

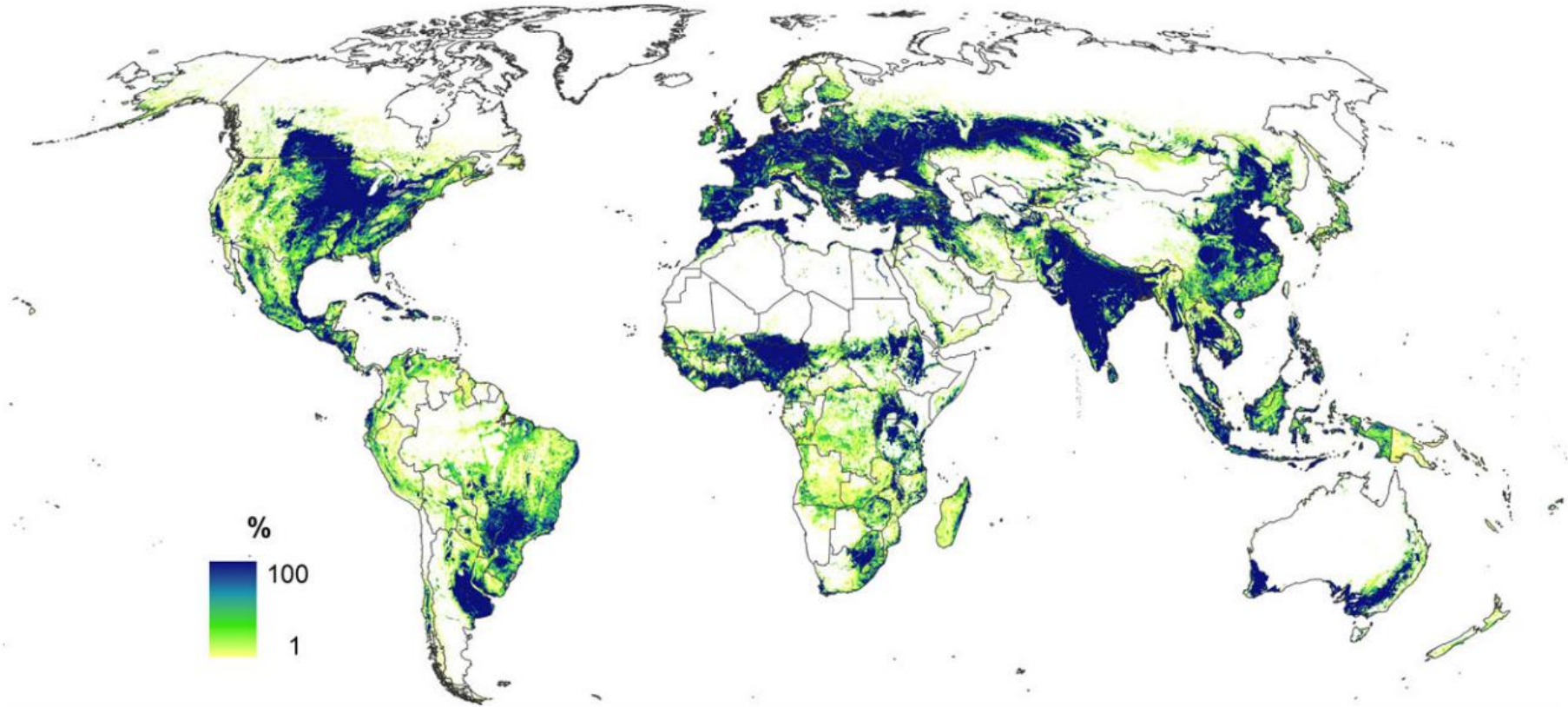


LANDSCAPE ECONOMICS

Sten Nilsson

**Landscape Approaches in Practice
Umeå, 17 March, 2015**

THE IIASA-IFPRI CROPLAND MAP



Source: Fritz, S. et.al, Mapping global cropland and field size, 2015.

PRODUCE MORE FROM LESS – AND EVEN LESS

- Assessments of global croplands vary between 1.22 and 1.71 billion ha (40%)
- Assessments of agriculture land vary even more
- New IIASA-IFPRI assessment of cropland: crowd-sourced and fusion of data – WIKI platform
- Less available land for agriculture and bio-energy expansion (~ -50% = 30-80% less for diff. scenarios) compared to earlier studies

THE 10 PRINCIPLES

by Sayer et al. (2013)

The 10 principles are only part of the total process

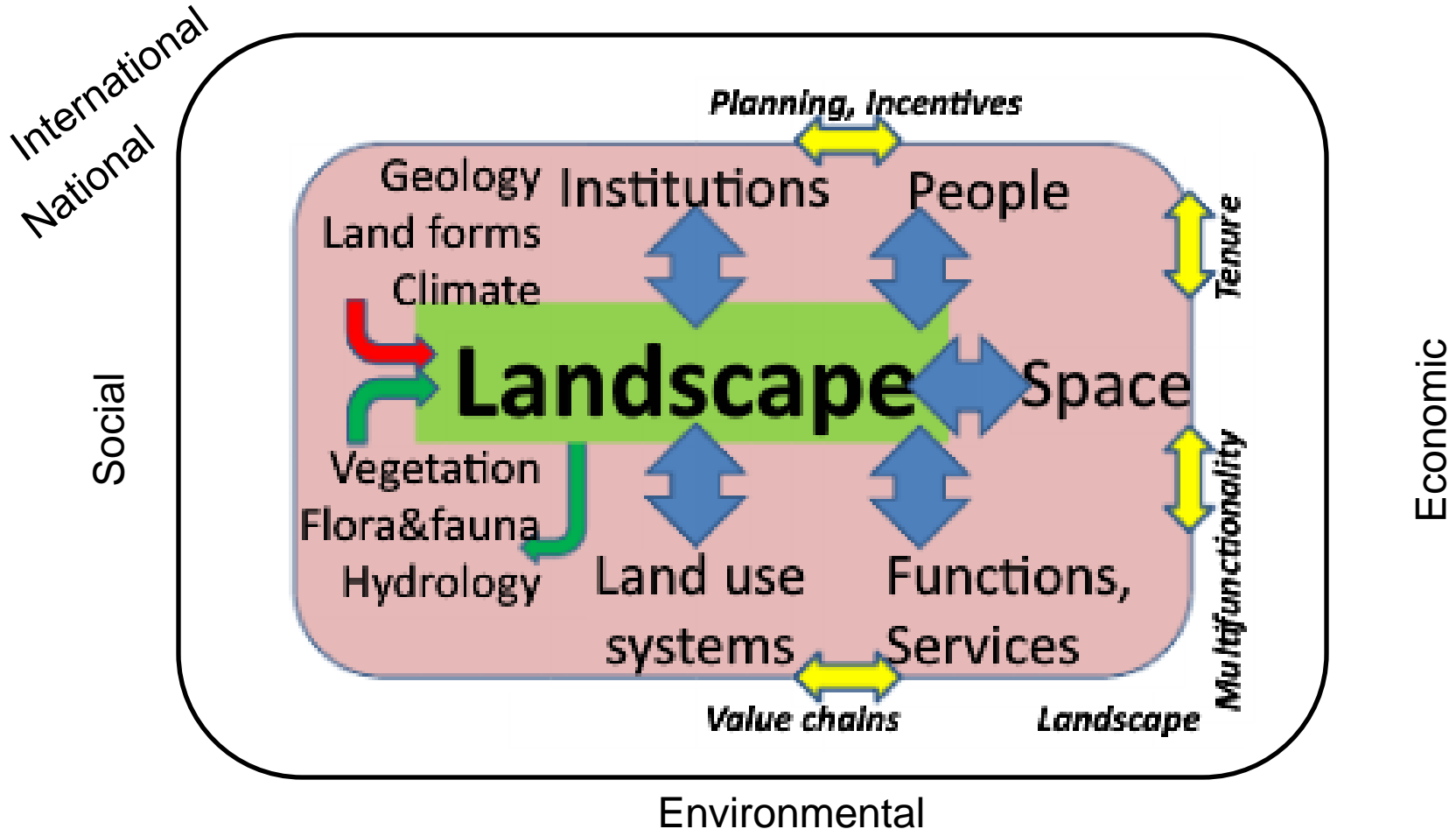
Establishment of
stakeholder
platform

Establishment of
planning, capacity
building,
implementation
incentives

Shifting the land
use among actors

Different processes and funding mechanisms

SYSTEMS THINKING WITH FEEDBACK LOOPS AND MULTIFUNCTIONALITY THROUGH NEGOTIATION



VALUATION OF LANDSCAPES - 1

- *Evaluation*: scoring and rating the quality of landscapes. *Valuation*: assigning an economic (monetary) value to a landscape
- Long period of development of methods for evaluation and valuation of landscapes. But little consensus on why any landscape would be rated as better than any other.
- Nor do the methods provide decision makers with relevant policies for decisions on trade offs and impacts of landscapes
- Landscape research lacks quantitative tools for any relevant value assessment

VALUATION OF LANDSCAPES - 2

- Non-use values constitute significant part of landscape values
- Questionable whether any economic procedure can really measure non-use values
- Economic function of landscapes: *flow of products, services, and cash*. Ecological functions: *stocks, conditions, qualities and non-use values*. Social functions: *conditions, qualities and non-use values*
- Different *values, scales and time horizons*

VALUATION OF LANDSCAPES - 3

- Quantification of values is generally much more difficult than cost estimation
- Instead of economic and ecological criterion we should probably use what the landscape contribute toward achieving societal goals and objectives

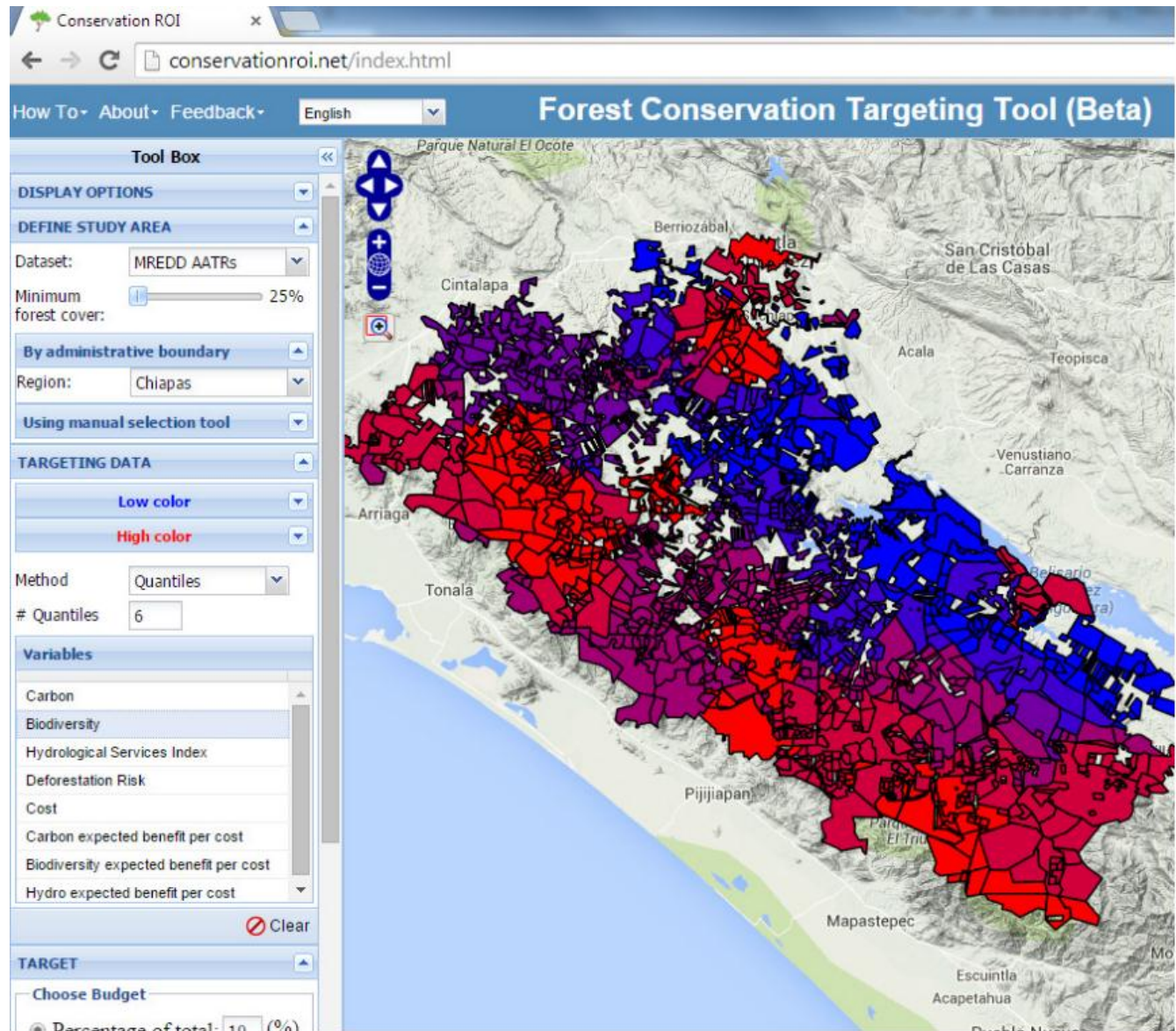
CASE STUDIES - 1

- Some 500 landscape developments investigated in Africa and Latin America but only 87 in Africa and 104 in LA could be used for evaluation/valuation
- Only possible to identify whether or not investments and outcomes occurred but not the level of investments or magnitude of outcome
- Changes not reported against any baselines
- The stakeholders take more diverse objectives, wider investments, to some degree achieved goals and broader range of outcomes as an income that multi-functionality of landscapes bear fruit

CASE STUDIES - 2

- *It remains to be demonstrated that the benefits of integrated landscapes outweigh their transaction costs and whether the magnitude of benefits they provide to diverse stakeholders is greater than single sector strategies. Land sparing versus land sharing approach (Hart et al., 2014)*
- *The desired human, social and institutional outcomes will take several years to achieve underpinning the need for long-term support and funding*

RFF TARGETING TOOL FOR RETURN ON CONSERVATION INVESTMENTS



Source:
RESOURCES,
Nr. 188, 2015.

STARBUCKS C.A.F.E. PRACTICES (2008-2010 PURPOSES) - 1

<h2>PEOPLE</h2> <p>Social</p>	<h2>PLANET</h2> <p>Environmental</p>	<h2>PRODUCT</h2> <p>Economic</p>
<p>Purpose</p> <p>Ensure fair and non-discriminatory hiring and employment policies. Protect employees from workplace hazards. Conform to national laws as well as to international conventions related to occupational health, safety and living conditions. Strive to improve the quality of life for coffee farmers and workers.</p>	<p>Purpose</p> <p>Ensure that all coffee is grown and processed in a manner that minimizes environmental impacts. Many of the coffee-growing regions overlap with areas rich in biodiversity—called Key Biodiversity Areas. By encouraging sustainable farming, Starbucks helps to alleviate pressures on these valuable habitats.</p>	<p>Purpose</p> <p>Ensure that all coffee sold to Starbucks meets our high quality standards. We strive to create a program that is financially accessible for small farmers and rewards all suppliers for ongoing improvement of social and environmental practices.</p>
<p>Criteria Verified</p> <ul style="list-style-type: none">  Wages  Benefits  Education  Medical Care  Living Conditions  Human Rights 	<p>Criteria Verified</p> <ul style="list-style-type: none">  Soil  Waste  Water Use and Conservation  Shade Canopy  Energy  Agro-Chemical Use  Wildlife 	<p>Pre-Requisite</p> <ul style="list-style-type: none">  Equitable Payments  Green Coffee Preparation  Receipts/Invoices  Cup Quality  Long-Term Viability  Farm Traceability

STARBUCKS C.A.F.E. PRACTICES (2008-2010 RESULTS) - 2



TYPES OF INTEGRATED LANDSCAPE INITIATIVES

National government-led, large multi-lateral donors

Sub-regional initiatives and platforms

Traditional, local or community-led

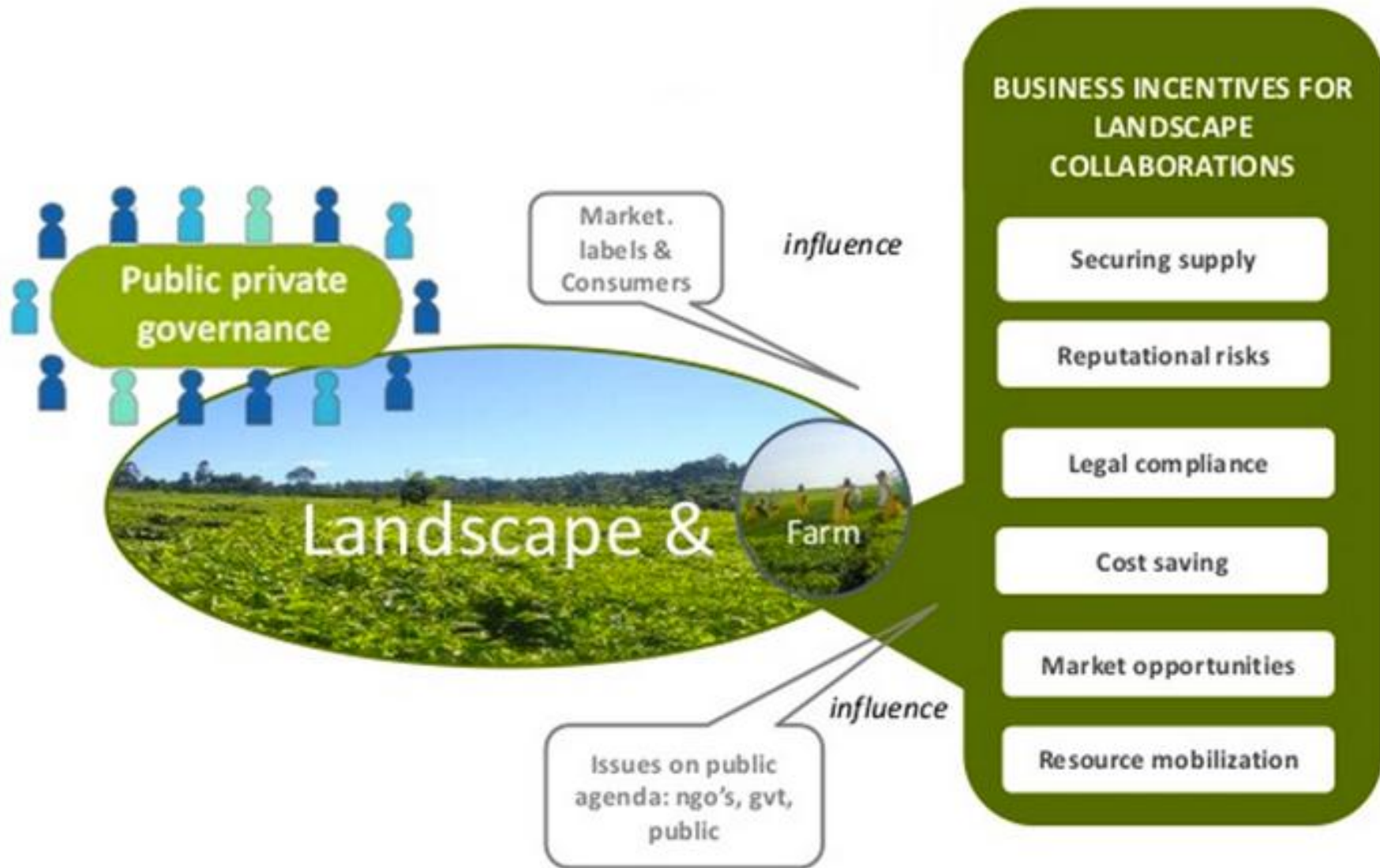
NGO-led, civil society organizations

Private sector-led (small-scale farmers to agri-business, forestry, mining)

INVESTMENTS TODAY

- In the LA case studies 87% of investments by donors and NGOs and in African case studies over 95%
- This will not generate sustainable landscapes. Long-term funding needed
- Governmental and NGOs are largely sector siloed in funding
- There are value investors, social investors, conservation investors but hardly any *landscape investors*
- Unilever, Nestle, Cargill, Starbuck, Mars, Tesco, McDonalds, SABMiller, Walmart, etc. are investing in landscapes – secure supply chains

INCENTIVES FOR BUSINESS TO WORK AT A LANDSCAPE LEVEL



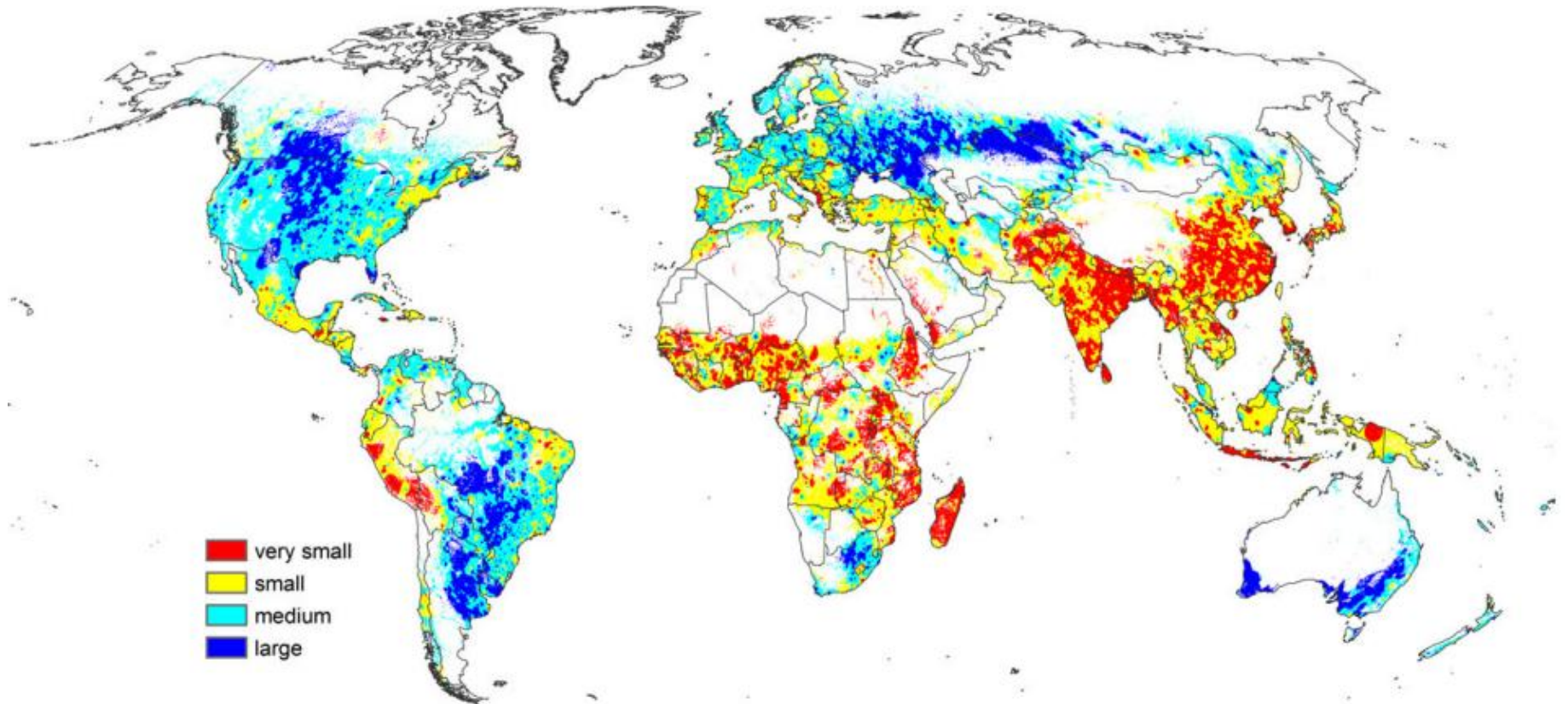
INVESTMENT BARRIERS

- Lack of benefits and value assessments
- Investment risks are high compared to low return potential
- Investments in landscapes are piecemeal, which is too small for existing conventional financing institutions
- Insecure tenure, customary rights, institutional settings, technical capacities, competencies, data, models, lack of investment standards, lack of business capacity, lack of value chains
- Conflicting goals of investors and right-holders
- Isolation from: consumers and markets: financial and business providers: and policy makers
- Seasonality
- Conflicting legislation and rules

INVESTMENTS TOMORROW

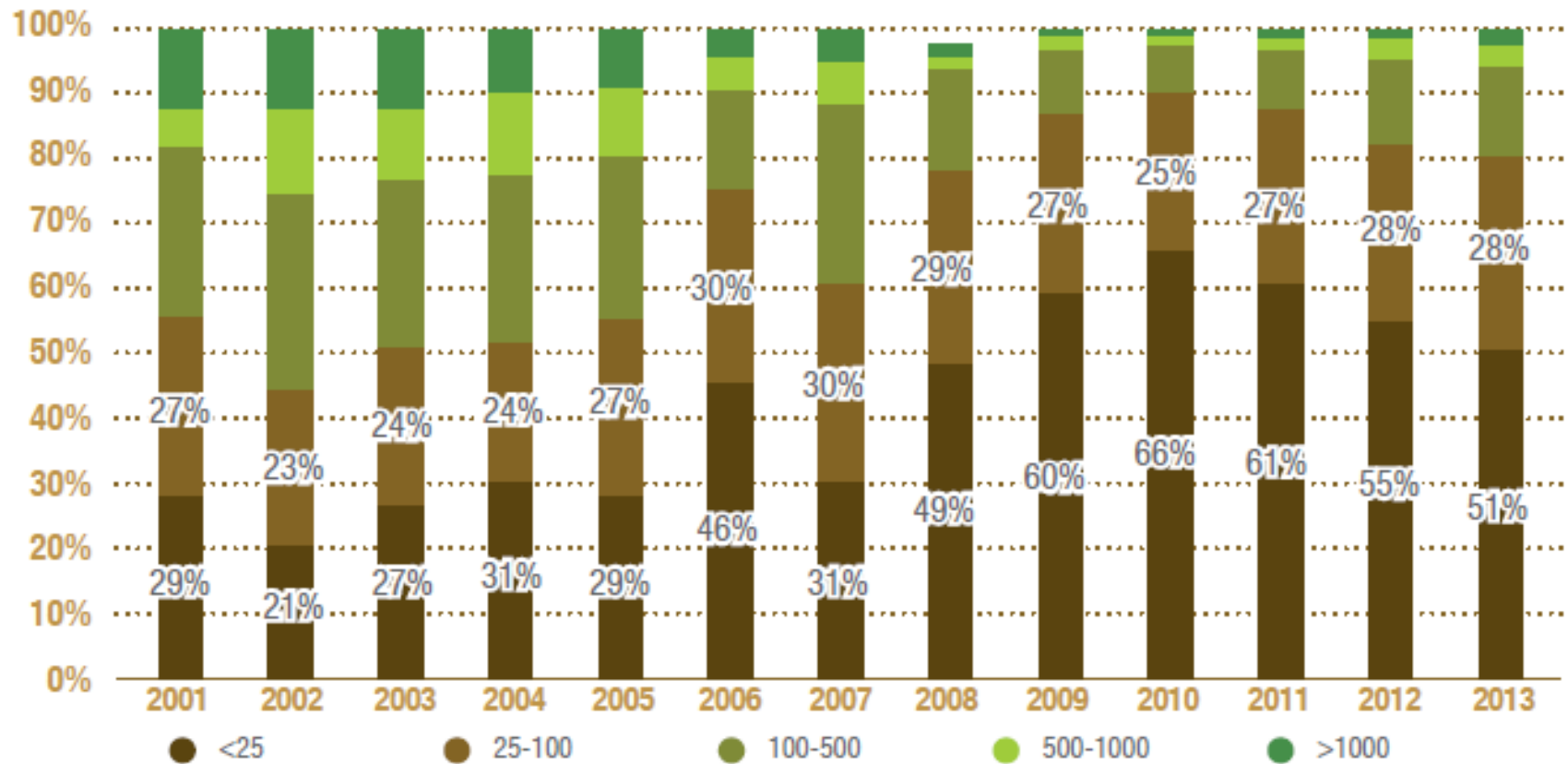
- Develop business cases demonstrating benefits
- Ensure feasibility in regulatory and institutional frameworks
- Promote co-investment solutions
- Foster multi-sector linkages
- Implement efficient PES systems
- Risk reduction in investments

FIELD SIZE OF CROPLANDS



Source: Fritz, S. et.al, Mapping global cropland and field size, 2015.

CONTRIBUTION OF DIFFERENT CLASSES OF DEFORESTATION PLOT SIZE (HA)



UPSCALING

- For up-scaling it will be necessary to demonstrate the benefits of landscapes to policy makers and funders
- Economic incentive schemes
- Establishment of efficient PES systems
- Build capacities
- Efficient engagement by farmer's cooperatives and associations
- Establish links between landscapes and policies at higher order scales
- Sufficient investment capital
- Governments and industry must play a strong role
- Consolidate partnerships

THE WAY FORWARD - 1

- Powerful and long-term actors missing – governments and industry
- Economic incentives a must – payments for ecosystem services (PES) crucial
- Establish new and enhanced institutions and capacity building
- Develop a number of well documented business cases (SIDA?)
- Start from the development dimension and not the market dimension
- This means the landscape concept has to be implemented within a broader societal reform framework and linked to policy issues at higher order scales

THE WAY FORWARD - 2

- Landscapes are part of broader socio-economical human empowerment; landscapes are social processes in the larger political economy (WB, 2014); agricultural landscapes require changes in policies like subsidies, taxes, public R&D; to get scale the values of landscapes must be integrated with over-all socio-economic planning (UNU-IAS, 2012)
- Link landscape development with Green Economy
- To get scale of landscapes, disruptive changes of societal frameworks needed (Heller, 2014)

THANK YOU!



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