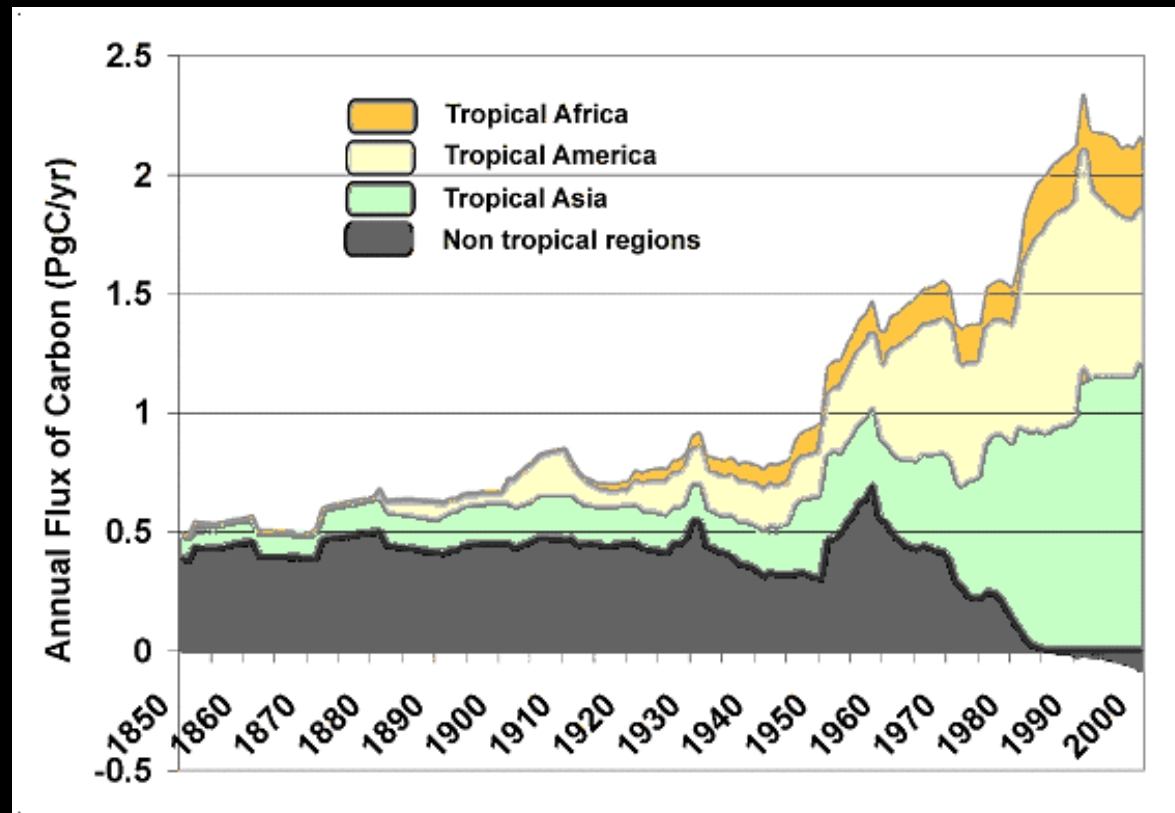# The Emerging Nested REDD+ Architecture

Daniel Nepstad, PhD
Director, International Program
IPAM
September 20, 2010

Carbon emissions from tropical deforestation

	Tropics	Non-tropics
Long term	50%	50%
1990s	100%	0%

Houghton et al. 2005
in Moutinho and Schwartzman, Eds.

REDD+
Reductions in **E**missions from **D**eforestation and [forest] **D**egradation (**+** Enhancement)

- UNFCCC: Nation-wide with provisions for sub-national

- US cap-and-trade: Nation-wide with period of sub-national (Waxman-Markey, Kerry-Lieberman)

- California cap-and-trade (AB32): State-wide, projects

The Advantages of Forest Carbon Projects

- Clear boundaries

- Manageable risk

- Independence of government

The Disadvantages of Forest Carbon Projects

- Baseline, leakage

- Do not address underlying causes through policy reform

- Difficult to achieve scale

- "Measles" syndrome

Nesting REDD+ Architecture

National REDD+
Program

State REDD+
Programs;
National policies

Projects;
State-wide Policies
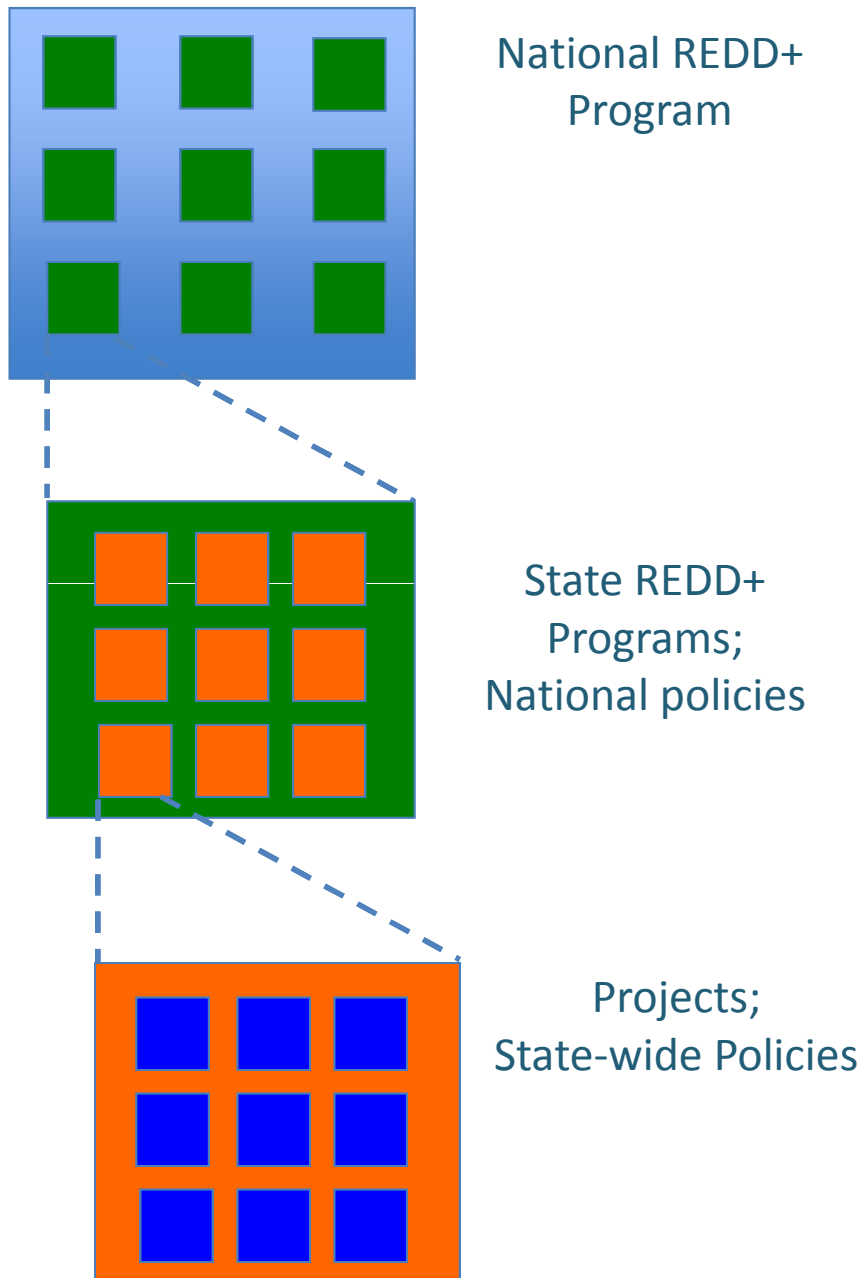
Goals

1. Scale neutral
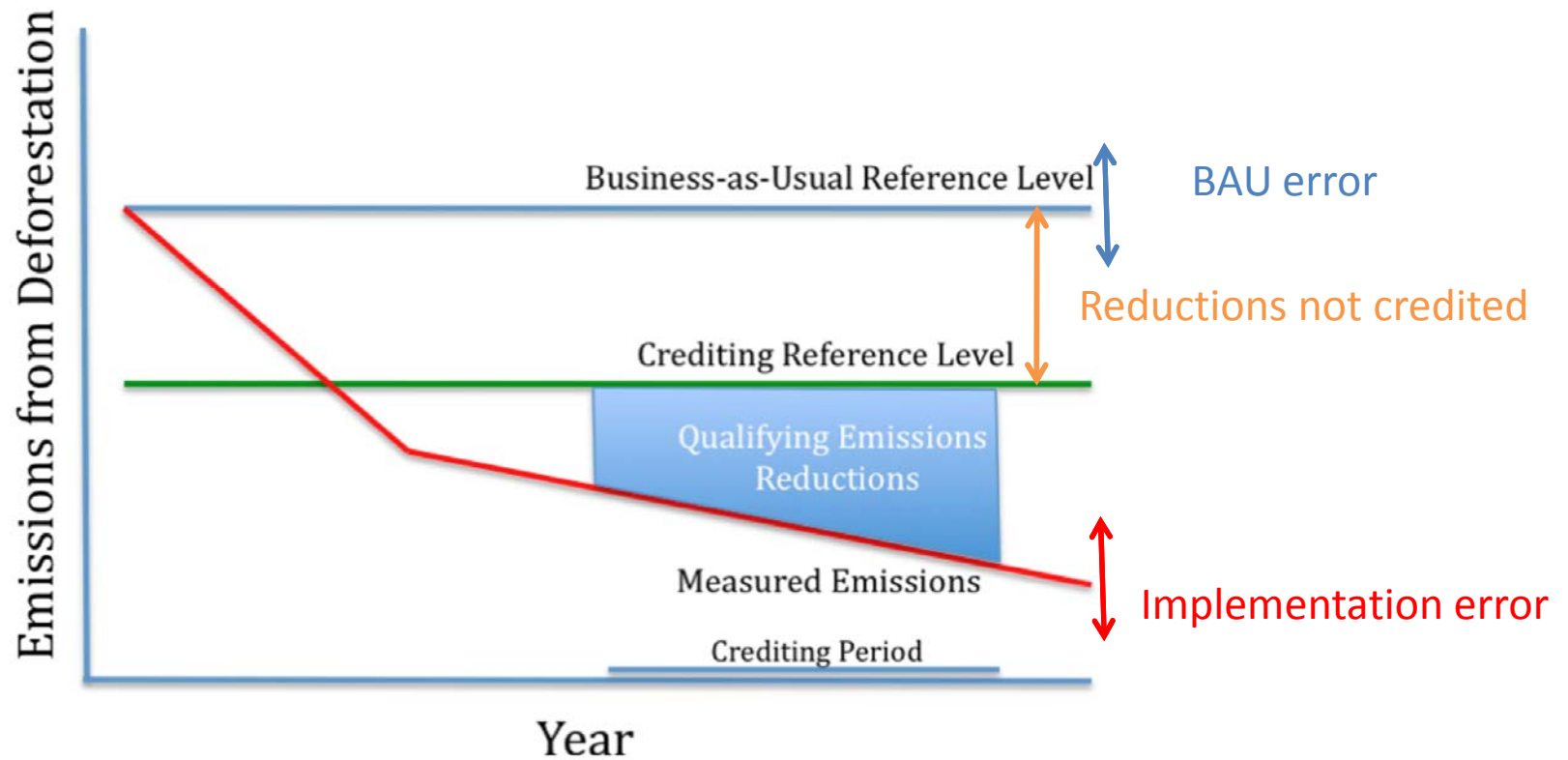2. Incentives on the ground
3. Full system participation

Advantages:

1. Policy-project integration at
   different jurisdictional levels
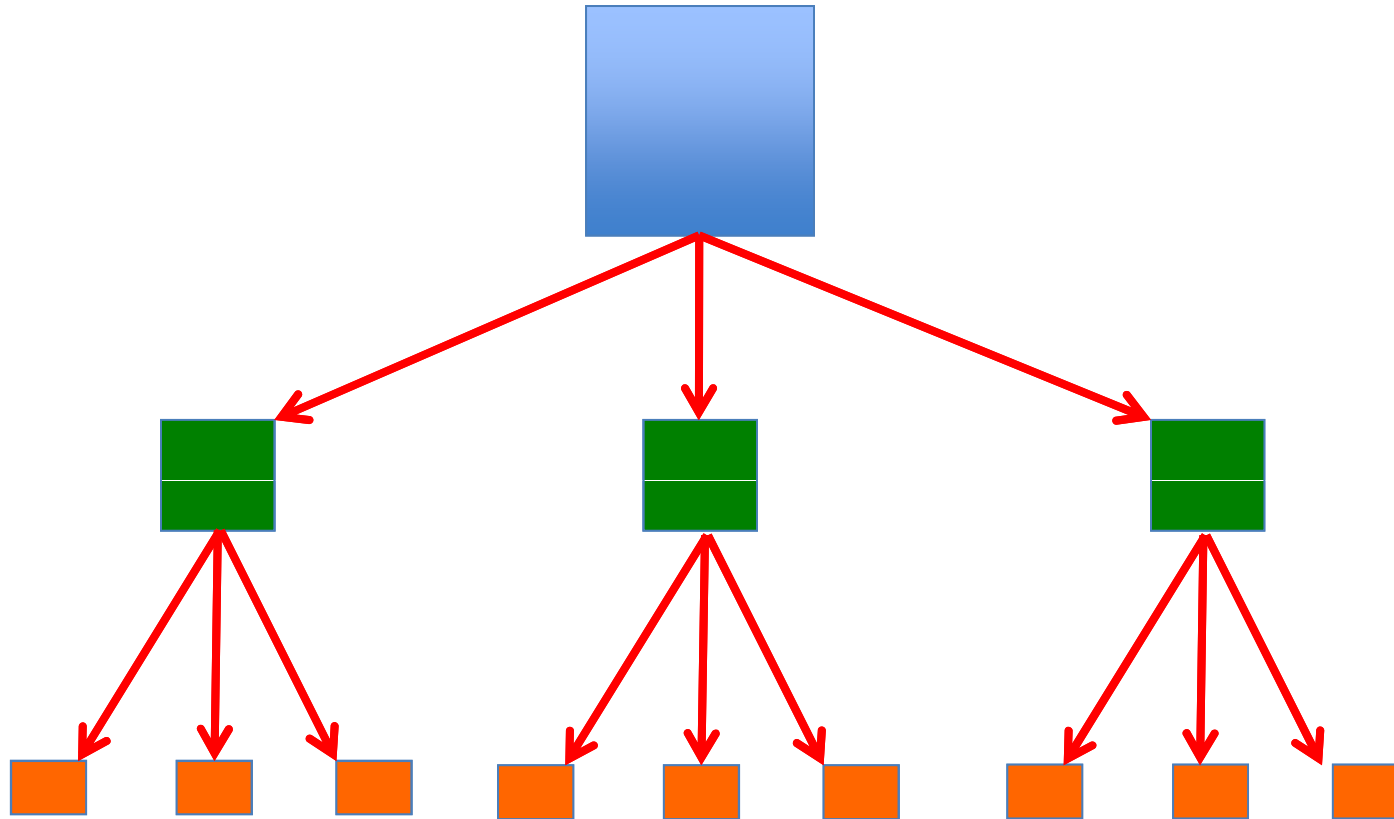2. Potential for large-scale
   emissions reductions

Challenges:

1. Baseline error propogation
2. Top down? Bottom up?
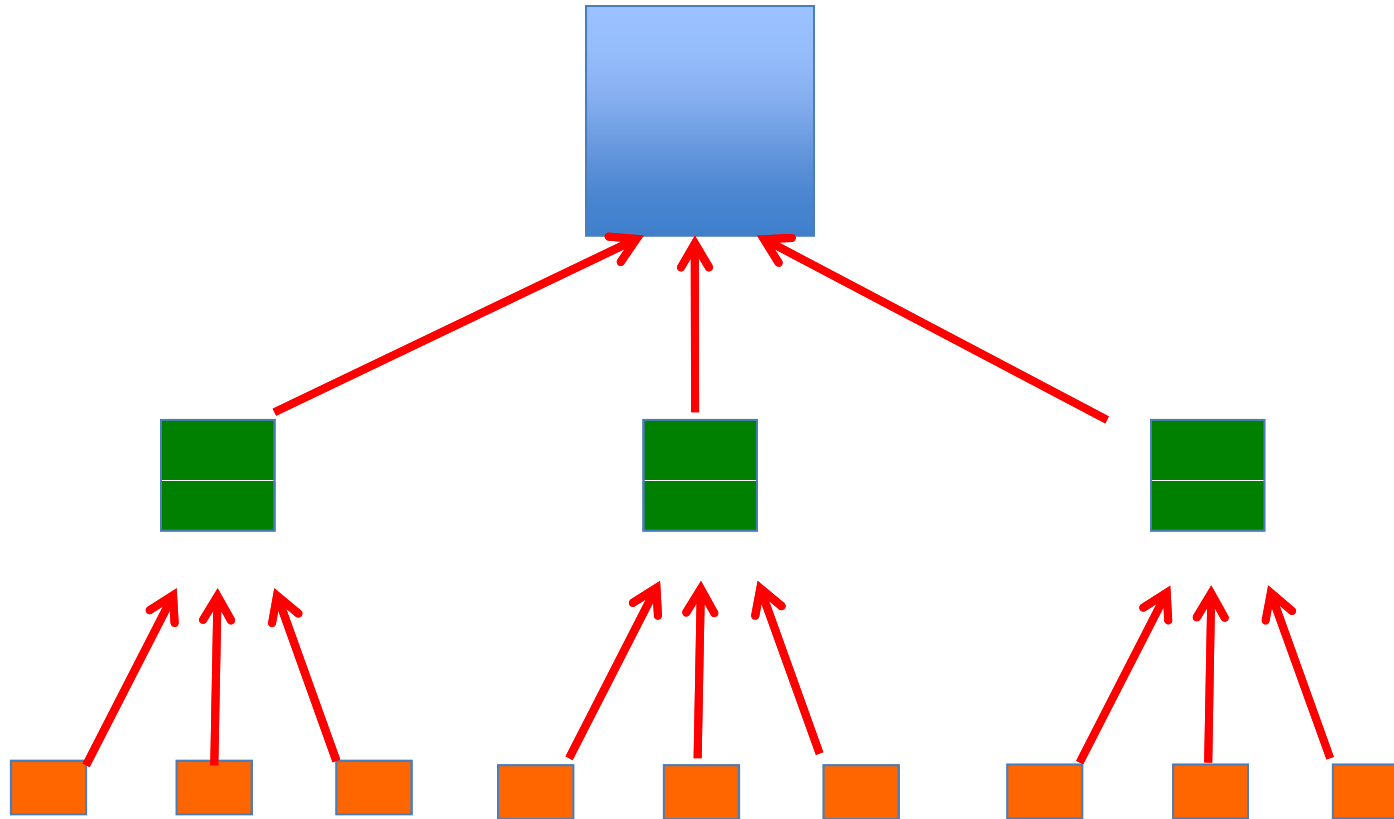3. Scale inter-dependencies

Challenge 1. Estimation errors.

Challenge 2: **Top-down**, bottom-up, hybrid?
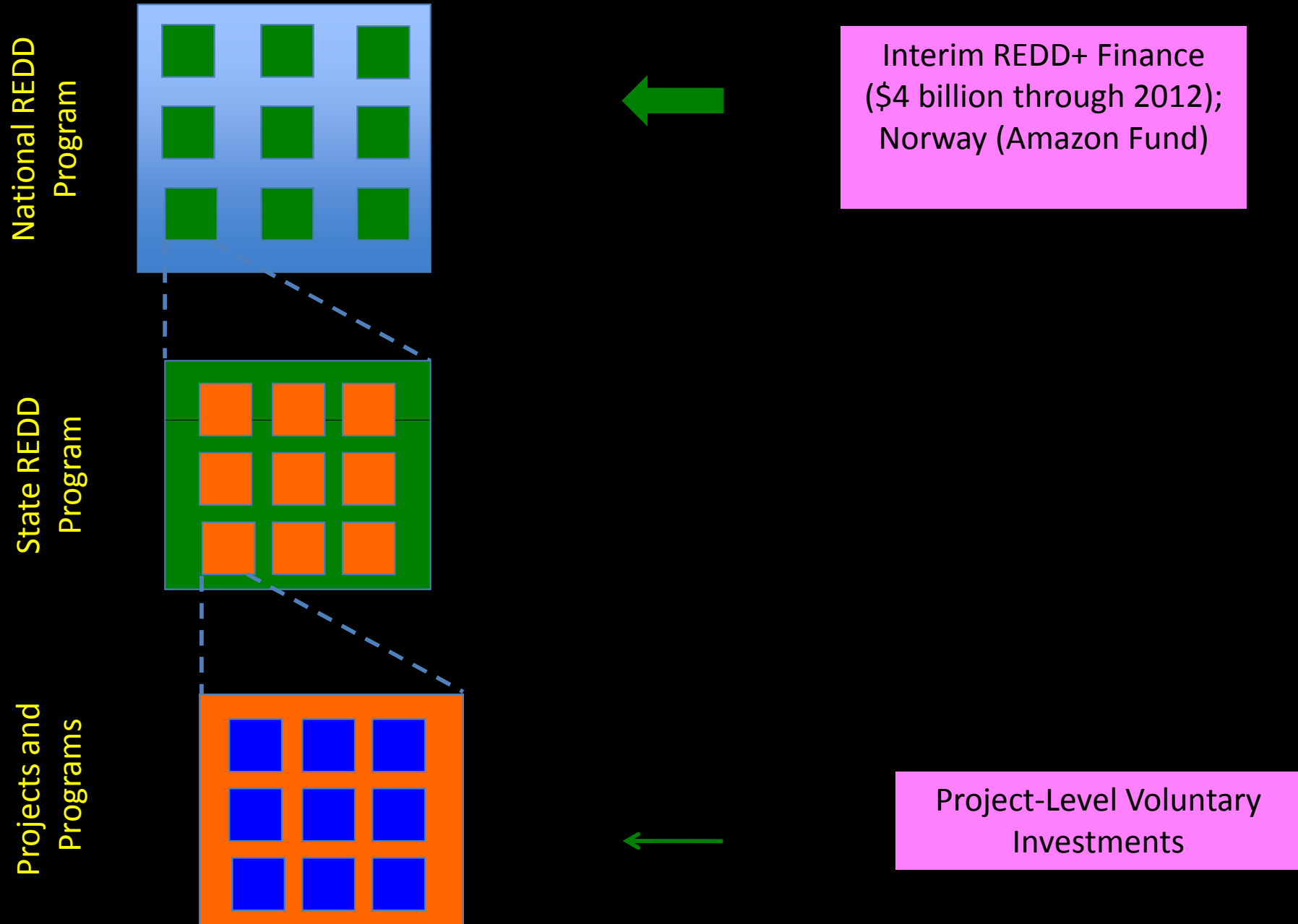
Challenge 2: **Top-down**, **bottom-up**, hybrid?

Challenge 3: Scale inter-dependency. If the nation fails to perform, are all states and projects disqualified?
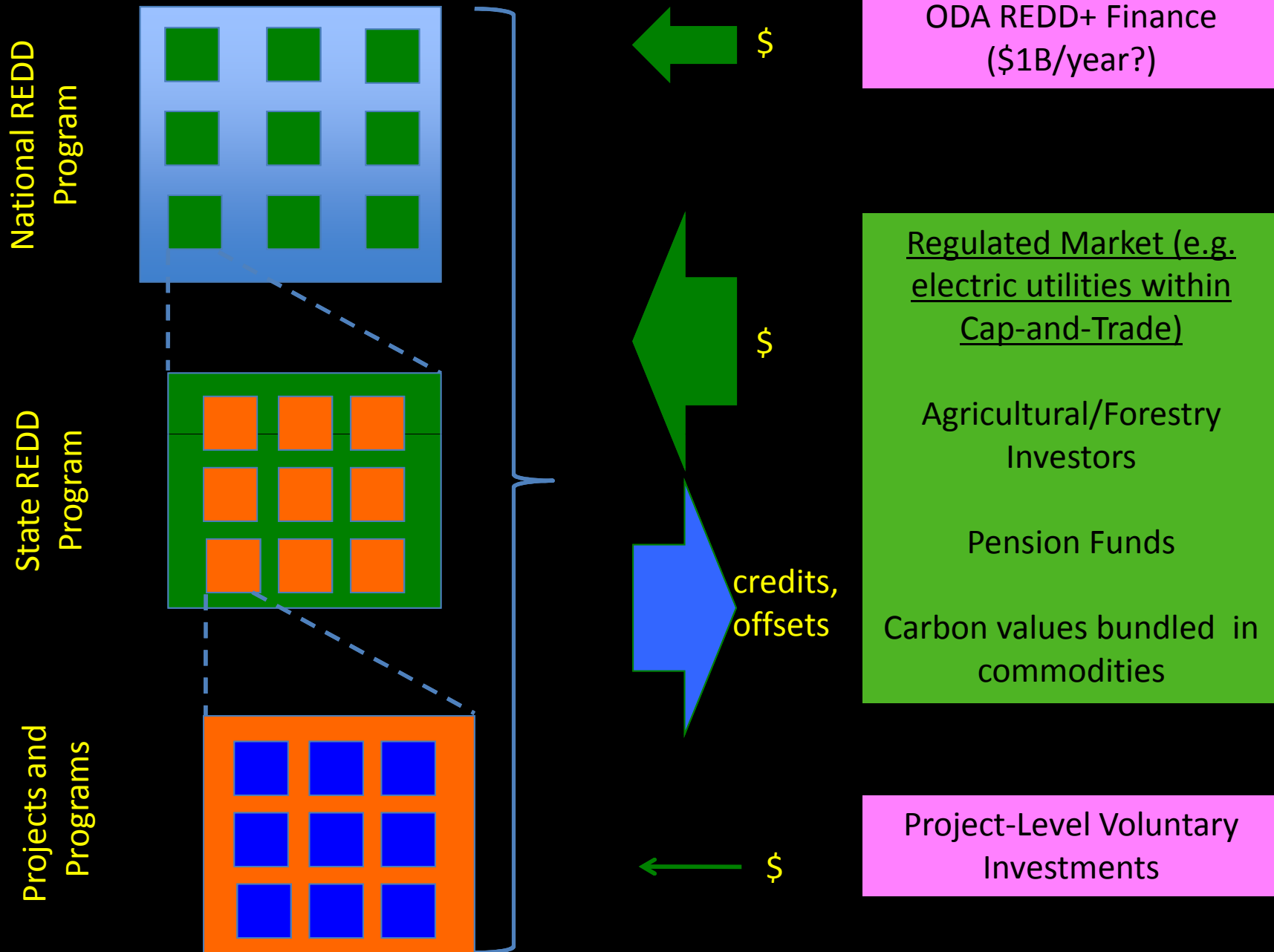
The way forward.

- Systematic review of baseline and implementation estimation
- Broad participation
- Buffer against national non-performance
- *Ex ante* benefits to forest stakeholders

In the long run, project-level baselines used primarily to inform REDD program design at state level?

Today's REDD+ investors. . . not enough

National REDD Program

State REDD Program

Projects and Programs

Interim REDD+ Finance ($4 billion through 2012); Norway (Amazon Fund)

Project-Level Voluntary Investments

REDD+ investors needed in 2015

National REDD Program

State REDD Program

Projects and Programs

$

$

credits, offsets

$

ODA REDD+ Finance ($1B/year?)

Regulated Market (e.g. electric utilities within Cap-and-Trade)

Agricultural/Forestry Investors

Pension Funds

Carbon values bundled in commodities

Project-Level Voluntary Investments

Brazil REDD: Deforestation reduction target has been exceeded, and could continue to decline through National Policy on Climate Change

Deforestation in the Brazilian Amazon: historical rates, baseline, and target
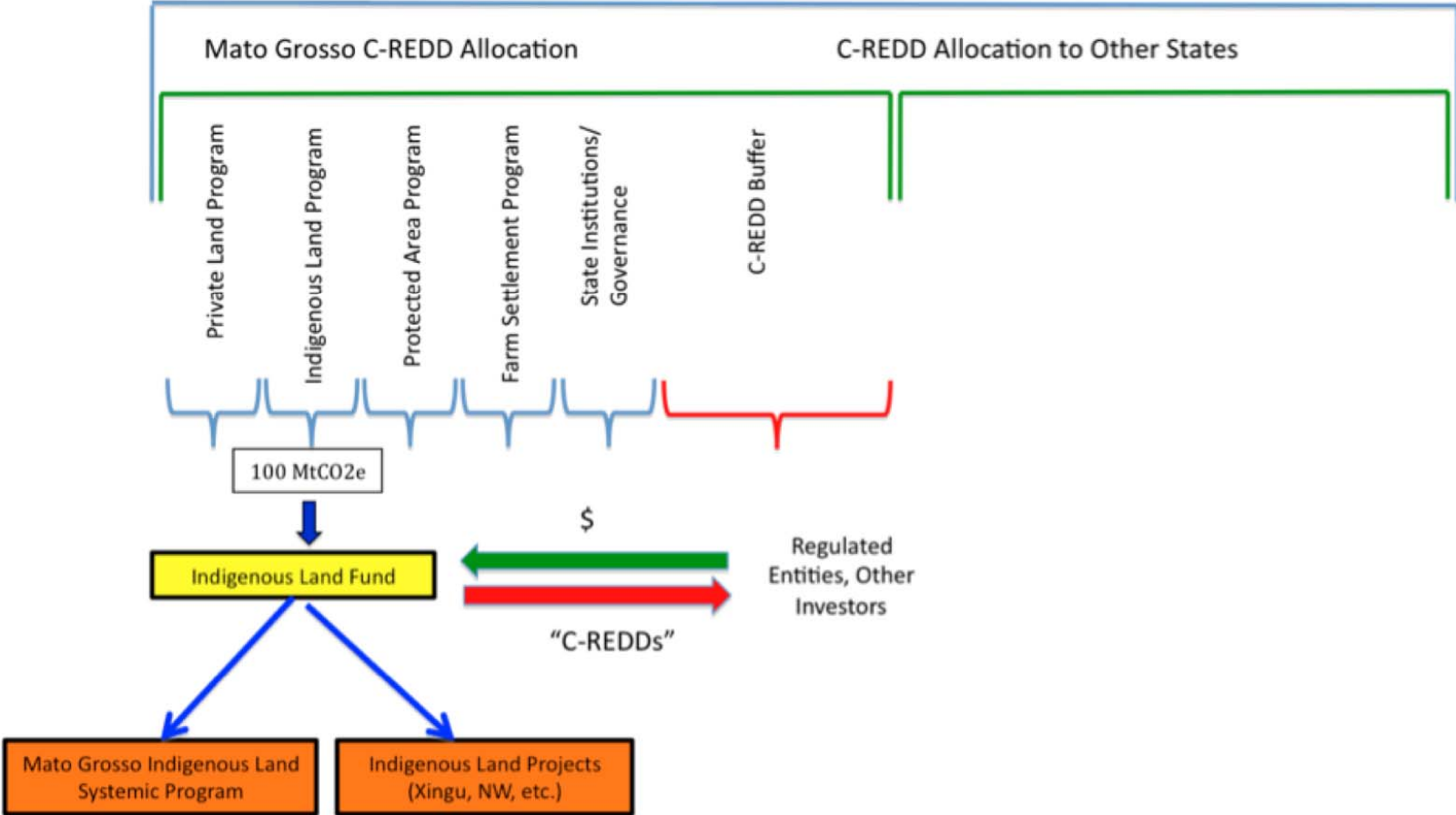(thousands of square kilometers)
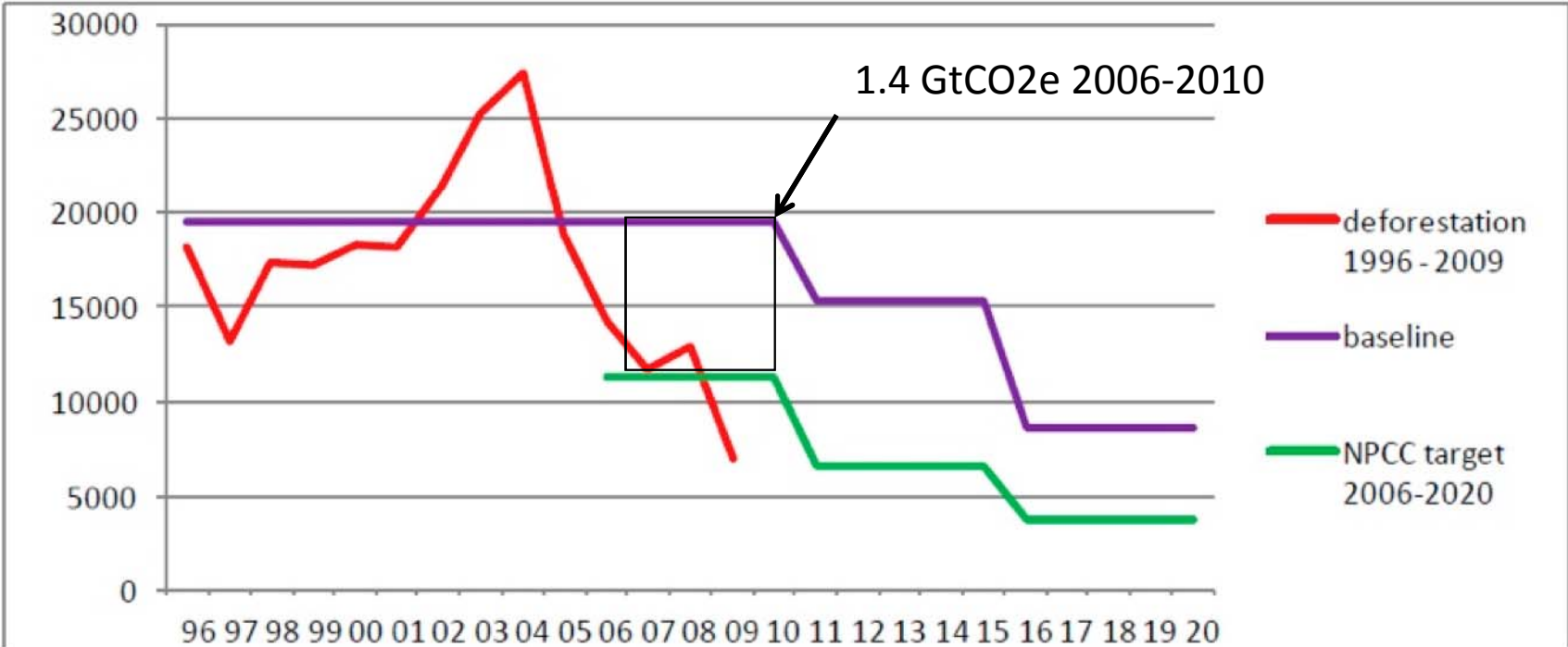
The Governors' Climate & Forest task force, launched by California, has united Governors to pressure federal governments in Brazil and Indonesia

Mato Grosso: REDD Architecture under development

Conclusions:

- Era of isolated, stand-alone projects is ending; credits will flow to nested projects and programs

- Special attention needed: baselines, implementation, broad participation, *ex ante* benefits,

- Public funding could cover costs of achieving crediting baseline; lower risk to private investors

- Brazil has achieved 1.4 GtCO2e reductions; effect of NAMA on provision of credits unclear

15 years IPAM — Amazon Environmental Research Institute