

Can PES secure livelihoods and ecosystems?

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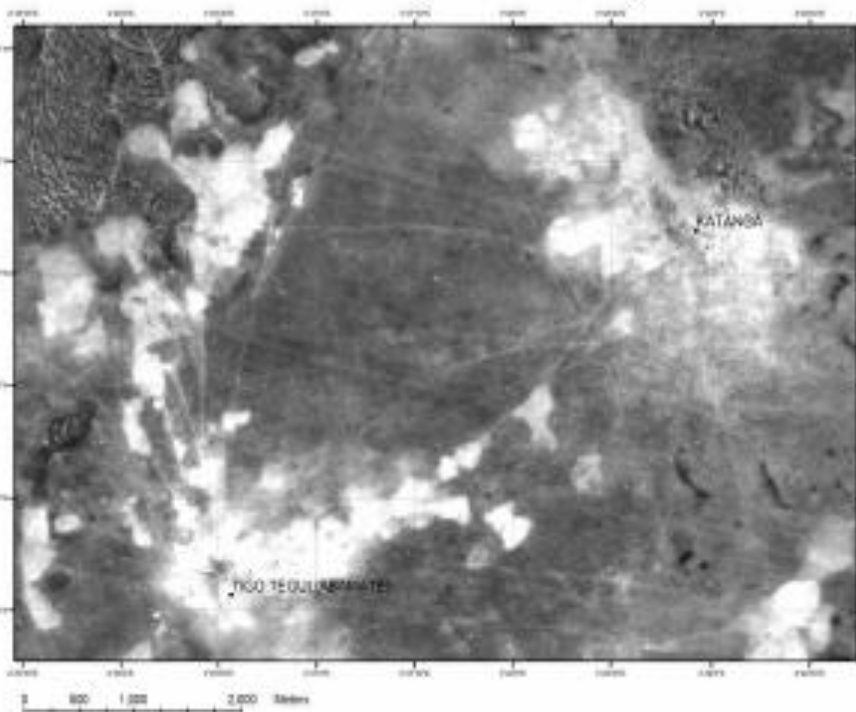
*Based on material provided by ICRAF's ASB,
landscape and PES teams*

Key points

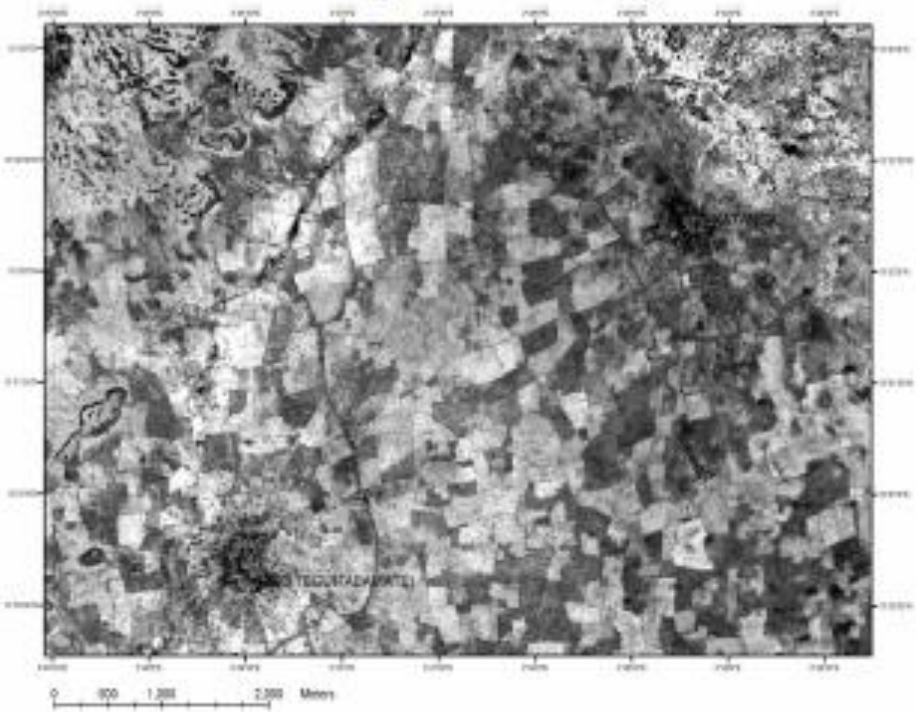
- ✿ Payments can work, co-investment often works better
- ✿ Markets are part of the solution, not the whole solution
- ✿ Put local communities squarely in the centre of all initiatives
- ✿ Solutions need to be sensitive to nested scales – from plot through landscape to continent
- ✿ Considering the whole system is the only guarantee

Change is rapid and pervasive

W. Africa 1966 – pastoral system

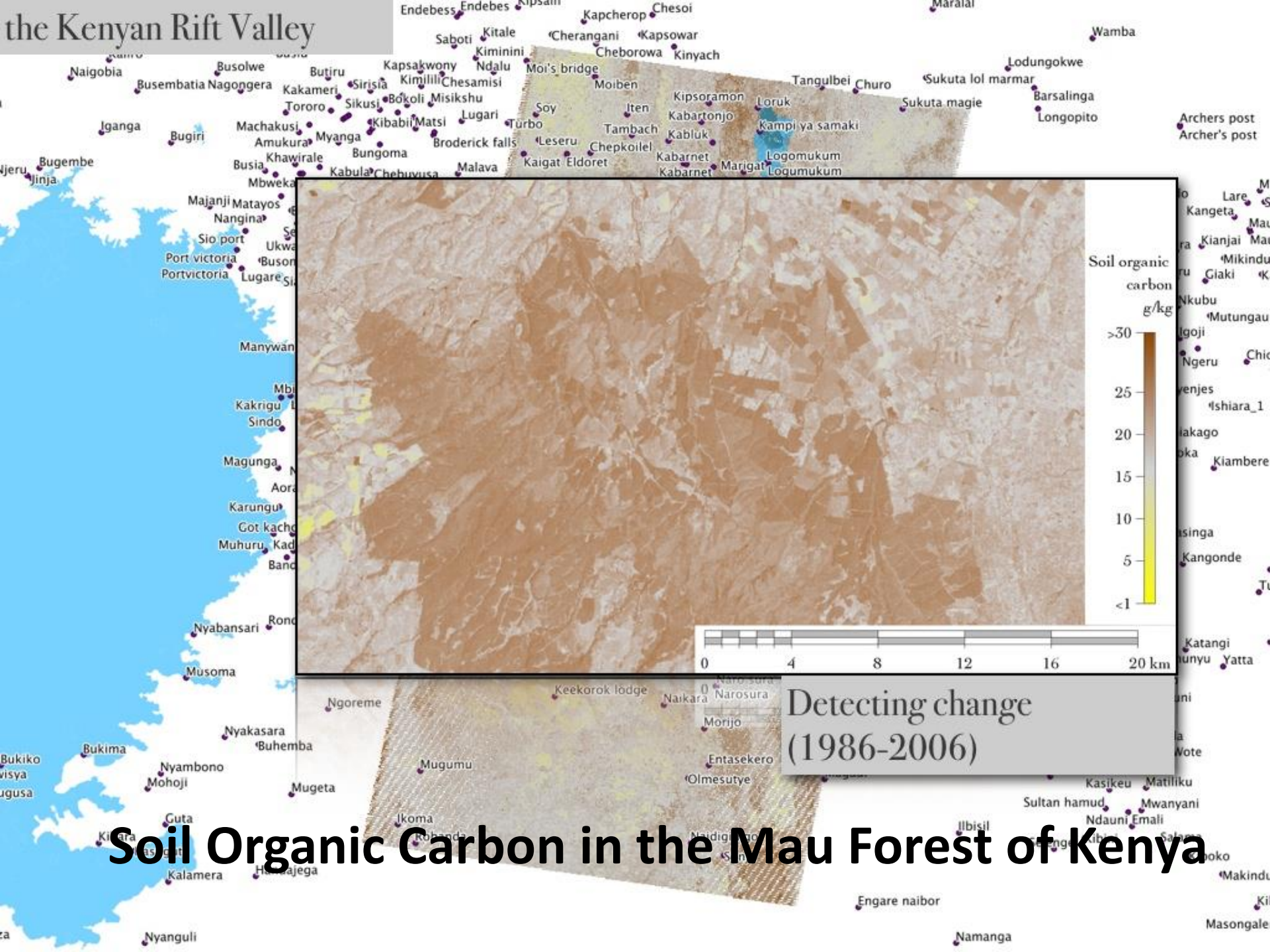


2004 – crop-livestock system

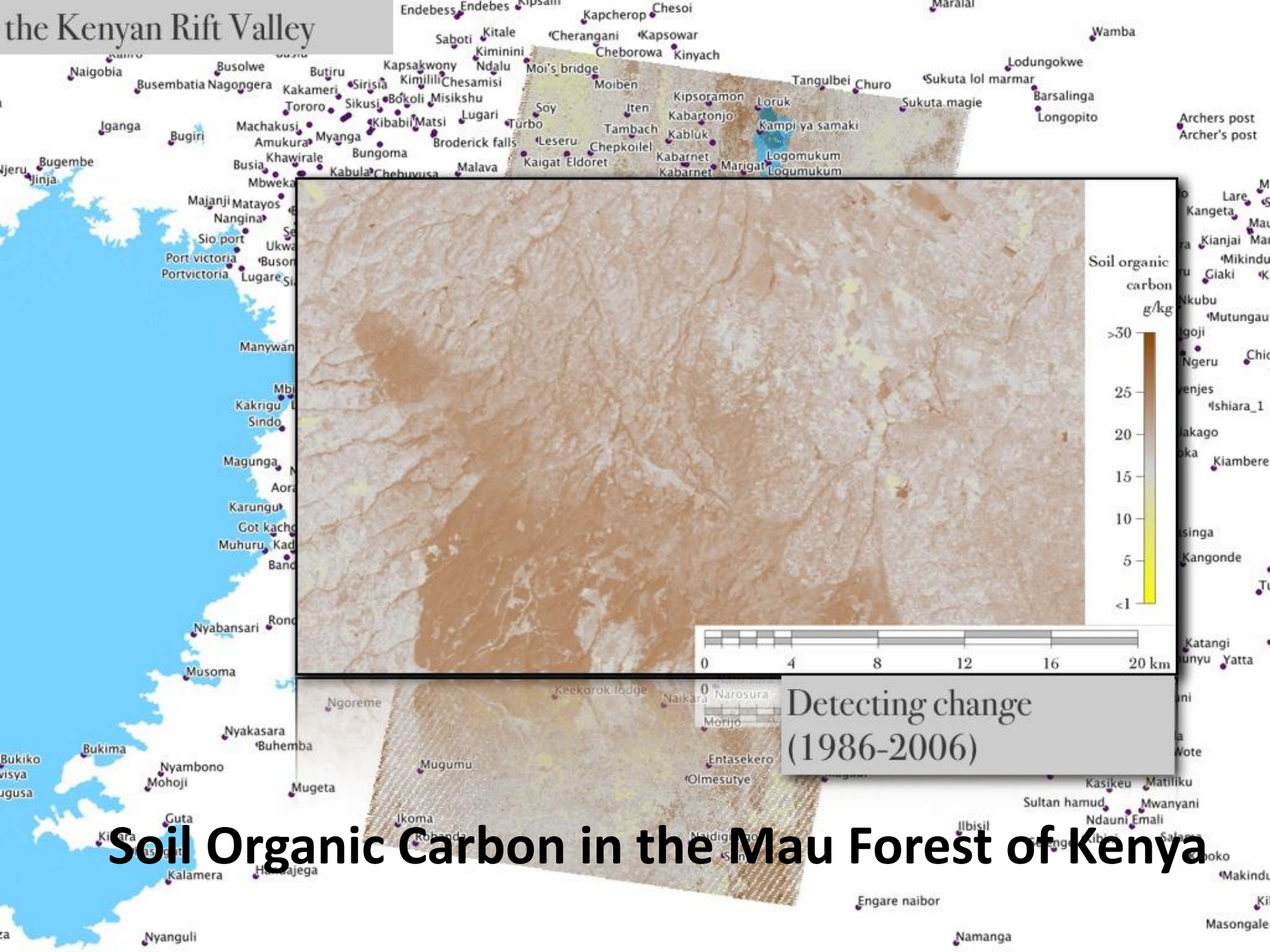


Herrero et al 2009

the Kenyan Rift Valley

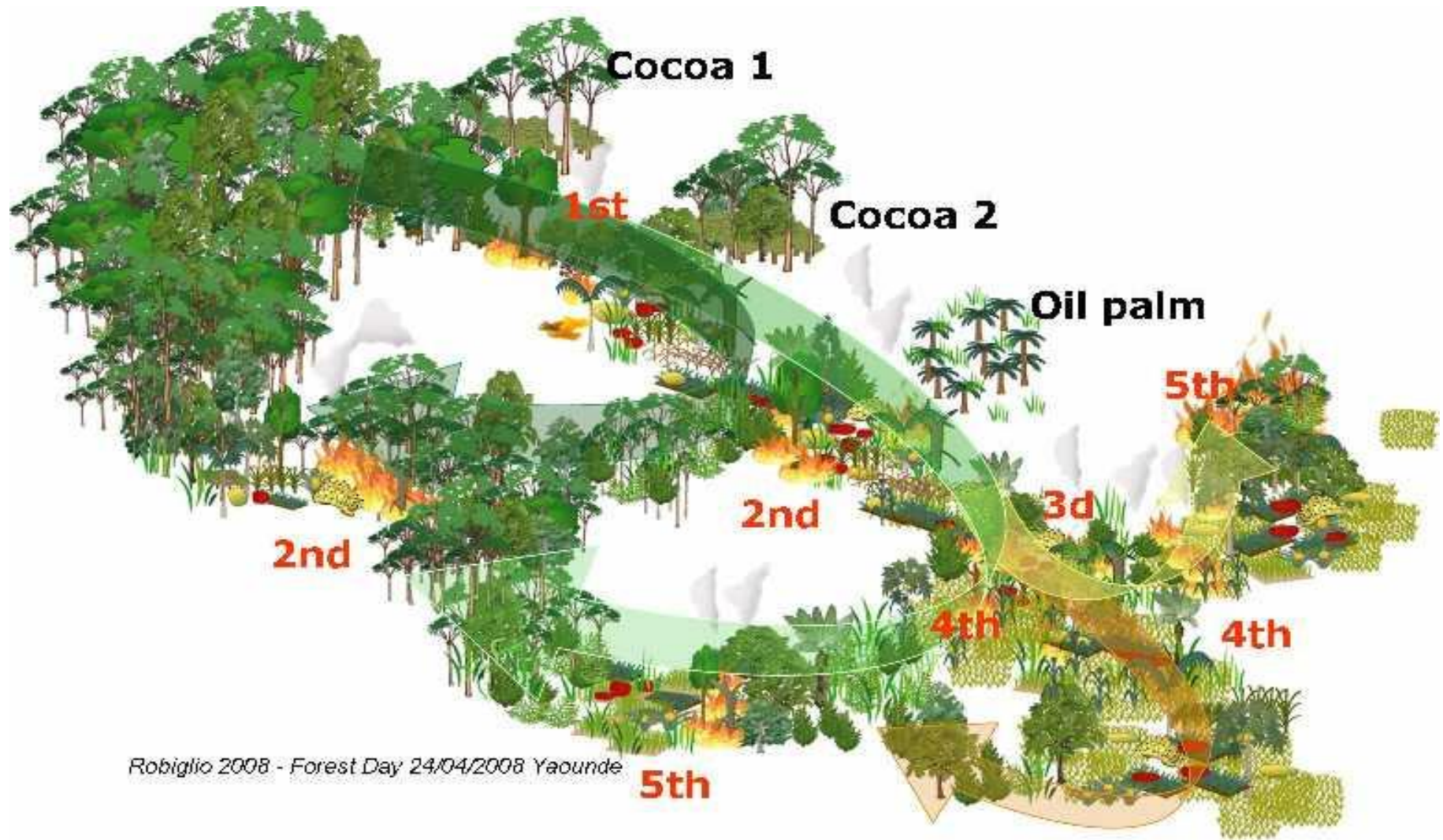


the Kenyan Rift Valley



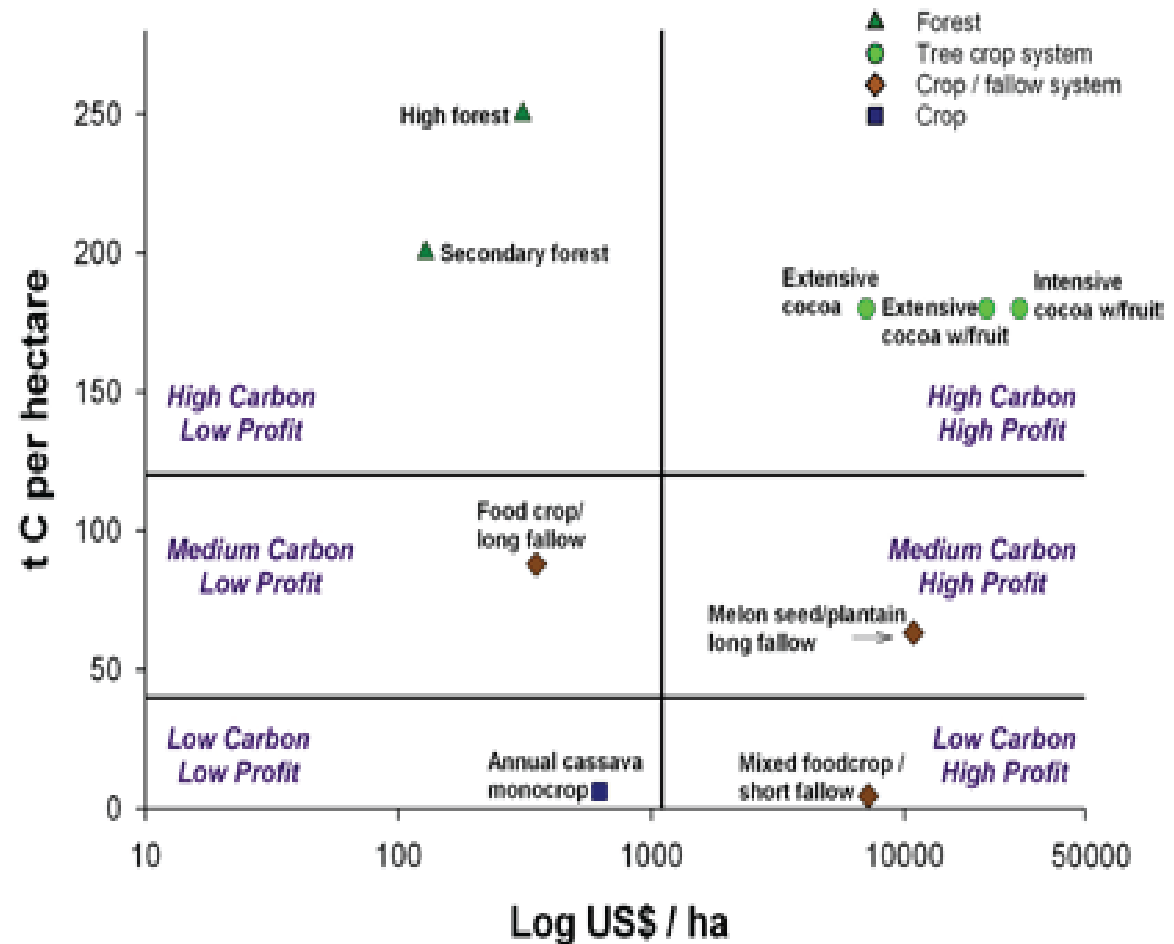
Soil Organic Carbon in the Mau Forest of Kenya

Agrarian dynamics: stages & trajectories



Agriculture and other uses have to be seen as part of a Landscape

🌿 Practices and activities will be part of landscapes and compete against other land uses. Hence trade-offs and synergies need to be understood.



Mosaic Landscapes in Indonesia and Kenya: The dominant reality



What constitutes Landscape Approaches?

🌳 Heterogeneity (Mosaic of Landuses)

🌳 Integration

- Synergies, trade-offs
- Multiple sectors, participants
- CSA vs REDD vs NAMA vs ...
- Multiple practices
- Mitigation and adaptation

🌳 Scale

- Appropriate Scale?
- Multiple scales (3 nested scales)
- What problem?

➡ Why?

🌳 For Analyzing and Understanding REDD+

➡

🌳 For Planning and Implementing REDD+, CSA and adaptation

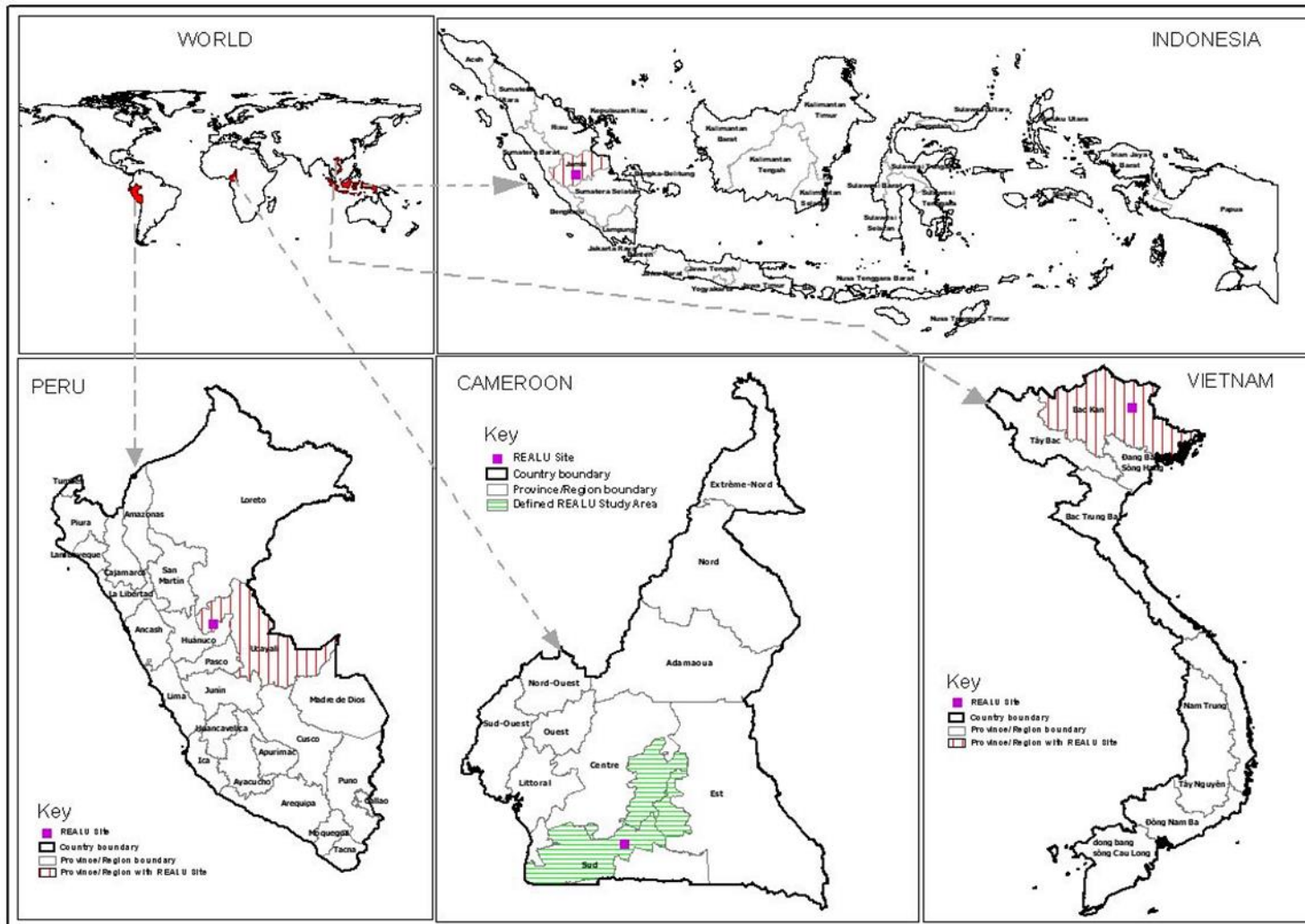
🌳 Most experience

- Geography
- Biodiversity conservation
- Water management....

➡

ASB Partnership: Landscape Approach

Where we work:



PES concept and its evolution



2005:

- Introduction of strict and normative definition of PES:
 - voluntary scheme
 - involving at least one ES buyer and one seller
 - with conditionality: only and if only the seller provides ES provision as stated in a contractual agreement with the buyer.
- Emphasizing in **effectiveness and efficiency of PES** in providing ES
- **Excluding the poverty alleviation** issue (because it reduces the effectiveness of the scheme)
- Monetizing ES
 - Giving **monetary value to ES**
 - **Transferring some money** from ES beneficiaries (which assumed having willingness and ability to pay) to ES providers for offsetting their full opportunity and transaction costs.

Research focus of PRESA and RUPES



1. Action research to generate evidence supporting agreements mainly focusing on payments for watershed functions – flow regulation, buffering, sediment reduction



3. Inform policy on extent to which PES contributes to sustainable natural resource management



2. Facilitate negotiation among ES sellers, buyers and policy makers



1

Broad paradigms of PES

Preconditions for application of the PES concept with strict conditionality are not met in many developing countries' contexts and a wider PES interpretation is needed.

**Outcome based payments
can shift risk to the poor -**

Method:

- Implementing and analyzing action research and learning sites in Asia
- Observing the implementation of PES elsewhere



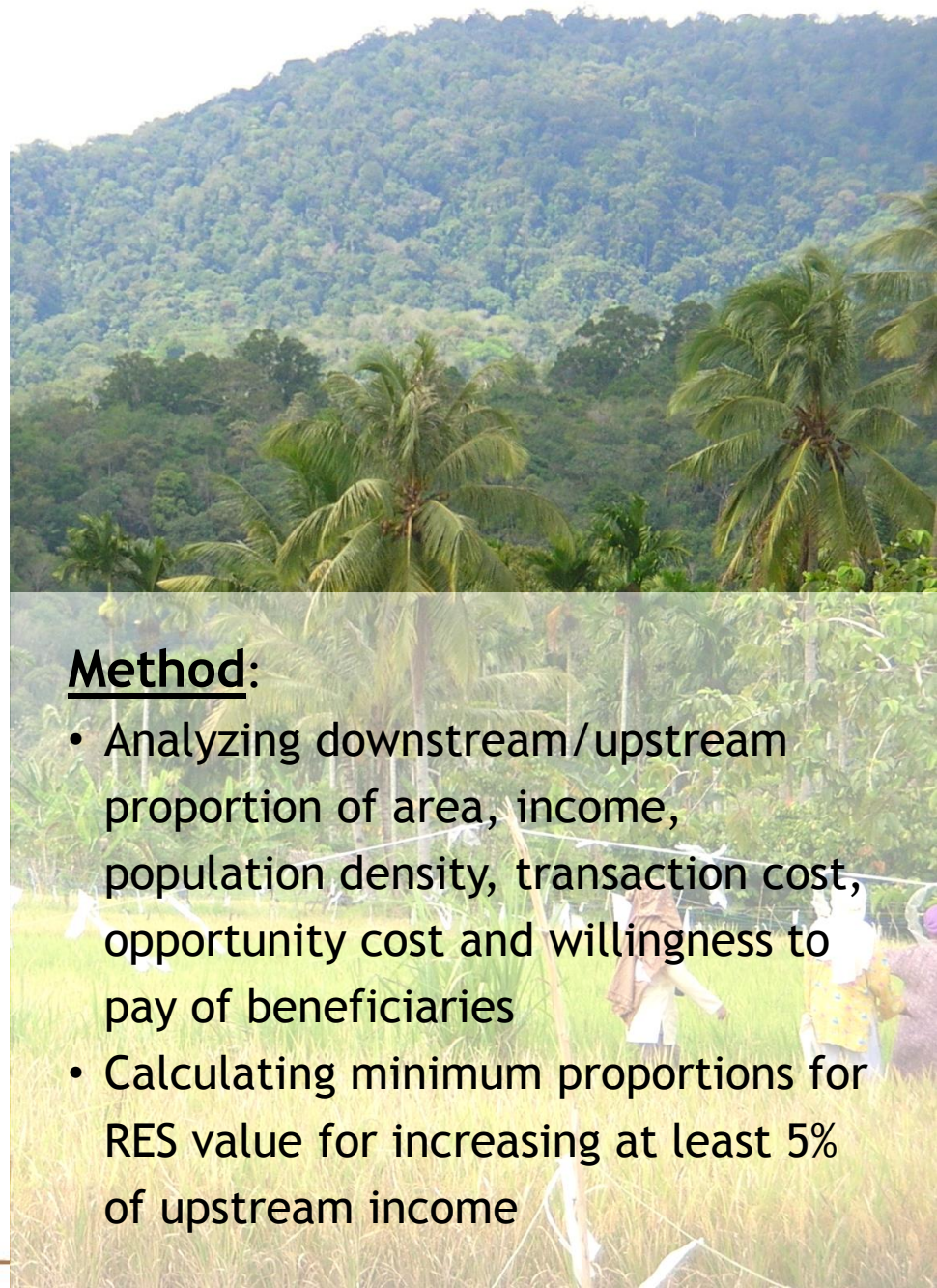
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Balance of fairness and efficiency in PES scoping and design

Only under **specific circumstances**, will *cash incentives* from PES contribute *substantially* to increase *disposable income* and alleviate poverty of ES providers.

Method:

- Analyzing downstream/upstream proportion of area, income, population density, transaction cost, opportunity cost and willingness to pay of beneficiaries
- Calculating minimum proportions for RES value for increasing at least 5% of upstream income



3

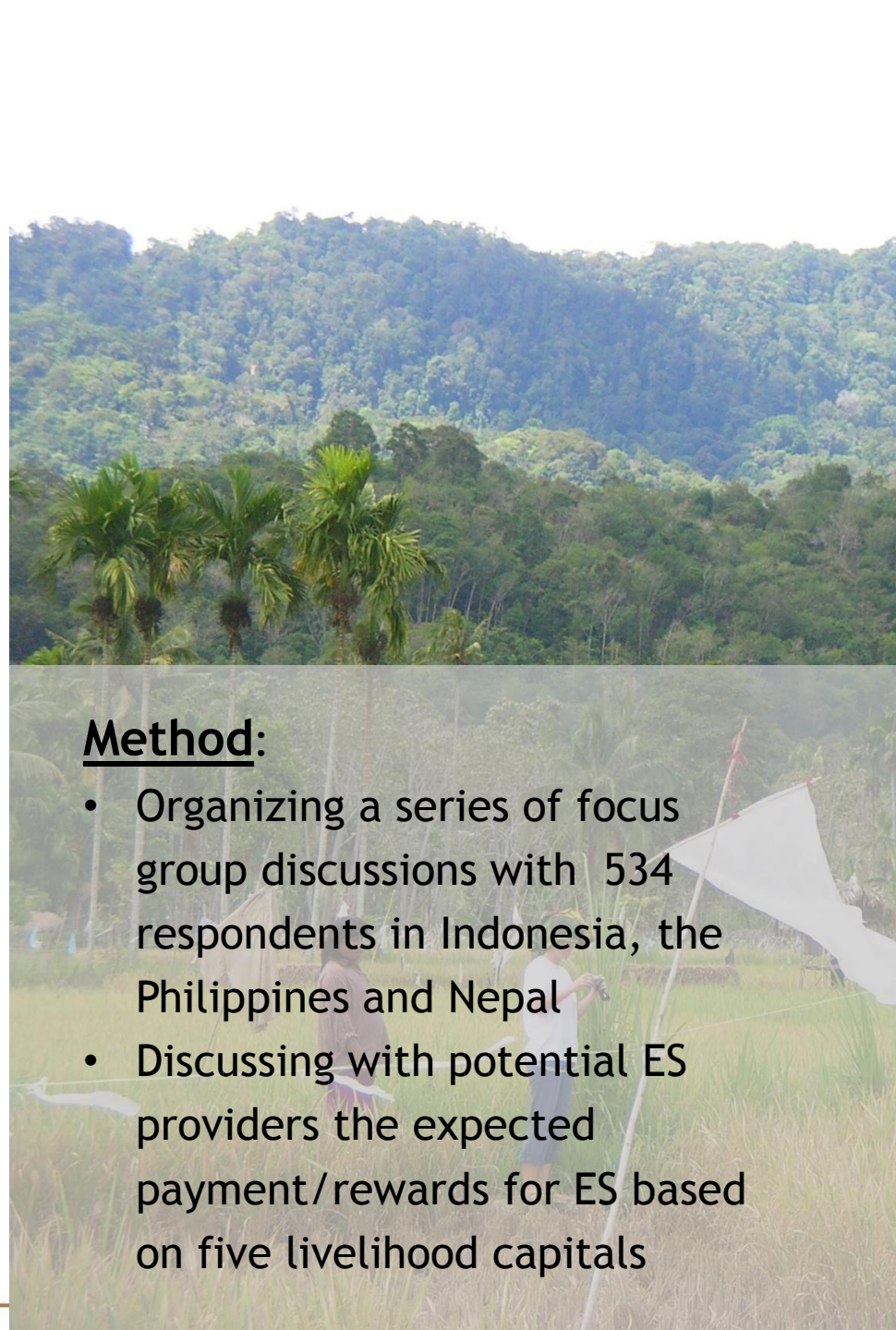
Balance of fairness and efficiency in PES scoping and design

Indirect non-financial benefit at community scale contributes to reducing poverty or a common-goods PES design (Pascual et al. 2010)

Bakun HEP royalty benefit-transfer to local indigenous group
Kulekhani Watershed - 12% Government royalty collected from Hydropower generation channeled back to the district

Method:

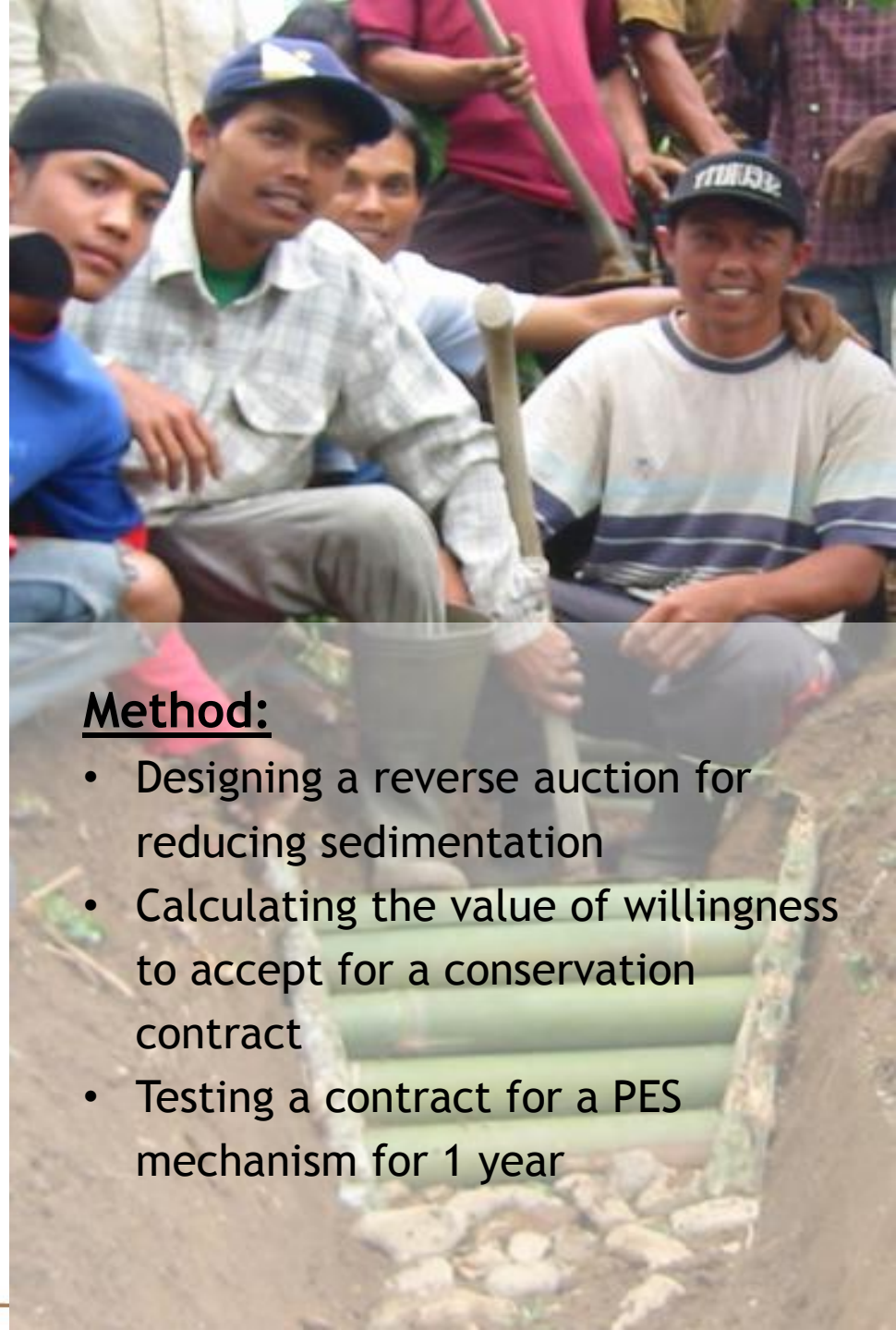
- Organizing a series of focus group discussions with 534 respondents in Indonesia, the Philippines and Nepal
- Discussing with potential ES providers the expected payment/rewards for ES based on five livelihood capitals



4

Balance of fairness and efficiency in PES scoping and design

- A PES procurement contract auction increases **efficiency of PES contract allocation**.
- **Specific elements** of procurement auction have to be designed and administered for **fairness** of farmers with *low formal education*, prone to *social conflicts* and *influenced by power structures* within their **community**



Method:

- Designing a reverse auction for reducing sedimentation
- Calculating the value of willingness to accept for a conservation contract
- Testing a contract for a PES mechanism for 1 year

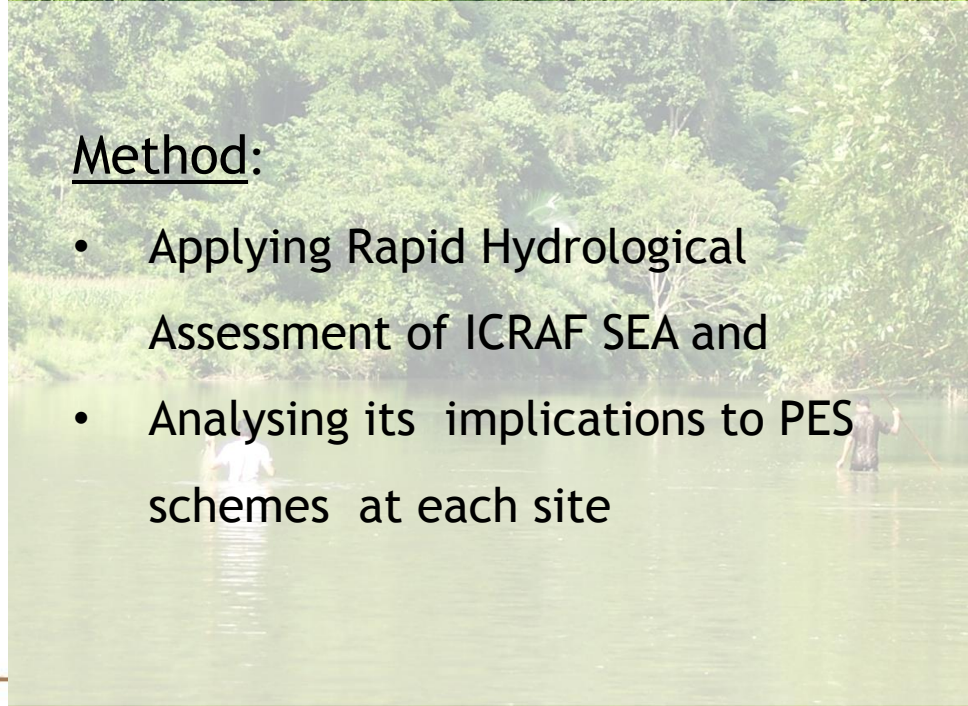
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Balance of fairness and efficiency in PES scoping and design

Reducing discrepancies and improving synergies of ecological knowledge of all actors in PES balance efficiency and fairness of a PES scheme.

Method:

- Applying Rapid Hydrological Assessment of ICRAF SEA and
- Analysing its implications to PES schemes at each site



Risks of PES not being pro-poor

🌳 **PRICE SETTING:** opportunity costs underestimated in Willingness to Accept auctions

🌳 **LOW WILLINGNESS TO PAY**

- Low private sector coverage
- High policy-driven levies and fees
- Limited legal mandate

🌳 **HIGH TRANSACTION COSTS**

Principles of Fairness and Efficiency

Payment, Compensation or Co-investment?

2010: case studies showing the application of strict conditionality of PES and monetization of ES **not working**

- Lack of money available for conservation fund
- Paying local communities undermining social norms
- Social jealousy of non-participants - no multiplier effects of the payment
- Lack of scientific skills, institutional capacities, data for ES monitoring
- Is the strict definition of PES still relevant?
- A '*PES-like*' term in existence
- Should we include fairness as an additional principle to PES efficiency?
- How to respond it positively?



Balancing act is needed

ES Provisions
and
Environmental
Goal

Efficiency



Fairness



Pro-poor design
and benefits
Free and prior
informed consent



Insights from PES Research

Commoditized Environmental Services

- Direct interaction ES providers & beneficiaries
- Recurrent monetary payments

Rewards are too small and a broader outlook of PES mechanisms is necessary

Co-Investment in (landscape) Stewardship

- A flexible contract with broad sanctions
- Entrust resource management to local communities
- Based on management plan high social capital

Broader paradigms of Payment for Environmental Services

CES: Commoditized Environmental Services

- Direct interaction ES providers & beneficiaries
- Recurrent monetary payments: supply and demand
- No explicit poverty target
- Actual ES delivery & direct marketability:
- Conditionality Level I

COS: Compensating for Opportunities Skipped

- Paying for accepting restrictions
- Achievement of a condition of (agro)-ecosystem or effort (or restrictions in input use).
- Poverty target added with certain conditions
- Conditionality Level II/III

CIS: Co-Investment in (landscape) Stewardship

- Entrust the local resource management
- Full trust of management plan & local monitoring with high social capital level
- A flexible contract, broad sanctions and a monitoring requirement
- Conditionality Level IV

'Real' ES,
recurrent

Proxies,
recurrent

Plans/ACM,
investment

Way forward

- 🌿 Minimum set of Indicators and metrics for multi-functional landscapes (productivity and functional eco-efficiency)
- 🌿 Balancing design and emergent properties in sustainable landscapes
- 🌿 Enhancing Investment mechanisms for multi-functionality (from local people through private sector investments, PES bundling and stacking as options, sustained government investments)

Conclusions

- 🌳 Agroforestry systems can deliver a multitude of benefits (market and non market) simultaneously
- 🌳 Change processes need to empower the people most affected if they are to be sustainable
- 🌳 We must embrace complexity and diversity



**World
Agroforestry
Centre**

Thank you!



Partnership for the
Tropical Forest
Margins



Centro Internacional de Agricultura Tropical
International Center for Tropical Agriculture
Consultative Group on International Agricultural Research



WWW.ASB.CGIAR.ORG



Who we are

- 🌳 The World Agroforestry Centre (ICRAF) is a CGIAR Consortium Research Centre
- 🌳 **Vision:** rural transformation in the developing world using trees in agric. landscapes to improve smallholder households
- 🌳 **Mission:** Generate science-based knowledge about the diverse roles that trees play in agricultural landscapes, and to use its research to advance policies and practices, and their implementation, that benefit the poor and the environment

About ASB

What is ASB?

- Consortium of over 50 Institutions (International, Universities and National) created in 1994
- Research on Forest-Agriculture-Environment interactions along tropical forest margins


Goal

- To raise productivity and income of rural households in the humid tropics without increasing deforestation or undermining essential environmental services.


Research Programmes

- Landscape approaches to REDD+, Reducing Emissions from All Land Use- REALU
- Synergies between Mitigation & Adaptation for Rural Transformations 2-SMART
- Swiddens in Poverty Reduction, Climate and Environmental Services- SPACES

Agroforestry

 ***The inclusion of trees in farming systems and their management in rural landscapes to enhance productivity, profitability, diversity and ecosystem sustainability.***

- *A dynamic, ecologically based, natural resource management system that, through integration of trees on farms and in the agricultural landscape, diversifies and sustains production and builds social institutions.*

 ***Agroforestation*** is the increasing use of trees on farm and recognition of farmers in the forest and as shapers of landscapes.

Security of tenure

- ✦ High standards of land use, investment and returns, and resilience



Lake Basin, Kenya. Mixed agriculture with fruit trees and smallholder tea

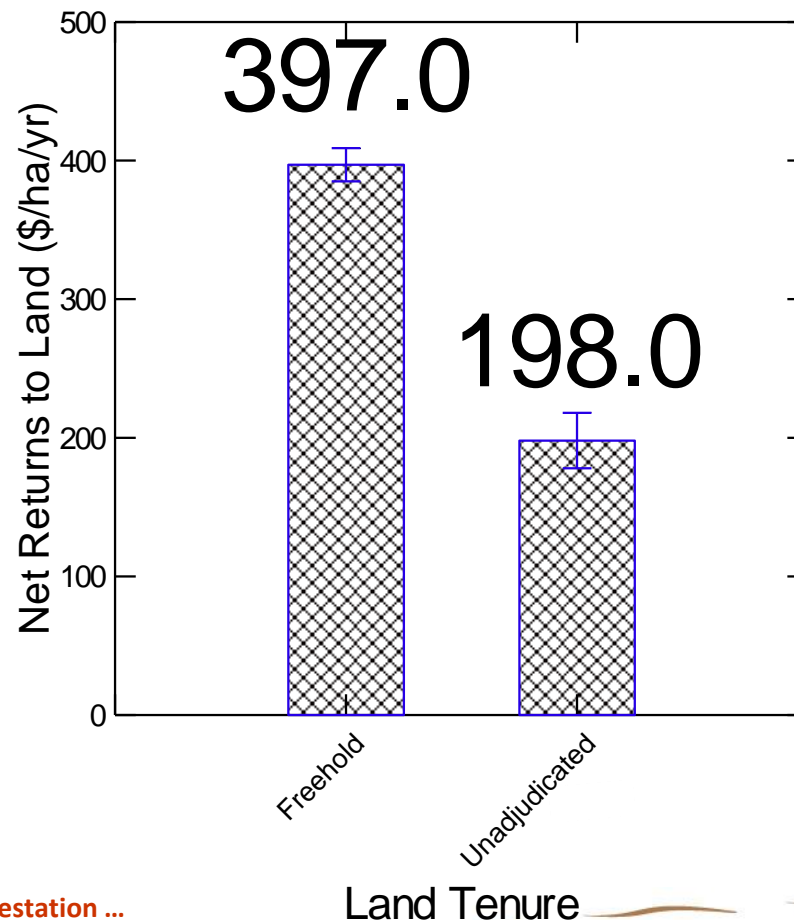
Source: Ecosystems Ltd

- ✦ Lower standards of land use, investment and returns, and resilience



There are strong economic gains from secure, (freehold) tenure

(Net Returns as \$ per hectare per year)



PRESA sites

