



The Pilot Community-based Forest Restoration Project in Biliran, Philippines

A Local Initiative with Global Relevance



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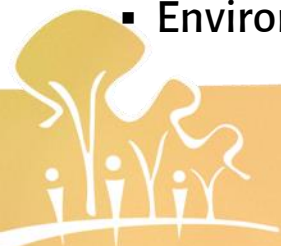


Background

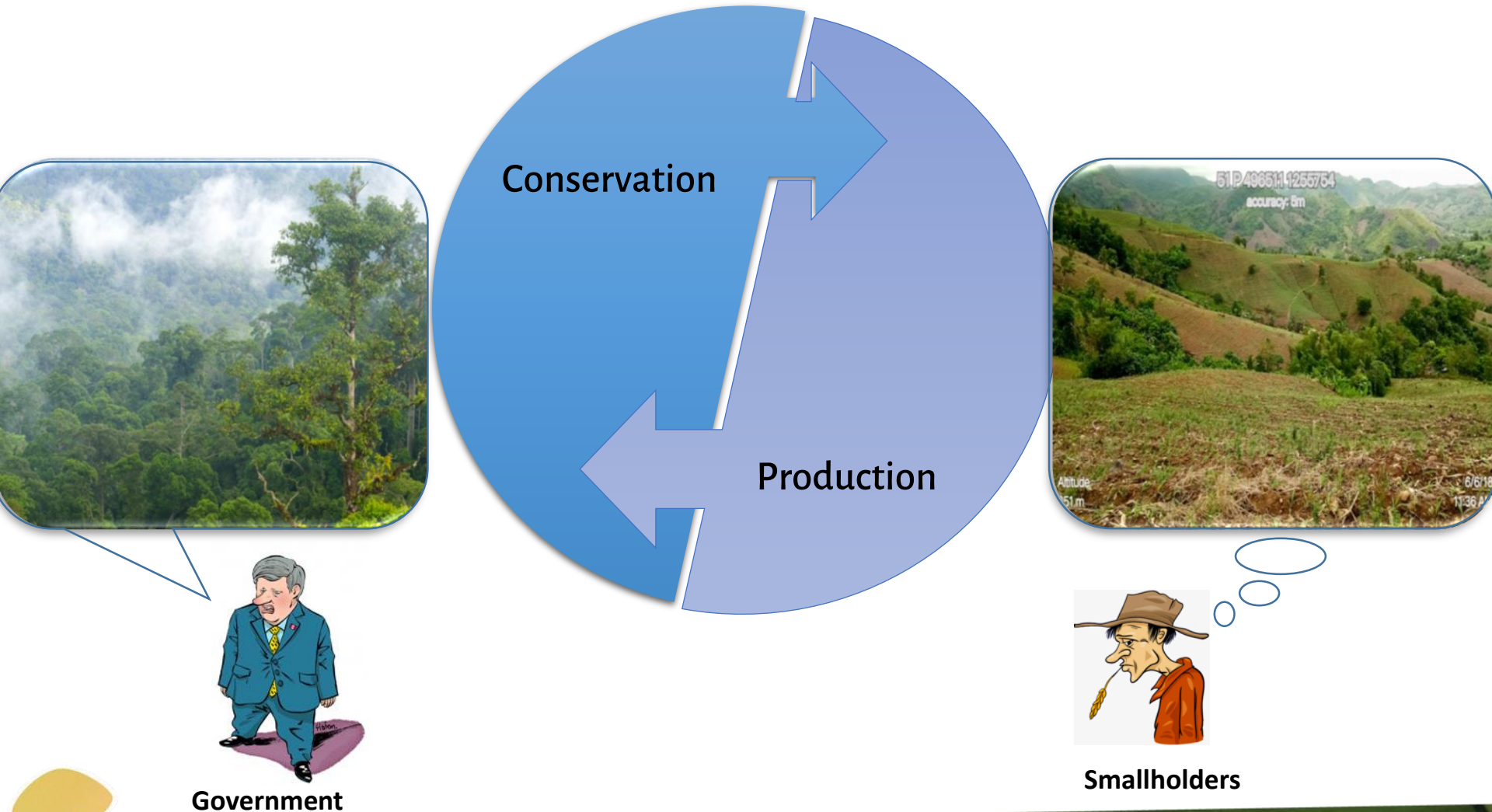
- Forest restoration is a global challenge
- In the tropics, restoration is largely undertaken in state-owned lands by smallholders in rural communities
- The Philippines has a long history of implementing community-based forest restoration programs
- National Greening Program (NGP)
 - Community-based forestry is main the platform (peoples organization)
 - State-owned land
 - Environmental and socio-economic objectives



Forest converted to smallholders corn farms in Iloilo, Philippines



The main challenge!



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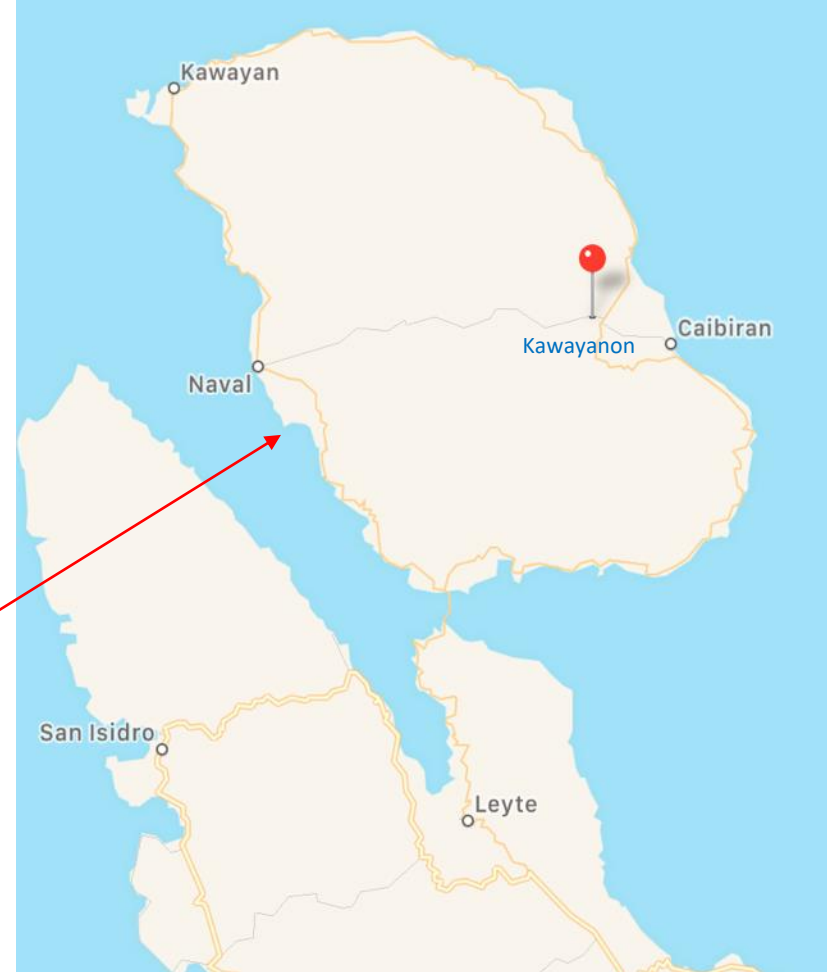
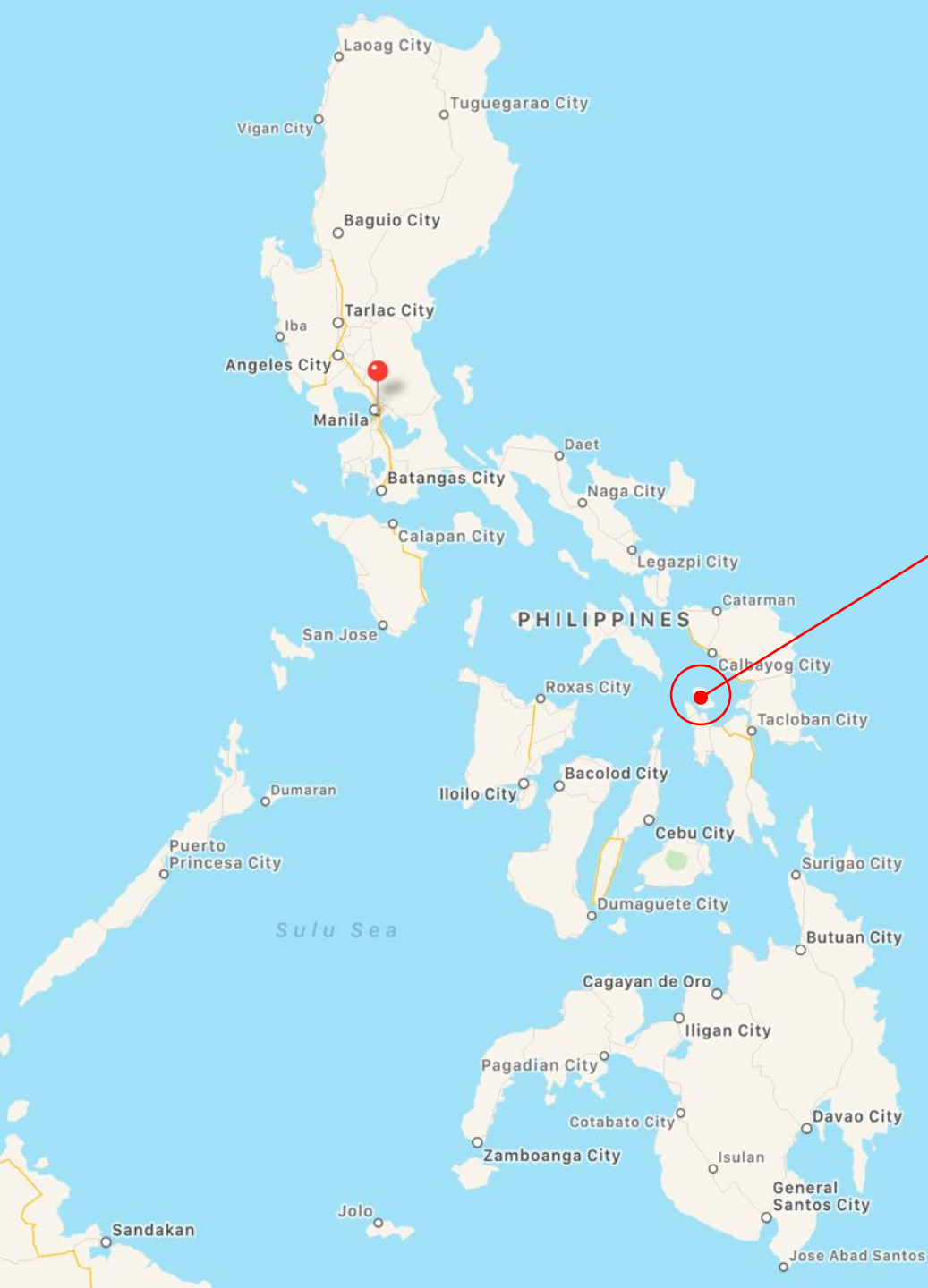
Kawayanon Farmers Association Inc. (KFAI)
Brgy. Kawayanon, Caibiran, Biliran

PILOT REFORESTATION PROJECT

A Demonstration of Community-based Best Management Practice in Watershed Rehabilitation



Supported by the Australian Center for International Agricultural Research (ACIAR), The University of Queensland, University of Sunshine Coast, Visayas State University and Department of Environment and Natural Resources (DENR)



Location of the case study site



The pilot restoration site

- Poor community
- A 26 ha of grassland, low soil fertility, rugged landscape and severe soil erosion
- Planted with trees under four national reforestation programs since the 1980s but tree survival is very low
- Disbanded People's Organisation with tenure over the land for 25 years issued by DENR
- Presence of land claimants establishing smallholder agricultural farms



The vegetation cover before the pilot project



Farmers harvesting crops from farms inside the restoration site





Landscape view of the restoration site and adjacent land-uses



Designing the pilot project

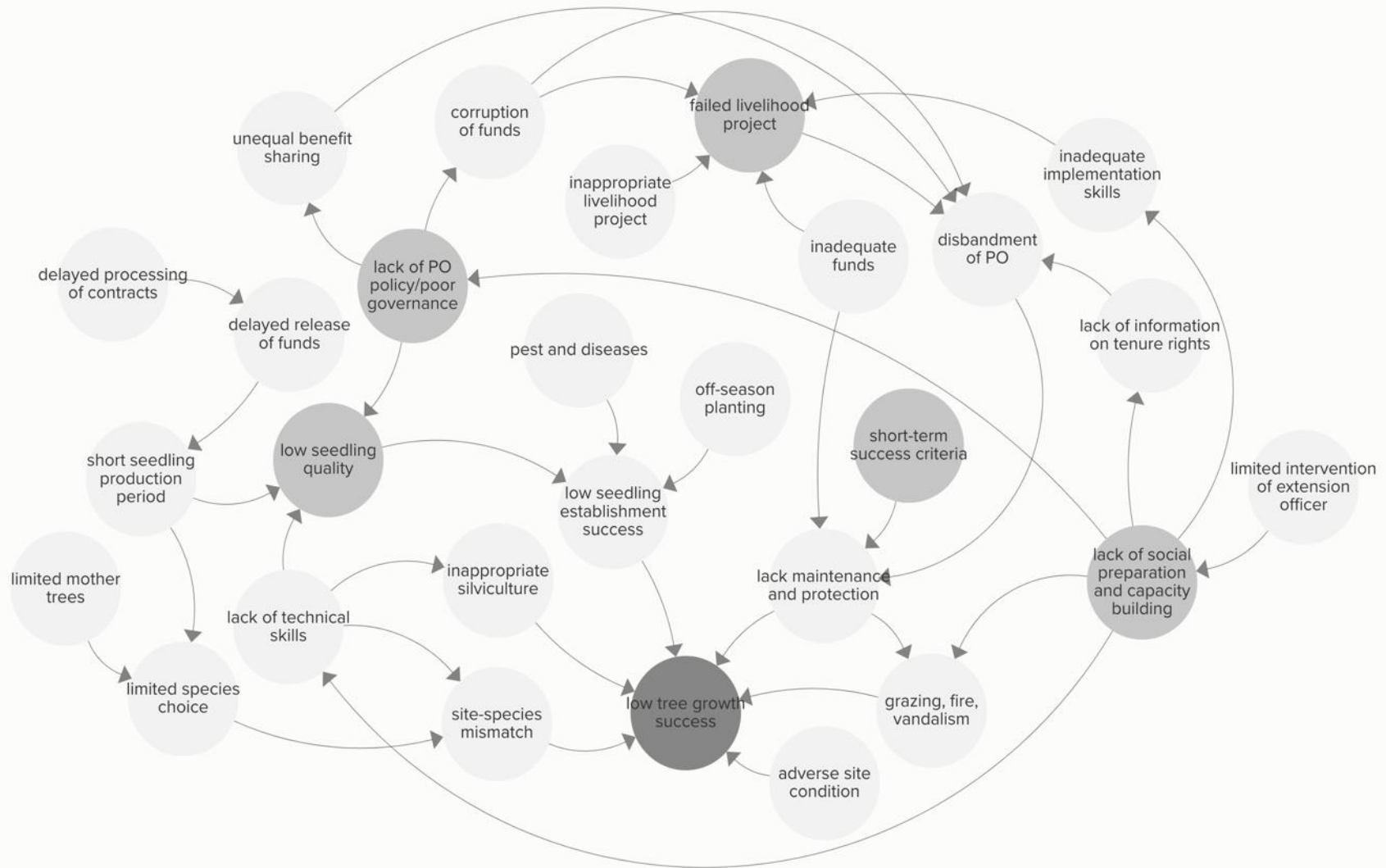
- Systems analysis
 - Considers the complex interactions of factors influencing restoration success
- Participatory approach
 - Determining the problems
 - Identifying solutions
 - Designing and implementing interventions
 - Monitoring of results
- Evidence-based
 - Uses lessons from past restoration programs and research results



Workshop with stakeholders to identify restoration issues and solutions



Issue	Cause of the issue	Suggested intervention
Lack of knowledge on tenurial rights	Lack of social preparation	Adequate information campaign to explain the rights and responsibilities of stakeholders
Site-species mismatch	The absence of long-term restoration plan; limited germplasm sources; limited seedling production period; delayed release of funds; PO's preference not considered	Site survey to identify the appropriate species; consult species preference of PO; zoning to guide species selection and facilitate plantation management
Low seedling quality	Lack of technical skills; limited germplasm sources, short production period; delayed release of funds; ineffective seedling quality regulation policy	Training on nursery best-practice; improved governance with support including adequate seedling production schedule, access to seed sources and capacity building to apply best practices;
Off-season planting	Changing rainfall patterns but firm policy on planting targets	Flexible planting schedule to consider changing climatic patterns
Lack of maintenance and protection	Limited funds; lack of knowledge on best practice; disbandment of the PO; short-term success criteria	Capacity building to adopt best-practice; adequate funds for plantation maintenance; PO cohesion
Inappropriate silviculture	Lack of technical skills	Training on best practice
Low seedling establishment success	Low-quality seedling; poor silvicultural practice; lack of maintenance; planting off-season; pest and diseases	Appropriate site-species matching; effective seedling quality regulation; training on best-practice silviculture
Low tree growth success	Low seedling quality; site-species mismatch; inappropriate post-planting silviculture; fire, grazing, and poaching; adverse site condition	Capacity building; promote group cohesion to maintain the plantation; use high-quality seedlings;
Grazing and vandalism	Lack of maintenance and protection; lack of information campaign;	Collaboration with community residents and leaders; community policy to help protect the plantation; information campaign on the importance of the project; settle land claim issue
Fire	Lack of maintenance; disgruntled land claimants setting fires	Establishment of firebreak; regular monitoring and maintenance of plantation; settle issues on land claims
Unequal sharing of benefits	Lack of intra-PO policy on sharing of benefits; inadequate governance; lack of intervention by extension agents	Develop a policy on benefit sharing and ensure effective implementation; DENR to oversee the sharing of PO resources
Failure livelihood project	Mismatch with the preference of the PO; lack of expertise; lack of market analysis; limited participation of members due to unequal sharing of benefits; lack of funds	Market viability research; financial and economic analysis; matching livelihood to PO circumstance; capacity building; benefit-sharing agreement; sufficient guidance by support agencies



Cause and effect diagram of factors affecting tree growth success



Interventions

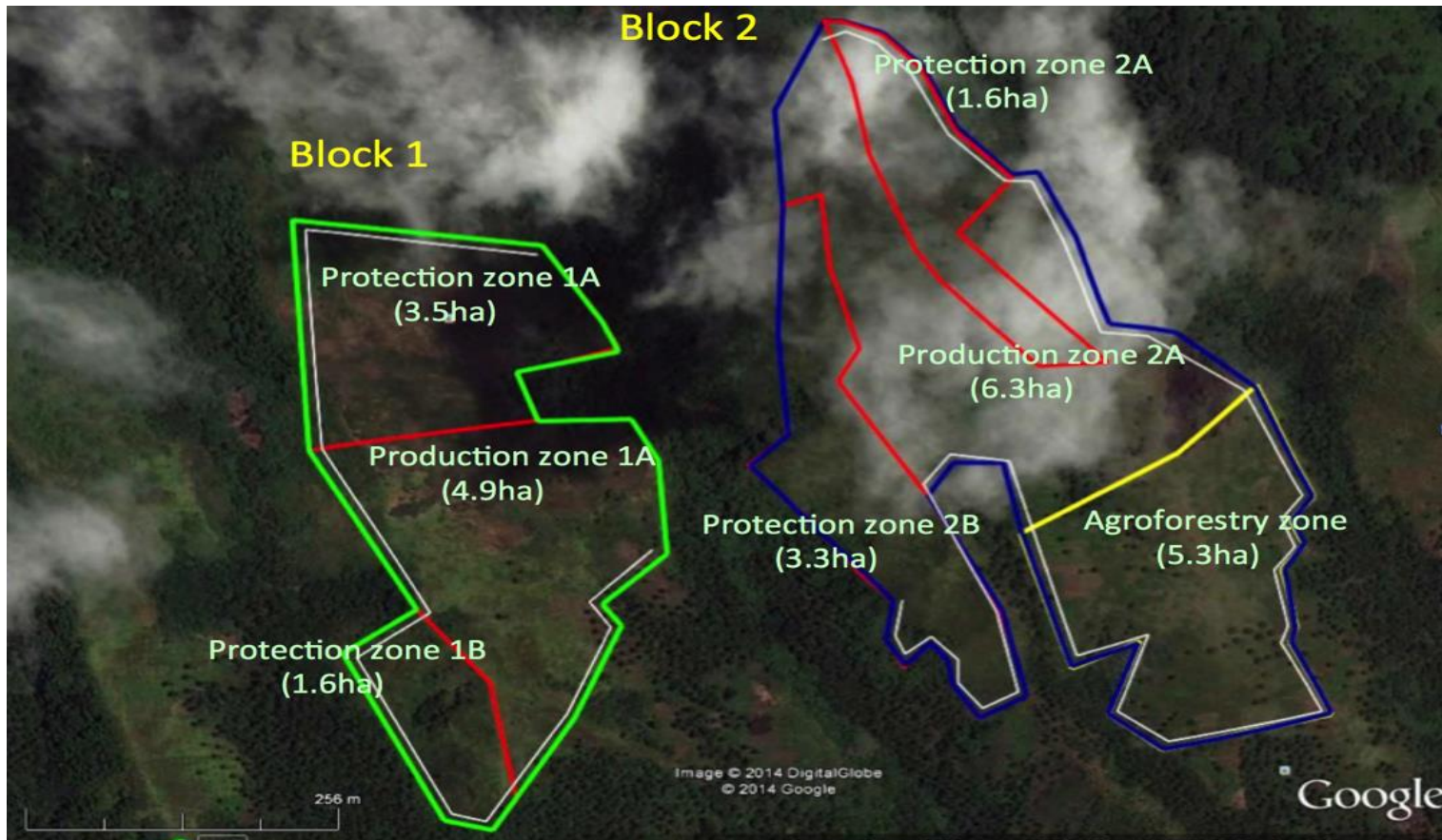
- Adequate social preparation
 - Substantial information and education
 - Rejuvenation of the peoples organisation
 - Capacity-building program
 - ✓ Smallholder-based best practice
 - ✓ Financial management and records keeping
 - ✓ Developing PO policies
 - ✓ Skills training for livelihood implementation



IEC with the community (top), training on quality seedling production (mid) and meeting with land claimants at DENR office in Biliran (bottom)



- Integration of production and conservation functions



The reforestation site with delineated planting zones



Restoration zones

■ Production

- Undulating ground but stable soil
- Trees with high commercial value
- Fast-growing native and exotics
- Tree harvesting plan

■ Protection

- Steep slopes prone to landslides, riverbank, areas adjacent to natural forest
- Trees with high environmental value
- Purely native trees from the natural forest (early to late succession)
- No tree harvesting but with livelihood plans

■ Agroforestry

- Relatively flat ground
- Fruit trees and agricultural crops
- For food and income



- Improved supply of high quality germplasm
 - Identified and marked plus trees from the natural forest of the community
 - Over 300 mother trees of 15 premium timber species
 - Partnered with the community to implement a mother tree protection program



Members of the People's Organisation marking and measuring mother trees



- Production and use of high quality seedlings
 - Smallholder-based technologies (easy and low-cost)



Simple and cost-effective nursery practices



■ Desirable practices in plantation establishment and silviculture



■ Sustainable livelihoods

- Agricultural crops – food and income (short to medium-term)
 - Production of sweet potato, cassava, pineapple, banana, in agroforestry zone
 - mushroom production, bee-keeping in protection zone
- Fruit trees (medium term)
 - Citrus, rambutan, lanzones, guyabano in agroforestry zone



PO members planting pineapple in the communal agriculture farm



- Nursery seedling enterprise (short term)
 - Selling seedlings to implementers of reforestation projects
- Fuelwood production (medium-term)
 - *Leucaena* and *Acacia* along the boundary
- Furniture making (long-term)
 - Using timber from trees in the production zone



High quality seedlings intended for sale



■ Transparency of the project implementation

- Regular meetings
- Financial reports

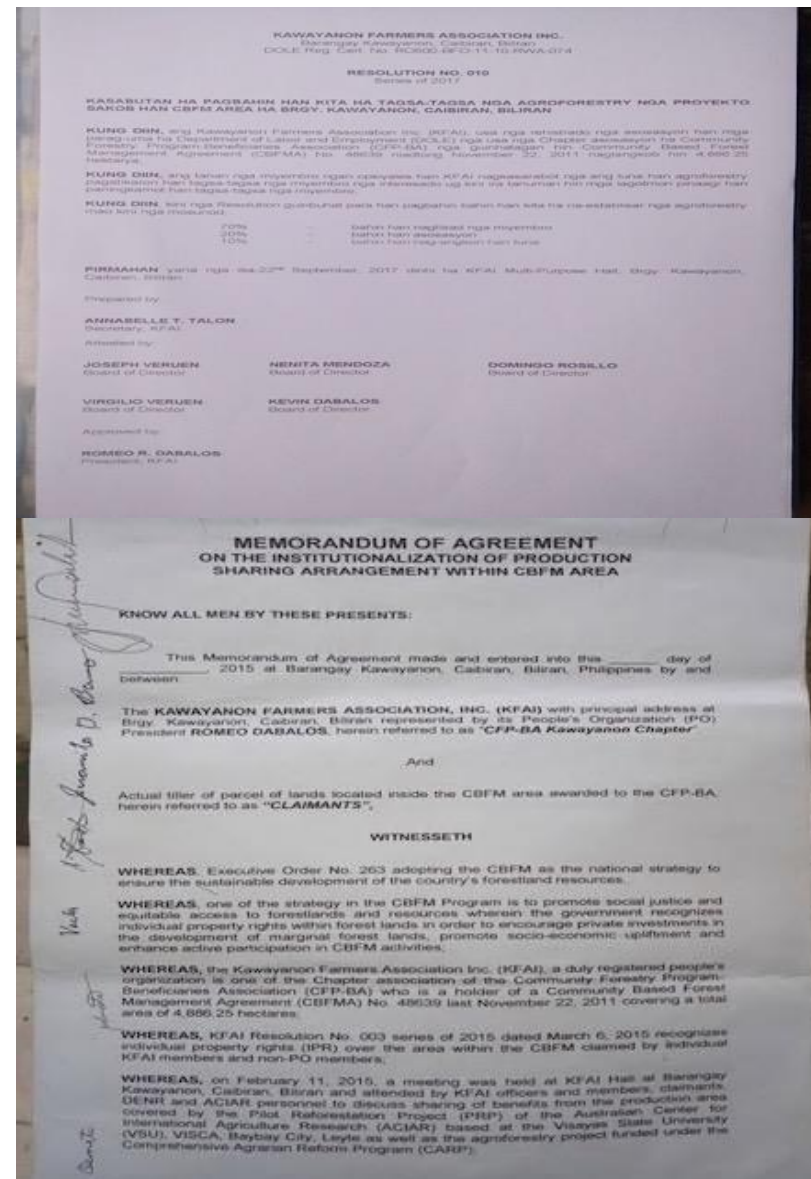


A regular meeting of PO members (top), and the treasurer presenting the financial report (bottom)



- Development of local policies
 - Membership and penalties
 - Sharing of responsibilities
 - Benefit sharing
 - Agreement with land claimants
 - Mother tree protection

Sections of policies on sharing of benefits (top)
and agreement with land claimants (bottom)



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Outcomes

- Tree and crop establishment success



October 2014



October 2018



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Native trees in protection and production zone



Fast growing exotics tree in the production zone



Fruit trees planted and crops harvested from agroforestry zone



- Improved social capital
 - increased active membership
 - Improved knowledge on nursery and post-planting best practice
 - Improved knowledge on local policy development



DENR personnel evaluating the quality of seedlings produced by the PO



- **Increased network and access to financial and material support from other government agencies**
 - Financial support from DENR to establish another 35 ha plantation of coffee, cacao and banana (USD 10,000)
 - Generator and pipes from DA
 - Financial support from DA to establish potting shed
 - Financial support from DA to venture into peanut plantation
 - Free crop insurance
 - A new NGP project from DENR in 2017 (USD 25,000)



- Commended by top official of DENR as exemplar of NCP restoration project showing tree establishment and growth success
- Featured in IUCN's publication **Enhancing Food Security through Forest and Landscape Restoration**



Portion of IUCN's factsheet about the pilot restoration project in Biliran



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Challenges

- Good governance inside and outside the organization
- Fluctuating active membership of the group
- Too large agroforestry farm (6 ha + 35 ha) for the PO to effectively manage without compensation
 - Poor members of the PO do not have the resources to manage resource-intensive crops that do not provide immediate returns including food and income



- Limited implementation schedule of activities to apply best practice
 - Delayed contract but fixed planting target
 - Low survival of seedlings in the new NGP project of the PO supported by DENR
 - ‘Seedlings produced and planted’ – not a robust basis for judging restoration success
- Job opportunities outside the project
 - More attractive than income from the project
- Aging members
- Adverse weather

Old members of the PO
implementing restoration activities



Lessons learned: some requisites for a successful restoration outcomes

- **Appropriate project design**
 - Holistic; matches with the community's interest and capability; long-term focus
- **Adequate social and educational preparation**
 - Community organising is a process; substantial IEC; need-based capacity building
- **Good leadership**
 - Sincere and selfless
- **Transparency in handling project funds**
 - Reduces corruption incidence; builds trust
- **Sustainable livelihood and food security measures**
 - Primary driver of success; people-preferred; short, medium and long-term benefits



- Adequate financing and timely disbursement
 - Allows best practice application
- Land and tree tenure is crucial although does not guarantee sustained engagement
 - Tenure promotes engagement but should be accompanied with other support
- Effective governance
 - Within and outside the PO; support agencies needed
- Support from extension officers
 - Cannot be overemphasized!
- Women are essential restoration agents
 - Restoration activities are largely women-implemented; decision-making and making restoration happen



- Integrative systems in designing FLR is important
 - Plethora of factors that are intricately connected
- Participatory approach is necessary
 - Stakeholder-based designing, implementing and monitoring
- Evidence and lessons from past programs are essential
 - Many lessons left not learned

