



Lowering financial risks for smallholder mixed, agroforestry systems

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Transforming lives and landscapes with trees



Who we are

Our Vision: An equitable world where all people have viable livelihoods supported by healthy and productive landscapes.

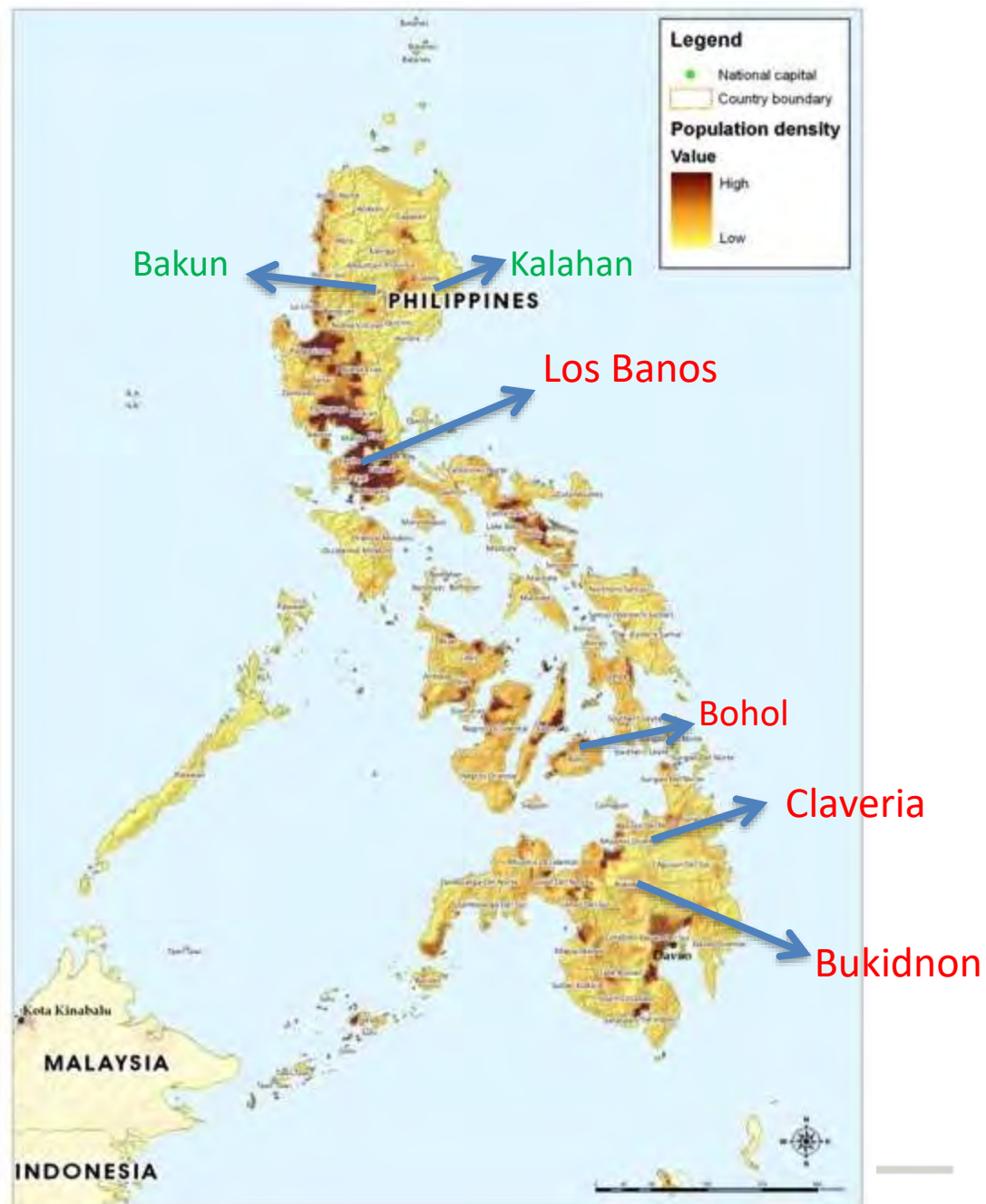
Our Mission: To harness the multiple benefits trees provide for agriculture, livelihoods, resilience and the future of our planet, from farmers' fields through to continental scales.

ICRAF's headquarters are based in Nairobi, Kenya, and we operate six regional programs in Sub-Saharan Africa, Asia and Latin America. We have approximately 620 staff, with 90 working in the South-East-Asia Region.





ICRAF Philippines



1996 The Landcare Project Pioneer work by ICRAF to develop technical AgFor solutions for landscape restoration

Dennis Garrity, Constance Neely, Agustin Mercado, Delia Catacutan,

Huge Success: Agroforestry largely mainstreamed in country policy and programs



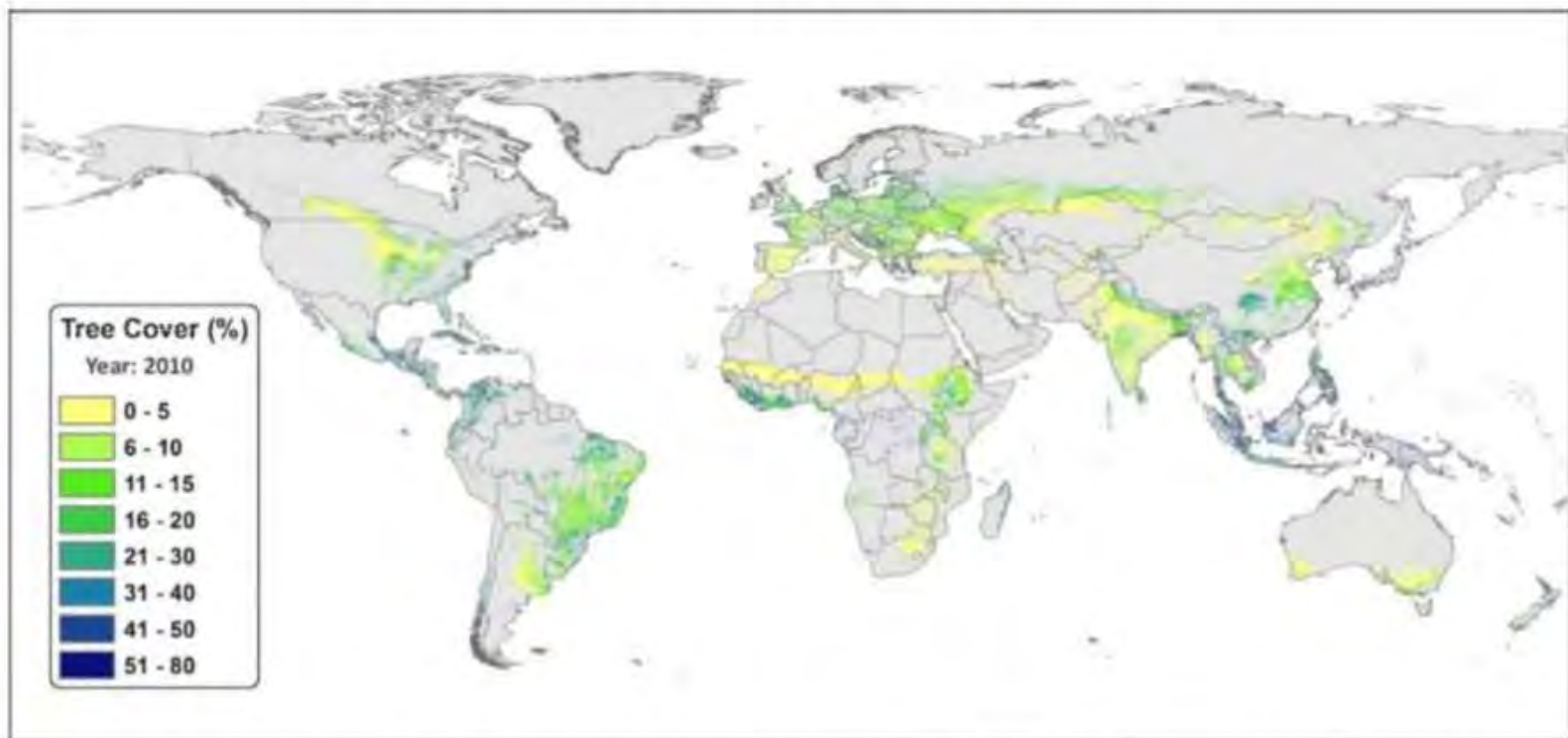
Smallholder Agroforestry

- *Globally 1.2 billion people practices some form of agroforestry*
- *560 million live in agroforestry landscapes (Zomer et al. 2010)*
- *Farmers dominant land managers in the developing world, producing food, tree products & ESs (Tscharntke et al 2012, Jackson et al. 2010)*
- *Rural & global economies - 90% of cacao, 75% of rubber, 67% of coffee, 40% of oil palm, & 25% of tea (\$60 billion global trade/yr)*



Trees outside forest

Tree cover on agricultural land



43% of agricultural land had at least 10% tree cover, and 23% at least 20% tree cover, in 2010.

Increased 2% since 2000: decrease in Mvanmar. Sierra Leone. Argentina

Forest cover trends in the Philippines



□ Forest cover decreased by 328,682 ha i.e. from 7,168,400 ha in 2003 to 6,839,718 ha in 2010 or an ANNUAL FOREST COVER LOSS of 46,954 ha.

“We must look more and more at the managed agriculture areas to provide the vital services that forests used to provide,” said Phil Dobie of ICRAF. We need to restore some of these key ecosystem functions on managed land.”

Mixed farming landscapes



Mono-crop farming landscapes



Adapting to the impacts of climate change



Carbon sinks with a focus on reducing emissions from REDD+



Conserving biological diversity



National context

- National Greening Program (NGP) in 2011: Targeting the reforestation of 1.5 million hectares of degraded lands, by planting 1.5 billion trees.
- UNCBD: Philippine Biodiversity Strategy and Action Plan (PBSAP) (2015-2028):
 - Integrated Approach in the Management of Major Biodiversity Corridors in the Philippines
 - Maintaining Ecosystem Flows, Mainstreaming Biodiversity and Restoring Degraded Forestlands and Enhancing Carbon Stocks through an Integrated Landscape Approach
 - By 2028, there will be a 10% increase in agricultural areas devoted to all types of biodiversity-friendly agriculture.
 - By 2028, 1 million ha of degraded ecosystems will be restored and/or will be under various stages of restoration
- UNCCC: NDC: 67% emission reduction:
 - Reforestation 7Mio ha of gazetted forest areas,
 - cleaner energy, including renewables
 - Mandatory Carbon Neutrality Certification for public and private sector

The paradigm of sustainable intensification

In agricultural production especially, sustainability is often synonymous with increased efficiency of the production, which implies intensification of yield production with less consumption of land, water and fertilizer (Tilman et al. 2011).



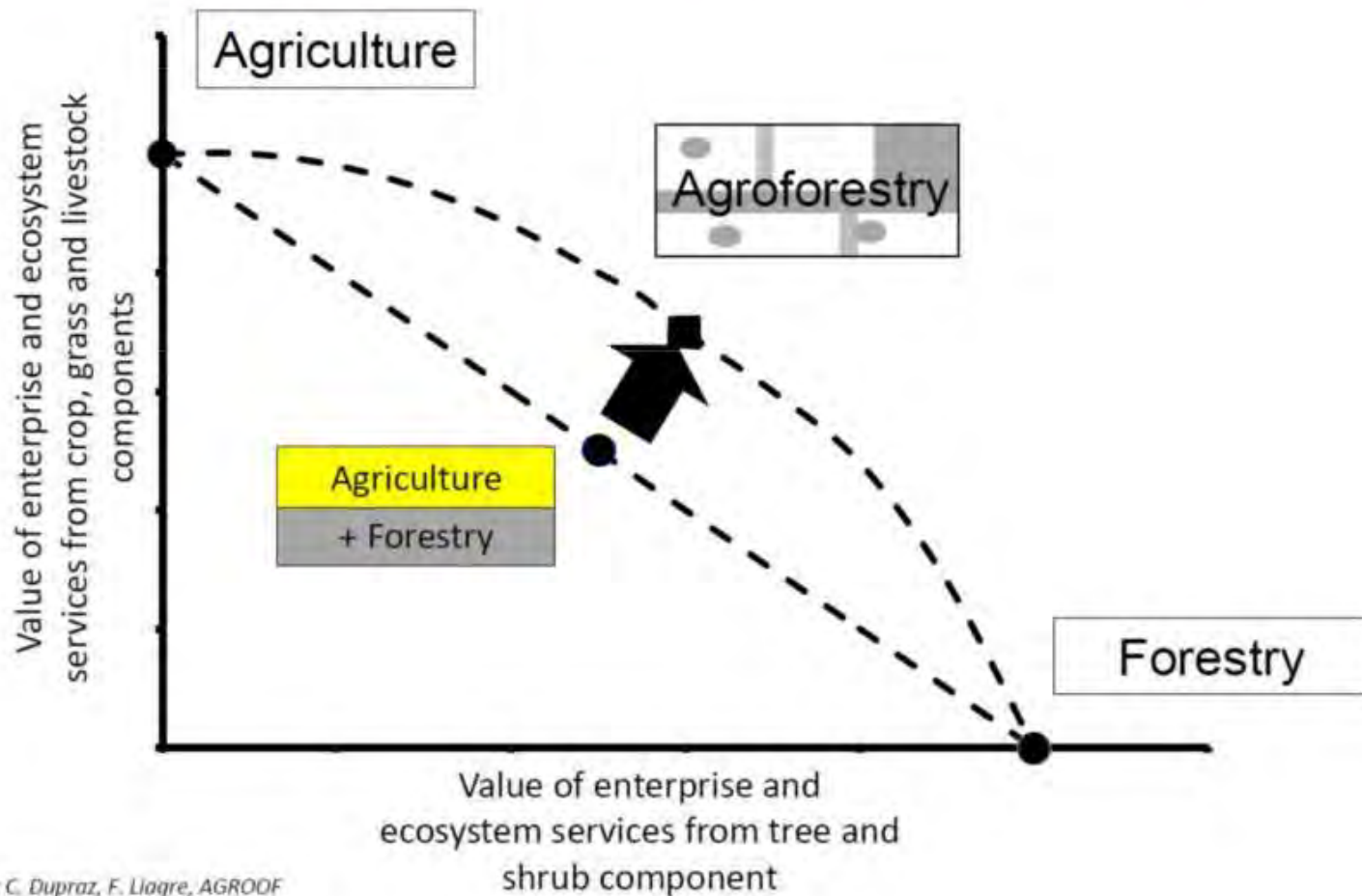
Source: Philipp Case; <http://assets.fwi.co.uk/>

Economics of Scope

Economies of scope are achieved when the average total cost of production decreases as a result of increasing the number of different goods produced



Agroforestry and Land Equivalent Ratios (LERs)



Source: C. Dupraz, F. Liagre, AGROOF

Financial risks for mixed farms – Multiple value chains

Example Claveria, Mindanao: Fruit Trees
and Vegetables

- Vegetables are transported to the local trade center on a daily basis
- Fruits: Sold to Middleman at a discount farm gate price of > 80%



Financial risks for mixed farms

Example Smallholder timber

- Low quality germplasm
- Lower growth rate, lower prices
- Trees don't count as asset for asset based lending
- High upfront investment, long waiting period for return of investment
- High vulnerability to typhoons, no access to climate insurance products



What is needed?

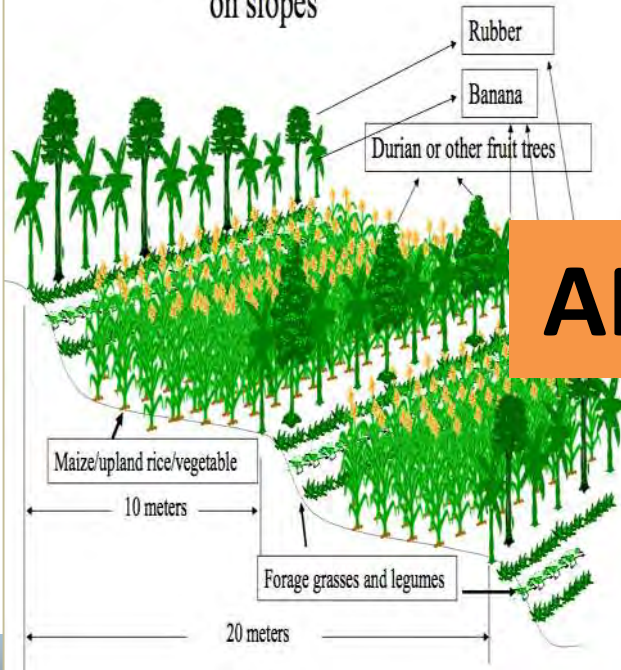
1. Rethinking of the agricultural paradigm of the “green revolution”
2. Un-learning of 50 years of extension services
3. Reform of agricultural and forest policies



What is needed?

Technical solutions

Rubber agroforestry system (RAS)
on slopes



Institutional solutions



AND





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The Philippines needs a national agroforestry policy to meet the Sustainable Development Goals

BY ROB FINLAYSON · APRIL 5, 2018

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Representatives of Philippine government forestry and agriculture agencies, the private sector, universities, farmers' organizations and NGOs are calling for a national agroforestry policy to meet climate challenges

The Philippines is one of the world's most vulnerable countries to the impacts of climate change,

The farmer group approach---bonding and bridging social capital

- Organize small groups of 15-30 households into Landcare groups at village level or build on existing groups.
- Facilitate group planning to define their direction and goals.
- Create a regional group network for wider sharing of knowledge and experience, and better access to support services.
- Build leadership, organizational and fiscal management skills.



ICRAF's role – translating science to policy and practice

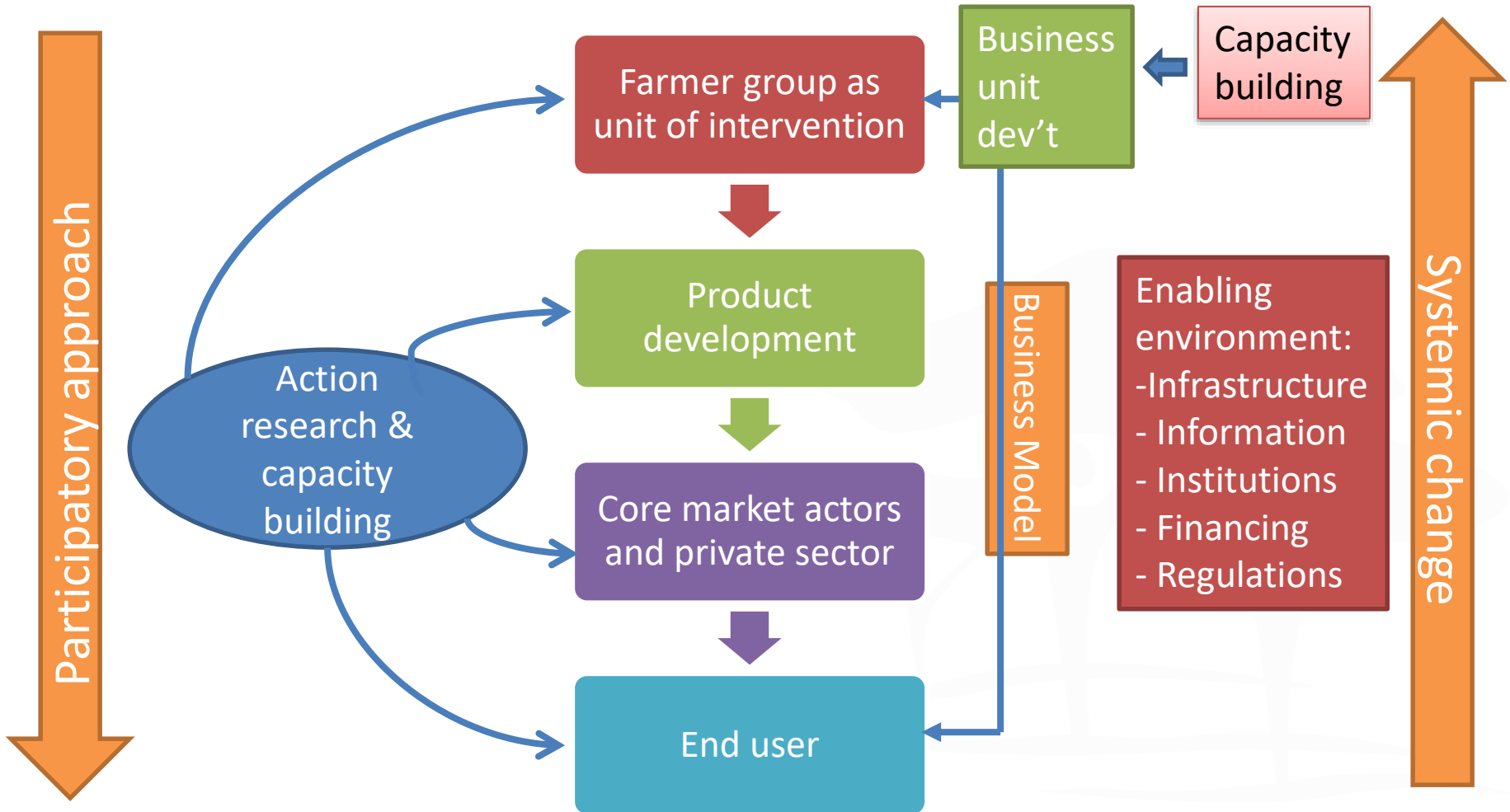
Policy Briefs: Agroforestry options for ASEAN series

1. Agroforestry in Southeast Asia: Bridging the forestry-agriculture divide
 2. Swidden-fallow agroforestry for sustainable land use
 3. Agroforestry for sustainable mountain management
 4. Agroforestry on peatlands: combining productive and protective functions as part of restoration
 5. Agroforestry in the uplands
 6. *Agroforestry in rice production landscapes (FAO)*
- *Agroforestry in coastal zones*
 - *Agroforestry with oil palm*
 - *Agroforestry in peri-urban areas*
 - *Agroforestry on small islands*



Read more and download: [http://blog.worldagroforestry.org/index.php/2016/12/03/role-agroforestry-climate-change-adaptation-southeast-asia/ ...](http://blog.worldagroforestry.org/index.php/2016/12/03/role-agroforestry-climate-change-adaptation-southeast-asia/)

Business enterprise development



Nurseries *develop capacity to produce high quality seedlings of rubber and other priority tree species*

Bi-weekly meeting with farmers

- Process start before training - *priority systems, species, objectives*
- Training integrated into 'program'
- Focus farmers schedule & realities
- Develop & implement work plan
- Address problems, challenges, etc
- Focus nursery management & related
- After basic skills - shift to other needs/interests of each group
- Leadership development
- *Design and management FDTs*
- *Develop enterprises & market*



Source: James Roshetko

How can we capitalize on the Philippines traditional farming practices?

1. Intersectoral collaboration to mainstream widespread practice of agroforestry as one of the strategies to achieve green growth;
2. Developing and implementing multi-sectorial financing systems (governmental ministries (forestry, agriculture and private funds);
3. Financial incentives, such as lower insurance premiums, micro-credit, tax breaks, performance-based payments through rewards for environmental services' schemes



Thank You!!!



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Science for a food-secure future