



## **Climate Change Research at CIFOR**

**Christopher Martius**

**Bogor, 18 March 2014**





# Theme 4

## Objectives & structure



Harnessing forests, trees  
and agroforestry for  
climate change  
**MITIGATION**



Enhancing climate  
change **ADAPTATION**  
through forests, trees  
and agroforestry



Understanding the role  
of forests, trees and  
agroforestry in achieving  
**SYNERGIES** between  
mitigation and  
adaptation



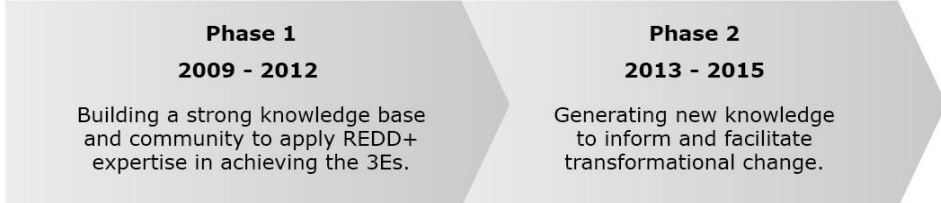
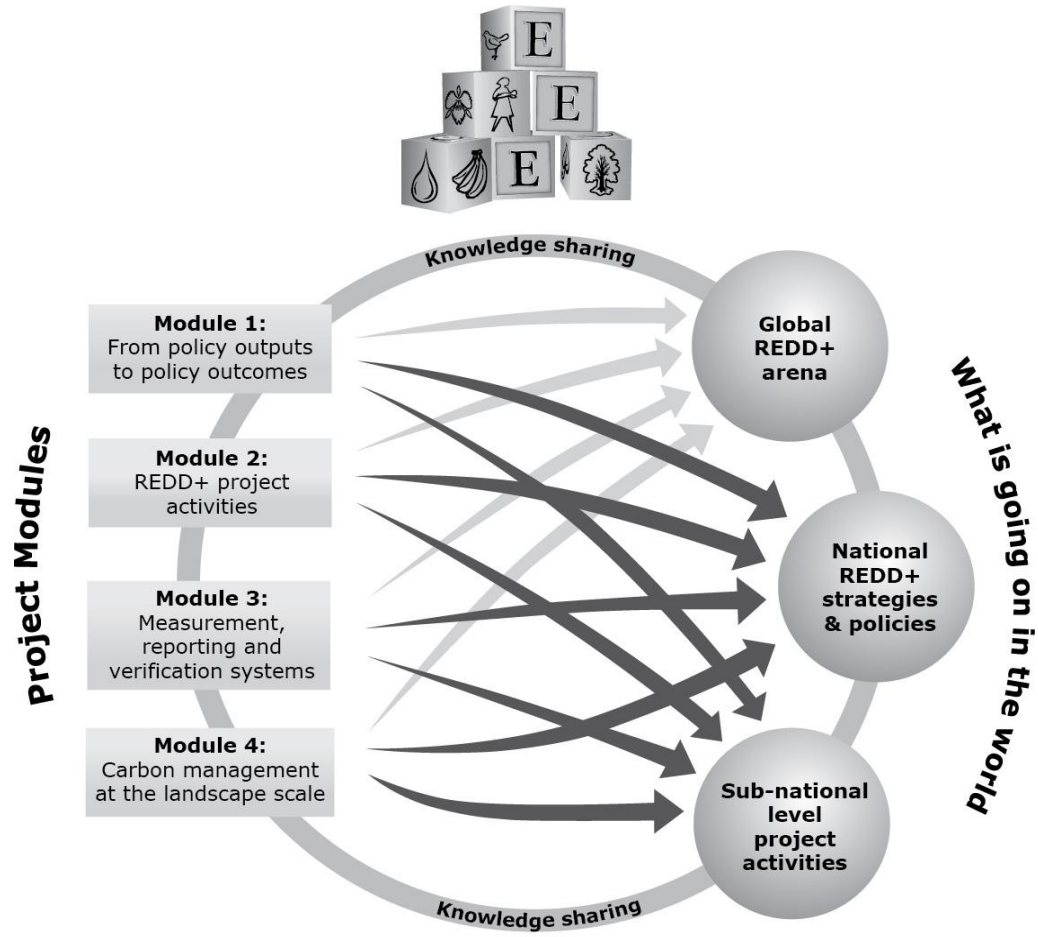
# CIFOR's Global Comparative Study on REDD+

## GCS-REDD+

### Structure and objectives

#### Objectives

- support REDD+ policy arenas and practitioner communities with science-based information, analysis and tools
- ensure 3E+ outcomes
  - effectiveness
  - efficiency
  - equity
  - co-benefits



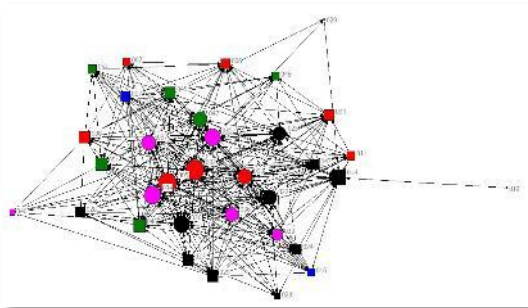
# Module 1

## REDD+ strategies, policies and measures

15 countries

new research

- links of national & international political processes
- benefits-sharing



Country  
case  
studies

**Country Profile**

*contextual  
conditions*

**Media Discourse  
Analysis**

*actors & influence*

**Policy Network Analysis**

*actors, perception, power,  
position*

**Flexible  
Policy  
Studies**

**REDD+ Policy Content Analysis**

*policies and measures*

**National REDD+ Strategy Assessment**

*full country case analysis*

**Cross-country  
comparative  
analysis**

**Comparative Analysis**

*combined country cases*

# Module 2

## REDD+ Subnational Initiatives



"BACI" research design

**Comparison**  
*Control*

Control  
*before*

Control  
*after*

**Project site**  
*Intervention*

Intervention  
*before*

Intervention  
*before*

*Before*

*After*





# Module 3

## Monitoring and Reference Levels

Improve procedures & practices for estimating & managing carbon stocks

*Hallmark:*

*Stepwise approach to RELs & MRV (considers countries' capacities)*



### Capacities

#### Assess

- *why technical capacity remains low*
- *how capacity-building can be made more effective*

### Technologies and methods

#### Work on monitoring concepts

*for various drivers of deforestation and forest degradation*

#### research on setting RELs

- *at different scales*
- *understand the links between national and sub-national RELs*

#### Test community-based monitoring methods

*accuracy versus cost trade-offs*

#### emission/removal factors

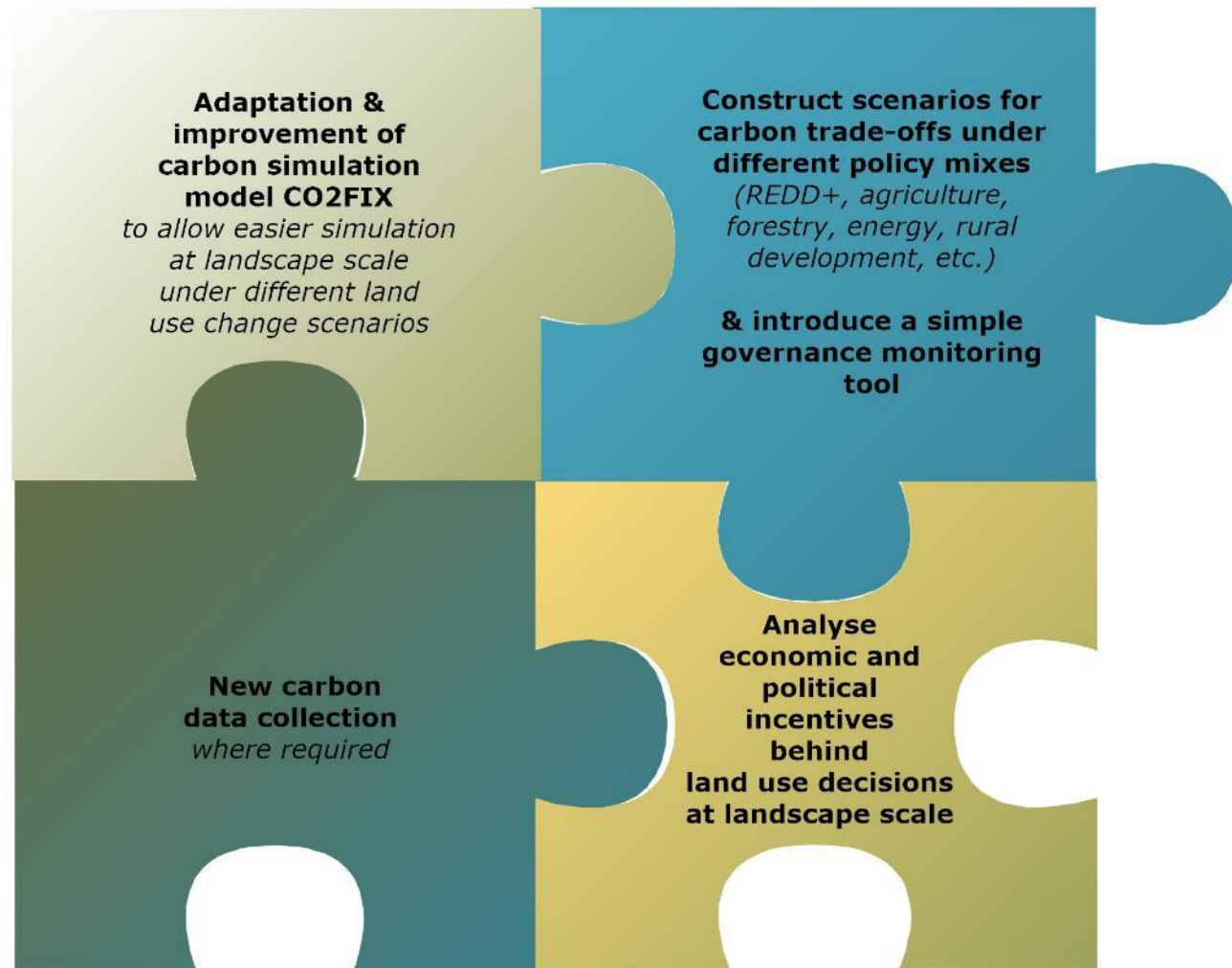
*continue work from Phase 1*

# Module 4

## Carbon management at the landscape scale

Improving the design of **multilevel institutions** and processes

*to overcome economic and policy barriers to REDD+ and other low carbon land use policies*





Thanks to



Norad



RESEARCH  
PROGRAM ON  
Forests, Trees and  
Agroforestry

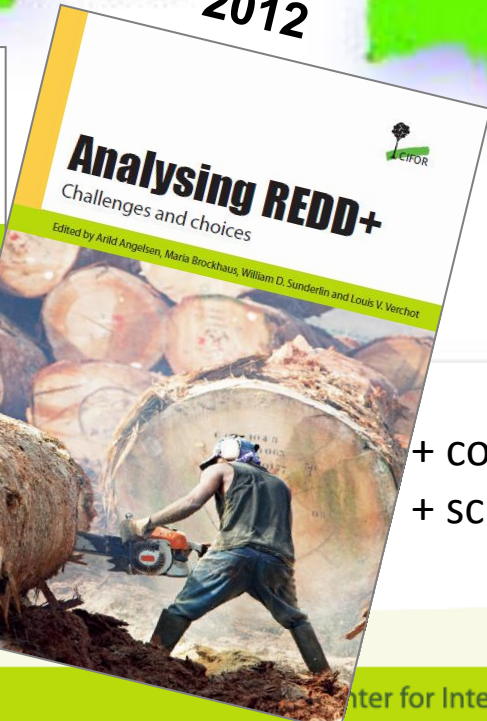
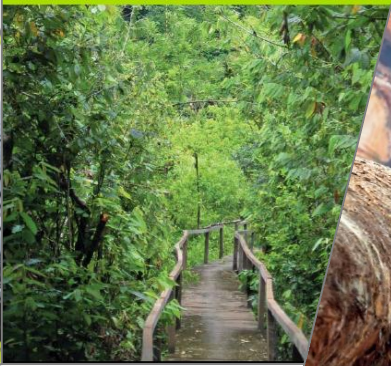


Australian Government  
Department of Foreign Affairs and Trade





# GCS REDD output & results



+ country profiles  
+ scientific publications





A scenic view of a tropical forest with a small wooden hut on a riverbank, reflecting in the water. The sky is blue with scattered white clouds. The forest is dense with various types of trees, including palm trees. The water is calm, creating a clear reflection of the hut and the surrounding trees.

## **As an idea, REDD+ is a success story**

Significant result-based funding to address an urgent need for climate change mitigation

Sufficiently broad to serve as a canopy under which a wide range of actors can grow their own trees



# REDD+ faces huge challenges

A woman with dark skin and hair, wearing a dark sleeveless top and a striped apron, stands in a lush green forest. She is carrying a large, heavy bundle of sticks and branches on her head, balanced on a woven basket. The background is filled with dense foliage and trees, suggesting a rural or forested setting.

**Powerful political and economic interests**

**Coordination across various government levels and agencies**

**Benefits to balance effectiveness and equity**

**Tenure insecurity and safeguards must be genuinely addressed**

**Transparent institutions, reliable carbon monitoring and realistic reference levels to build result-based systems**



A photograph of a man in a forest, wearing a light-colored t-shirt and dark pants, using a chainsaw to cut a tree trunk. The forest is dense with green foliage and trees. The man is positioned in the center-right of the frame, looking towards the left. The chainsaw is cutting into the tree trunk, and some wood chips are visible. The background is filled with various types of trees and undergrowth, creating a lush, green environment.

# **REDD+ requires - and can catalyse – transformational change**

**New economic incentives, new information and discourses, new actors & new policy coalitions: all have the potential to move domestic policies away from the BAU trajectory**



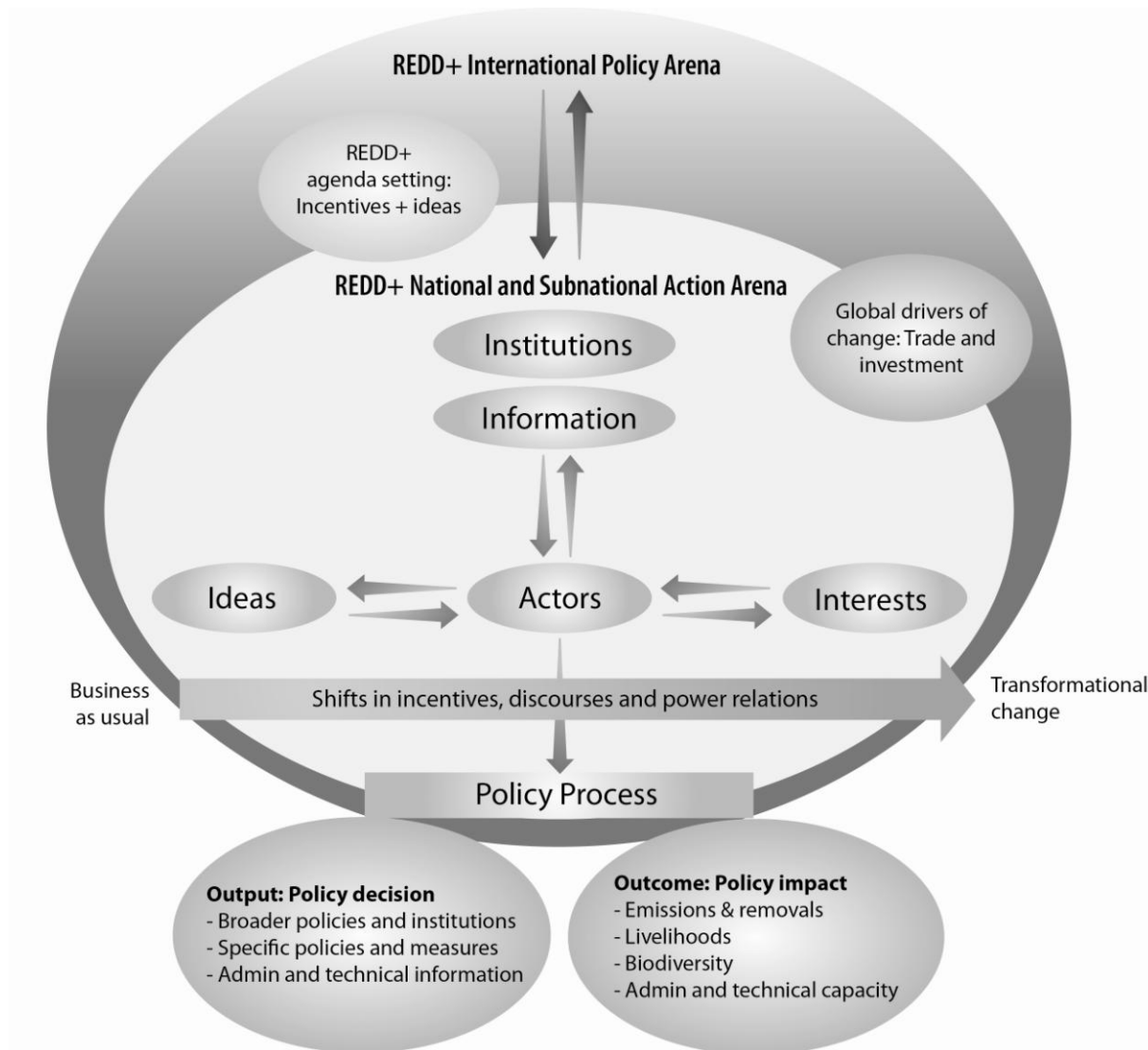


## REDD

## 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

# Seeing REDD+ through the lens of 4 I's



Political  
Economy  
lens





# How the 4 I's hinder or enable change (1)

- **Institutions**

- Formal power rests with 'stickiest' organisations – those with enough influence to resist change
  - E.g. colonial rules
- new institutions and actors are often ignored or remain isolated
  - E.g. Ministries for natural resources

- **Interests**

- State's interest in social and economic welfare can fall short if not autonomous from interests that drive deforestation and degradation
  - rent seeking, fraud, collusion and corruption practices in the bureaucratic system



# How the 4 Is hinder or enable change (2)

- **Ideas**

- discourse affects policy making
- it frames the problem and presents limited choices of ‘reasonable’ or ‘possible’
  - REDD+ benefits for those who contribute to efficiency and effectiveness, versus benefits for those who have moral rights based on equity considerations

- **Information**

- Facts are selected, interpreted, and put in context in ways that reflect the interests of the information provider
  - reference level setting



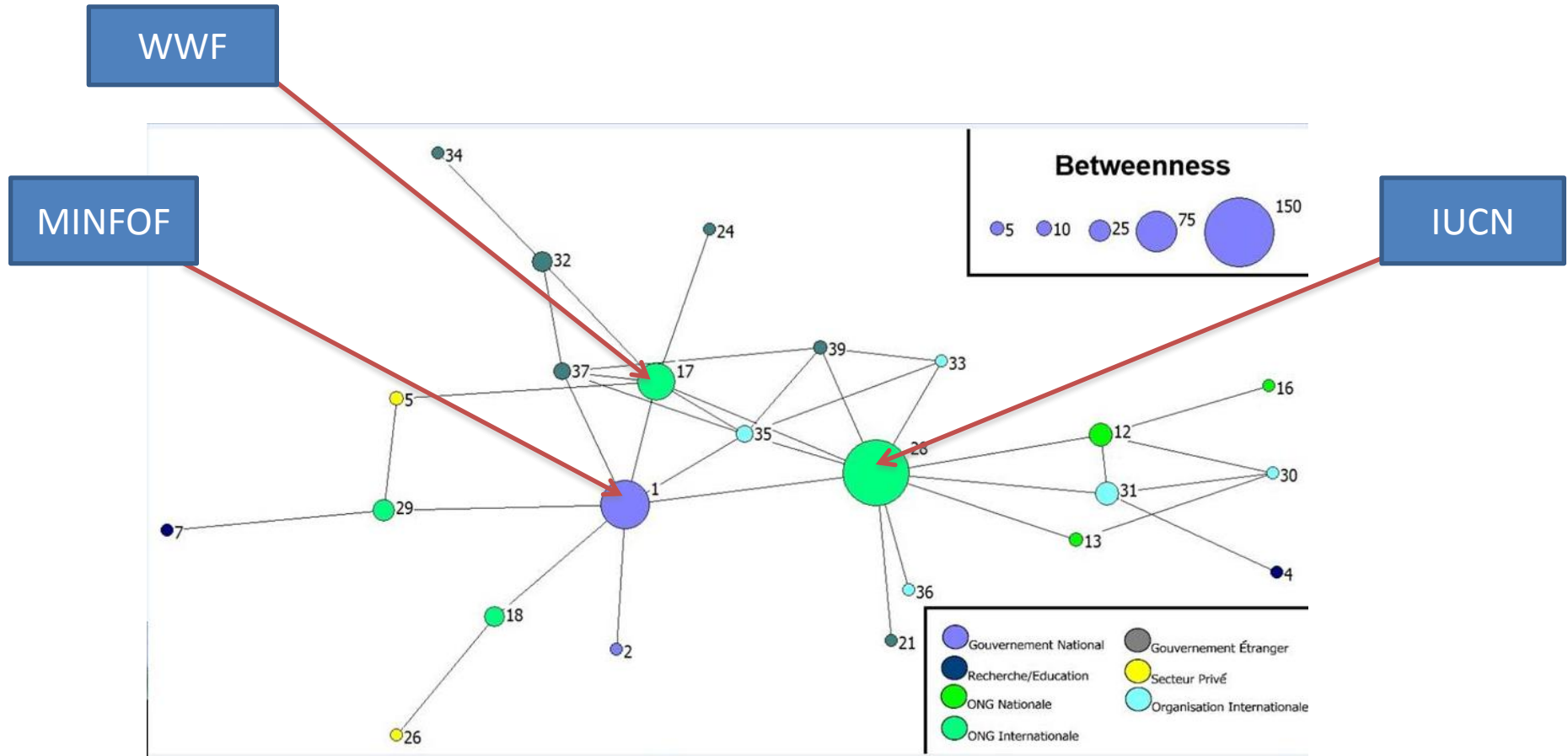




# Cameroon

Dkamela, G.P. et al. 2013. Lessons for REDD+ from Cameroon's past forestry law reform: a political economy analysis. (under review in Ecology & Society)

## Information flow in REDD+ policy arena



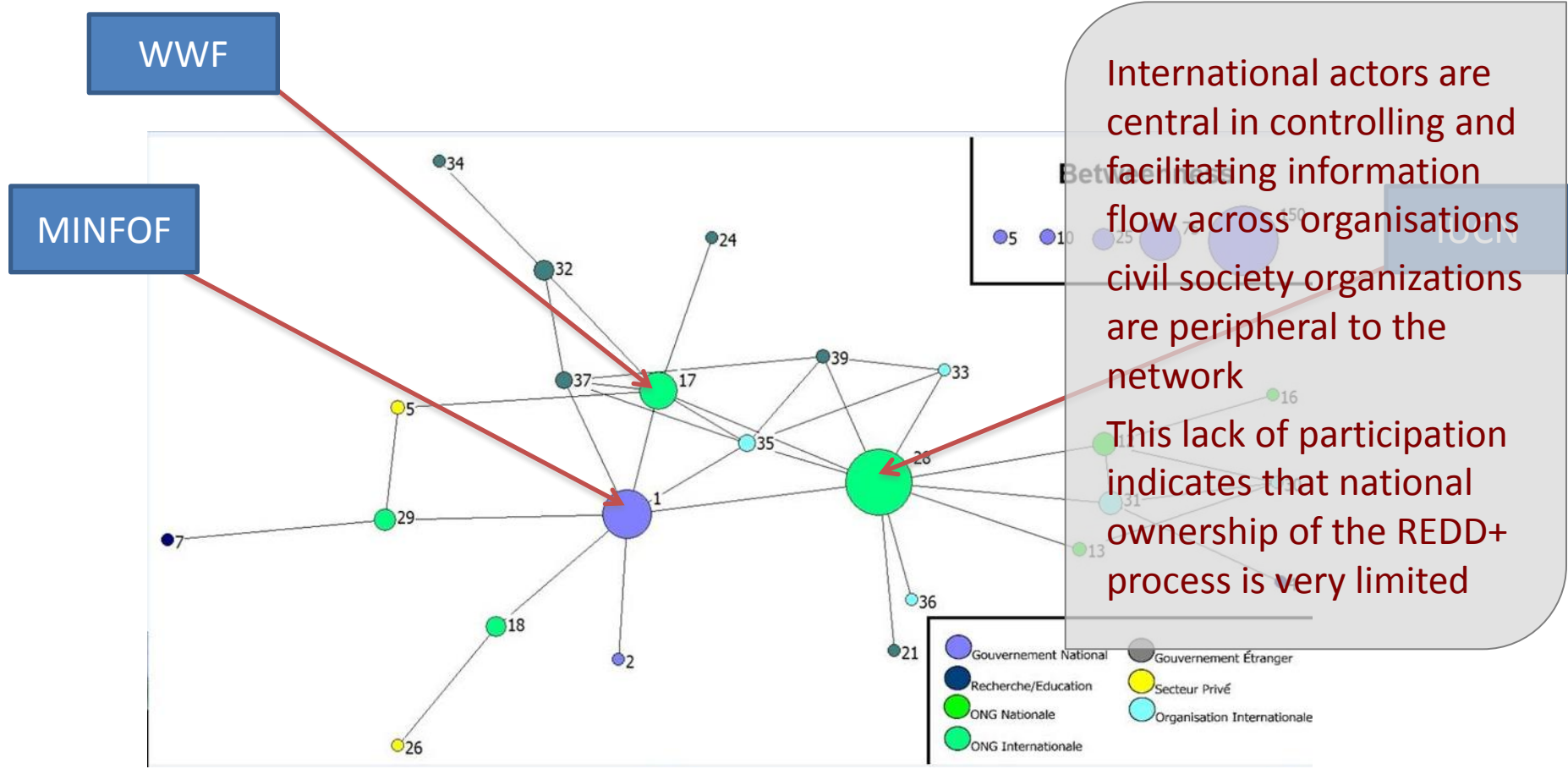
Betweenness refers to the extent to which other actors are on the shortest distance between pairs of actors in the network, indicating a favorable position of a specific actor in facilitating and controlling communication flows and high scores indicate a position of brokerage.



# Cameroon

Dkamela, G.P. et al. 2013. Lessons for REDD+ from Cameroon's past forestry law reform: a political economy analysis. (under review in Ecology & Society)

## Information flow in REDD+ policy arena

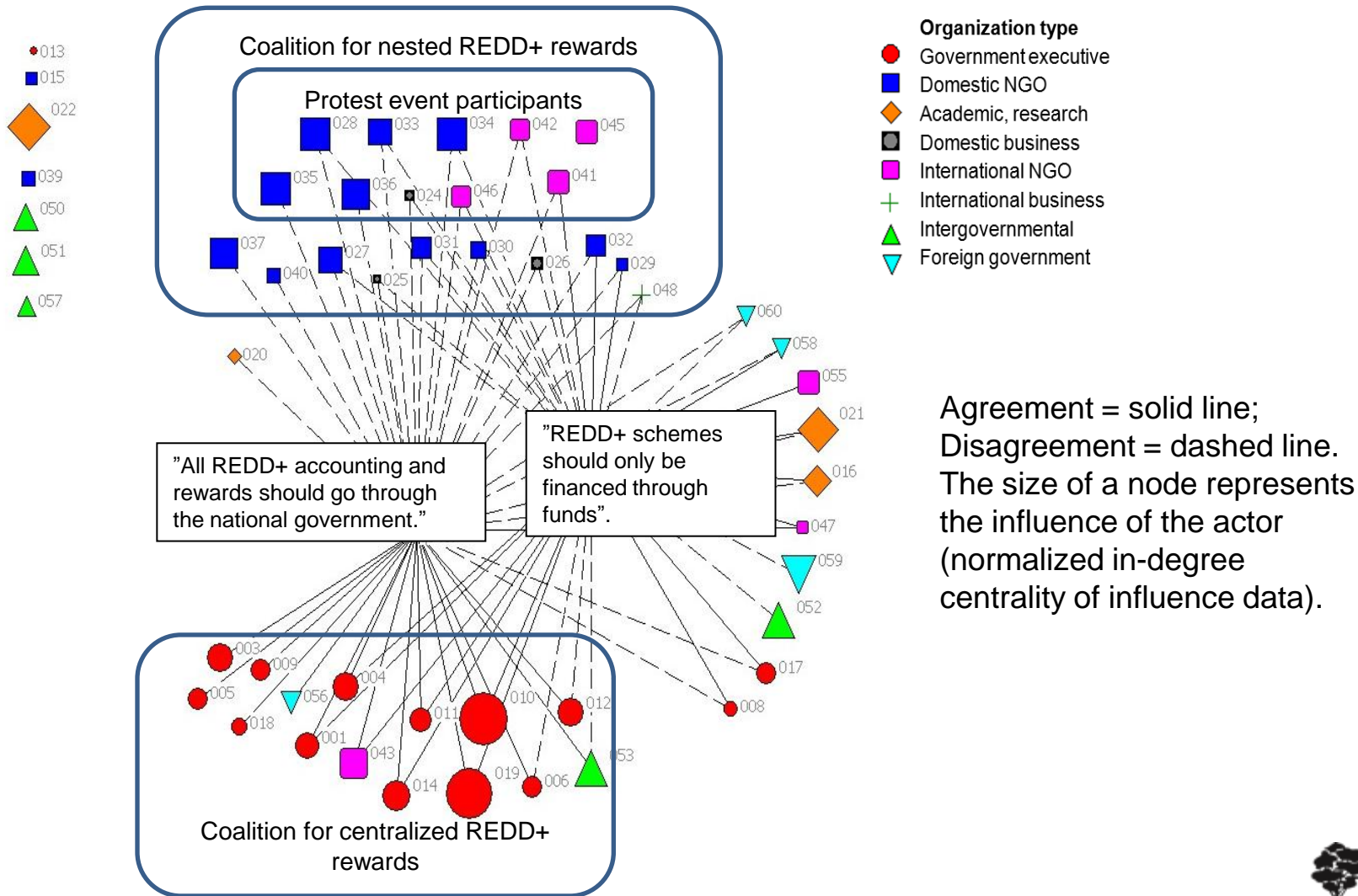


Betweenness refers to the extent to which other actors are on the shortest distance between pairs of actors in the network, indicating a favorable position of a specific actor in facilitating and controlling communication flows and high scores indicate a position of brokerage.



# Tanzania

## Policy positions and REDD+ discourse coalitions



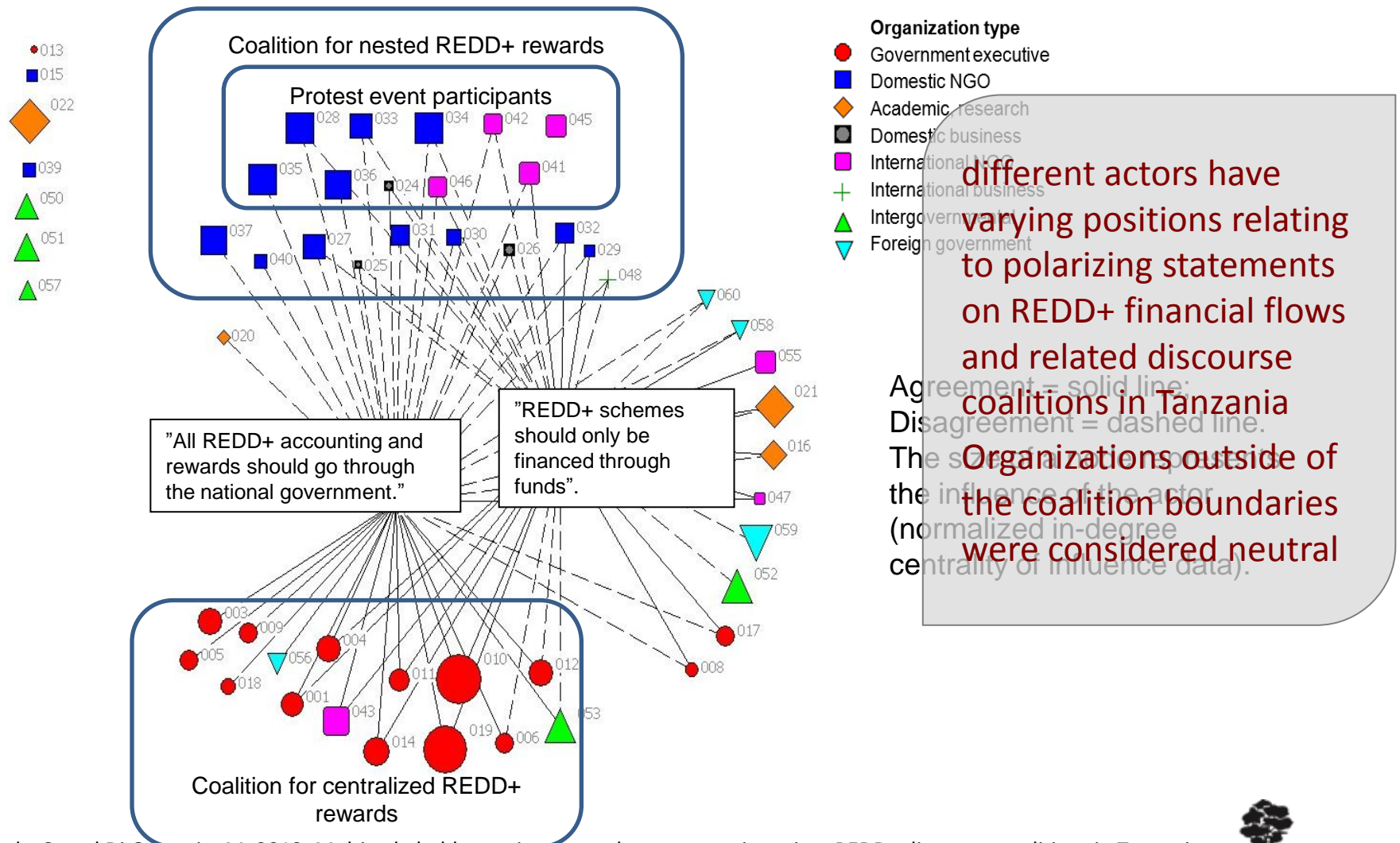
Rantala, S. and Di Gregorio, M. 2013. Multistakeholder environmental governance in action: REDD+ discourse coalitions in Tanzania. (under review in Ecology & Society)





# Tanzania

## Policy positions and REDD+ discourse coalitions

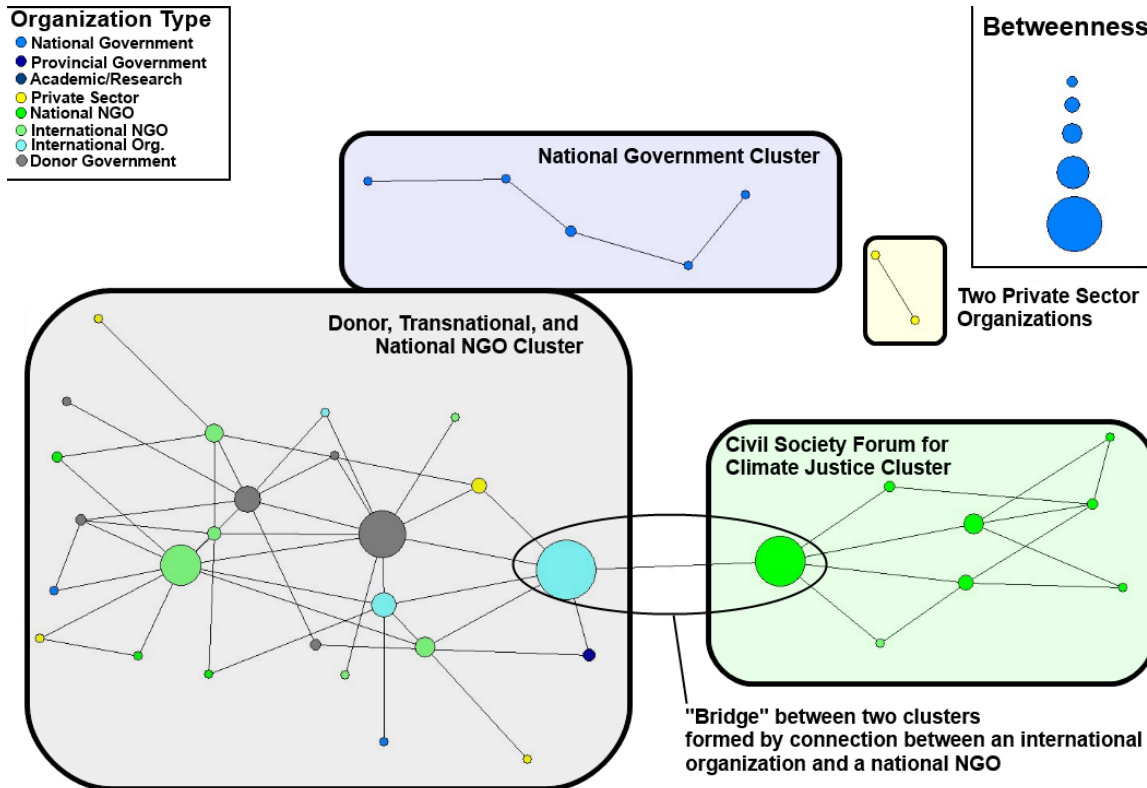


Rantala, S. and Di Gregorio, M. 2013. Multistakeholder environmental governance in action: REDD+ discourse coalitions in Tanzania. (under review in Ecology & Society)



# Indonesia

## Fragmentation in Information exchange network



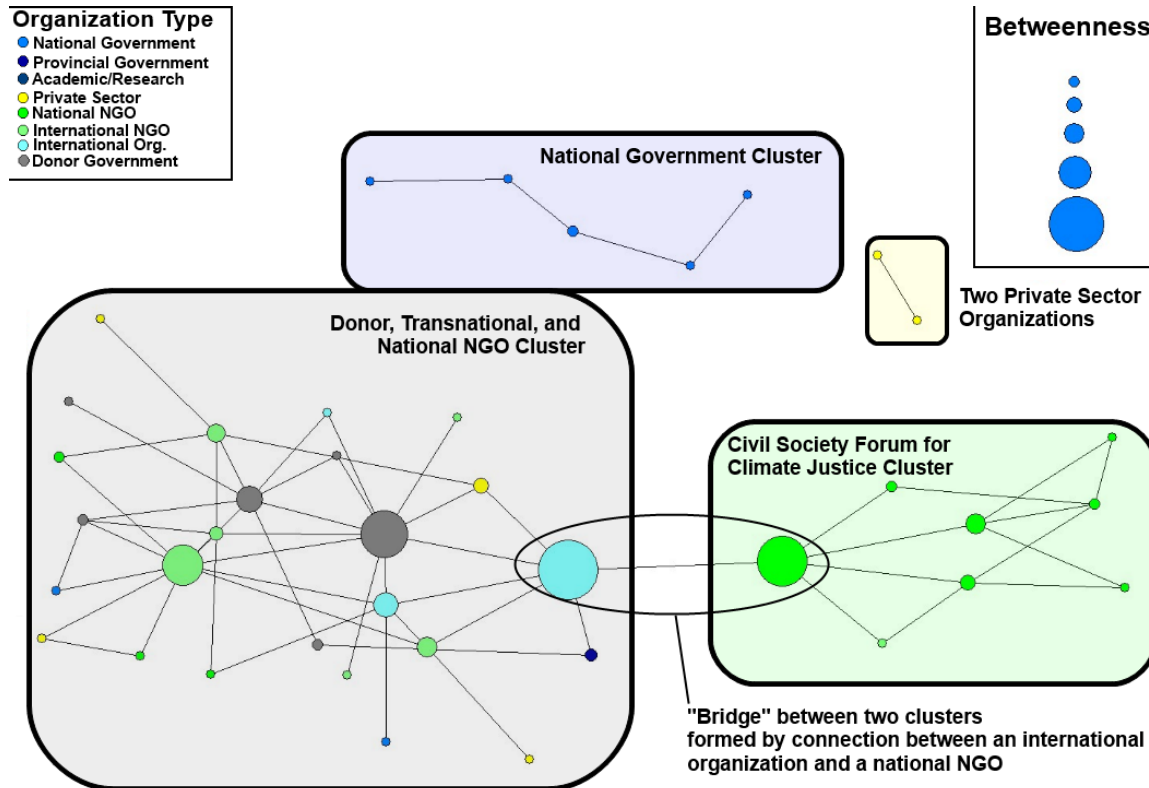
Moeliono, M. et al. 2013. Information Networks and Power: Confronting the 'wicked problem' of REDD+ in Indonesia. (under review in Ecology & Society).





# Indonesia

## Fragmentation in Information exchange network



4 distinct clusters

Self-referral strong in national government cluster

Only one bridge to civil society

Exchange of information very limited, actors of same types mainly speak together

There is no 'real' exchange

Moeliono, M. et al. 2013. Information Networks and Power: Confronting the 'wicked problem' of REDD+ in Indonesia. (under review in Ecology & Society).



# Conditions for REDD+ success (seven countries): Institutional setting

**TABLE 4** Truth table for the institutional setting conditions

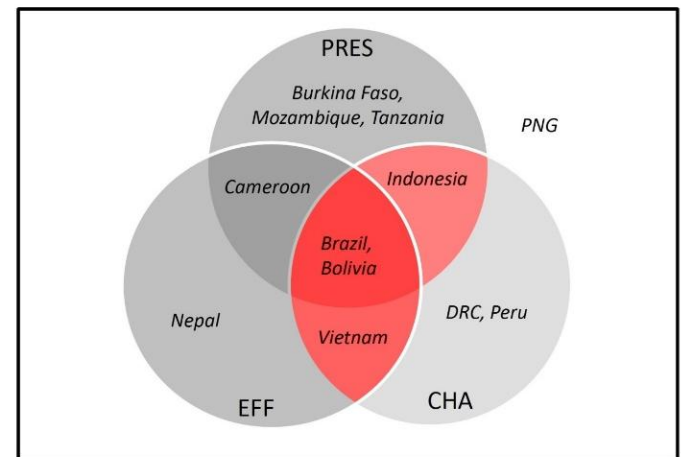
Conditions for the institutional setting			Outcome	Cases
PRES	EFF	CHA	REDD	Country
0	0	0	0	PNG
1	0	0	0	Burkina Faso, Mozambique, Tanzania
1	1	0	0	Cameroon
0	0	1	0	DRC, Peru
1	0	1	1	Indonesia
0	1	0	0	Nepal
0	1	1	1	Vietnam
1	1	1	C	Brazil (1), Bolivia (0)

Notes: 1, present; 0, absent; C, contradictory result.

PRES: Pressure from shortage of forest resources

CHA: Policy change already initiated

EFF: Key features of effective forest legislation,  
policy and governance

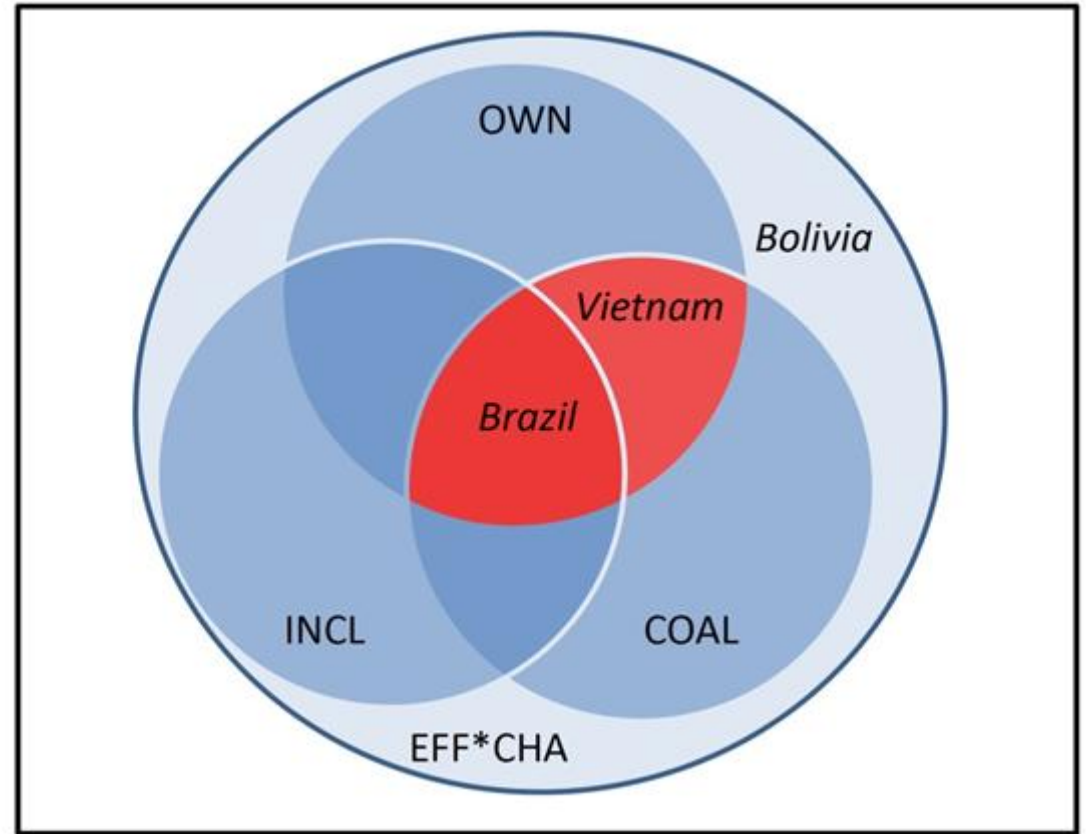


Kaisa Korhonen-Kurki, Jenniver Sehring, Maria Brockhaus & Monica di Gregorio (2013): Enabling factors for establishing REDD+ in a Context of weak governance. Climate Policy



# Conditions for REDD+ success (seven countries):

## Policy arena



- OWN: National ownership of REDD+ policy process
- COAL: Presence of strong coalitions for transformation
- INCL: Inclusive process

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





## tenure is essential

property rights over forests, trees and tree carbon must be clear

To allocate REDD+ incentives, it must be clear who has the right to benefit

If local people are secure in their rights, they are motivated to manage the land sustainably; if not:

They are less likely to make long-term investments

Some may even clear land to staking their claim

some may oppose REDD+ if they fear it means more outsiders taking their land

Clear tenure protects people's rights and livelihoods

can prevent a resource rush when the value of forests increases



**for villagers,  
livelihood comes first**



villagers at REDD+ project sites hope for improved income and livelihood, but are **worried REDD could harm them** or restrict their access to resources

**interest in generating income is greater** than in protecting forest for its own sake

REDD+ will be effective only if it can **compete economically** with other income- or rent-providing activities

REDD+ projects must **balance** forest protection with villagers' welfare concerns and protect agricultural livelihoods





# Capacity building and technology transfer are essential

**lack of capacity** hampers countries' efforts to fully engage in REDD+

only 19 of 99 developing countries have good capacity to implement a complete and accurate national monitoring system using IPCC guidelines

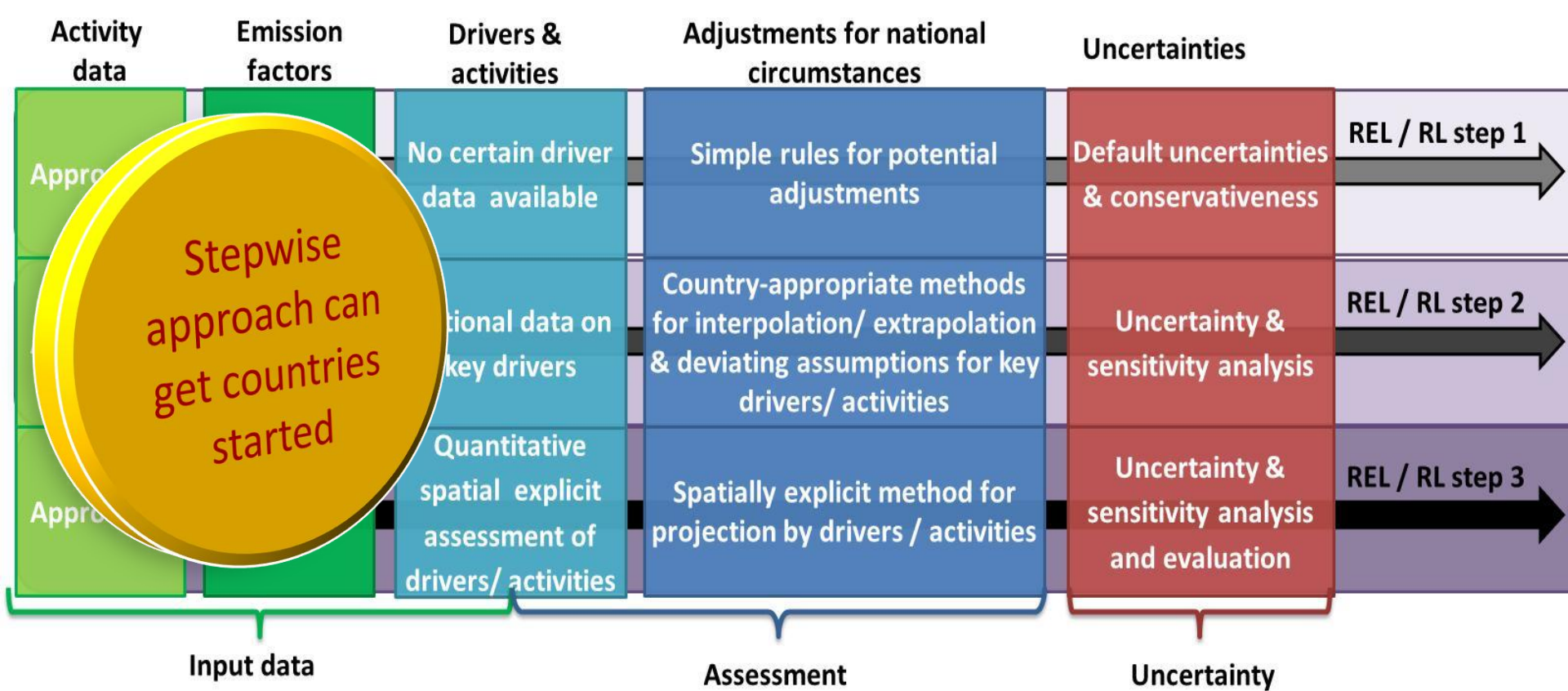
A survey of 17 REDD+ sites found low capacity for measuring carbon pools for using biomass equations

for efficient capacity building, **the top 19 countries should be prioritized** so they can get ready on time for REDD Phase 3

longer-term investments will be needed for countries with poorer capacity

a **stepwise approach** that builds on existing strengths and fills key gaps can be a model for capacity development





a stepwise approach to setting reference levels reflects different country circumstances

countries have different technical capacities and different levels of information on forest area and carbon stocks and emissions, and on drivers of deforestation

Starting at different levels facilitates broad participation of countries

the UNFCCC adopted this approach in 2011 as the reference emission level framework



# Moving forward: A “no regrets” agenda



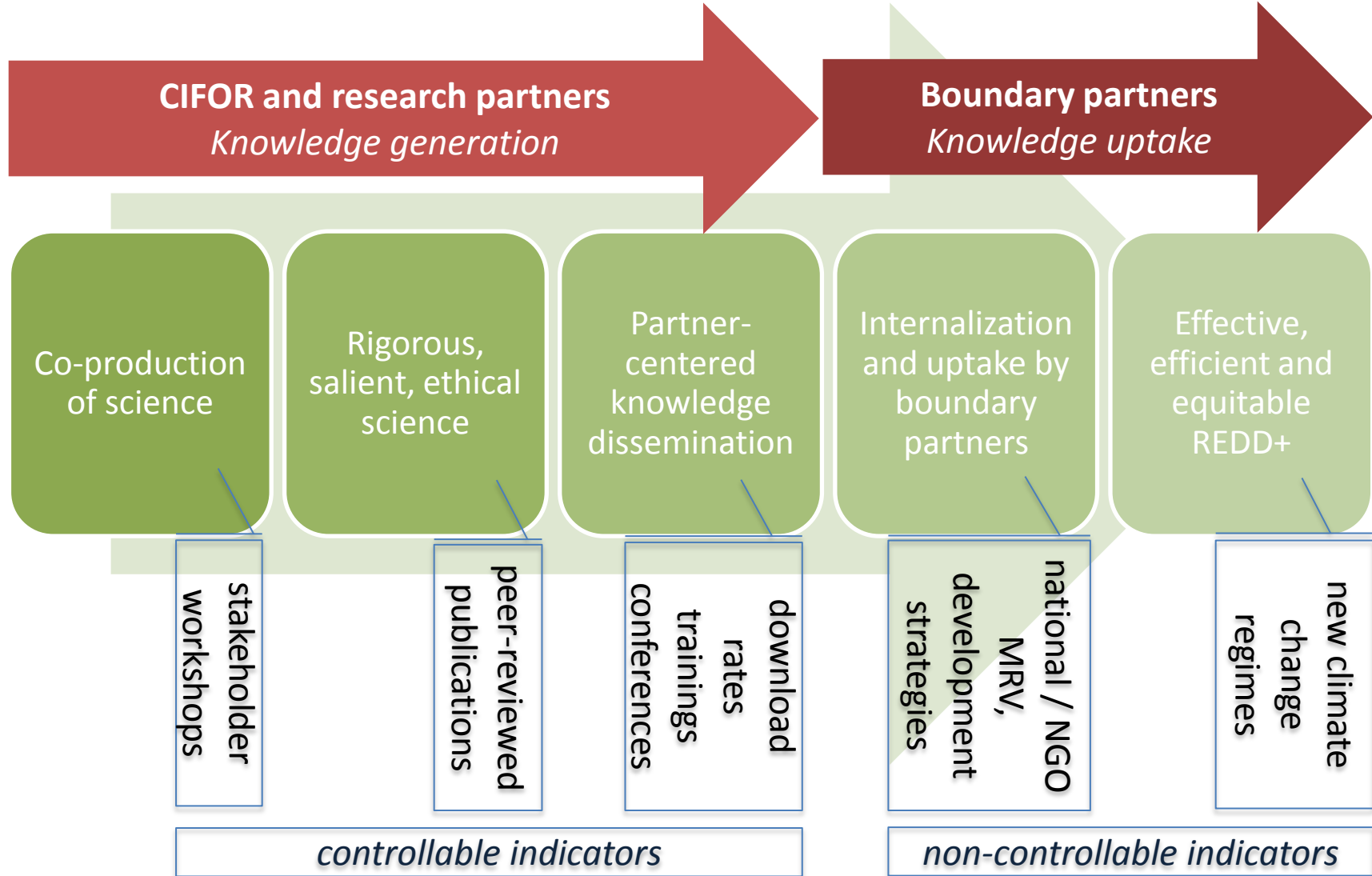
- Build **broad political support** and legitimacy for REDD+ framed as an *objective* rather than a *program*
- Invest in foundations for REDD+ success, such as filling **MRV information and capacity gaps**
- Focus on **policy changes that would be desirable** irrespective of climate objectives:
  - Clarify land tenure
  - Remove perverse agricultural subsidies
  - Strengthen rule of law, tenure and forest governance





# Forests, Trees and Agroforestry (FTA) Theme 4 (Climate Change)

*From Research to Impact: Theory of Change*





# Non-controllable indicators

- **national partners (Module 1)** providing high quality information for national REDD+ policy processes
- **research used by**
  - **Indonesia:** development of national strategy (scientist seconded to work on national REL), negotiations over the NOR-IND Lol
  - **Ethiopian REDD+ taskforce:** developing national MRV roadmap
  - **Common Market for Eastern and Southern Africa (COMESA)**
- integration of “**stepwise**” idea into UNFCCC decisions
- our expertise called upon by **national and sub-national governments and roundtables** (e.g. Mesa REDD Peru)
- solicitation to contribute to REDD+ efforts by **other international organizations** (e.g. RECOFTC, JRC)



# Major accomplishments 2011-2013 (I)

*activities, results and outcomes from CIAT, CIFOR and ICRAF research*

2004-2011  
deforestation rates in  
Amazonia  
(terra-I MRV project)

- decreased in Brazil, but increased outside Brazil
- Tools for low emissions development strategies developed

→ *incorporated into national (Panama) & local (Ucayali) planning processes*

LWES (LU Planning for  
Low Emission  
Development Strategy)  
(REALU project)

- helps planning for emissions reductions at landscape scale

→ *currently used by 30 of the 33 provinces of Indonesia*

A REDD readiness  
assessment framework  
(REALU project)

- A pioneer tool with six functions and 29 indicators

→ *guides for countries that want to pursue REDD+*

Key incentive schemes  
to reduce emissions  
(REALU project)

- REDD through conservation of forest carbon stocks
- REDD through Agroforestry Based Intensification

→ *solicited and being tested in four REALU landscapes*



# Major accomplishments 2011-2013 (II)

*activities, results and outcomes from CIAT, CIFOR and ICRAF research*

**Conditions for REDD+ success** (GCS-REDD project)

- quantitative comparative analysis in 7 countries: national ownership of REDD+ policy process; presence of strong coalitions for transformation; inclusion of all stakeholders

→ *used in national REDD policy development by Indonesia, Ethiopia, and COMESA*

**Stepwise approach to RELs & MRV** (GCS-REDD project)

- allows countries with different capacity levels to join REDD in an early stage

→ *integrated into UNFCCC decisions*

**Adaptation and mitigation synergies** (GCS REDD+ project)

- Comparative policy analysis

→ *contributing to UNFCCC Adaptation Board*

**Emission factors for peatlands** (SWAMP project)

- network of 200 scientists in 21 countries

→ *used in IPCC peatlands guidelines*



Celebrate 20 years  
of forestry research

CIFOR's 20<sup>th</sup> anniversary



## Thinking beyond the canopy

Center for International Forestry Research



CIFOR advances human wellbeing, environmental conservation and equity by conducting research to inform policies and practices that affect forests in developing countries. CIFOR is one of 15 centres within the Consultative Group on International Agricultural Research (CGIAR). CIFOR's headquarters are in Bogor, Indonesia. It also has offices in Asia, Africa and South America.



[www.cifor.cgiar.org](http://www.cifor.cgiar.org)

[www.ForestsClimateChange.org](http://www.ForestsClimateChange.org)