVE COMMUNITIES
SMALLHOLDER COMMUNITIES
REDD+ CONSERVATION PROJECT
TIMBER CONCESSION
CULTURE SECTOR
- Regional (Regulation)
AGRICULTURE SECTOR
- Regional (Titling)
FORESTRY SECTOR
- National (Regulation)
- Regional (Permitting)

Further reading:

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