Community-based agroforestry practices for watershed management in the Philippine uplands: Lessons learned from the Landcare experience

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Outline

• Introduction: Upland context
• What is the Landcare approach
• Elements of Landcare
• Landcare impacts
• Lessons learned from Landcare experience
The Philippine Uplands: Forest lands under siege
Introduction:

Upland environments

- Most complex, diverse and risk prone agricultural ecosystems
- Soil erosion is prevalent resulting to the loss of soil fertility and crop productivity
  - 50-350 tons of topsoil lost annually per hectare
  - 200-500 kgs annual yield loss per hectare
Soil Degradation
• Upper watersheds affect infrastructures, lives and livelihoods of people living downstream
• More than 25 million people live in the uplands
• Farmers are generally poor
• Rapid population growth push farmers to cultivate steeper slopes and more fragile ecosystems
• Low human and social capital for natural resources management
• Extension services are inadequate and fragmented.
Where is Landcare...
Landcare now (1996 to the present)...

• Today:
  – more than 600 Landcare groups in Visayas and Mindanao
  – More than 10,000 farming families adopted conservation farming technologies including agroforestry practices
  – hundreds of communal and individual household tree nurseries have been established
  – hundreds of thousands of fruit and timber tree seedlings were planted

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What is the Landcare Approach?

• A community-led initiative for the judicious utilization of the land and the application of basic principles of natural resource management

• Operationally, an extension approach for the rapid and inexpensive diffusion of conservation farming, AF, and other NRM practices among upland farmers
What is the Landcare Approach?

• refers to a group of people who are concerned about land degradation problems and interested in working together

• evolved as a community-based approach designed to effect change in complex and diverse upland situations
Elements of Landcare Approach

Appropriate Technologies

Landcare approach

Institution Development

Partnership Building

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Core of the Landcare Development Model

• Development Principle
  – Landcare is not placed in a time-bounded vacuum.
  – held open, infinite and timelessly evolving.
  – embraces a range of issues in a programmatic manner and connects the pieces to make a whole.

• Management Approach
  – The Triadic Approach, where key players support each other, share resources and complement each other
  – forming an "Interdependent Relationship"

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• Development Tool
  – The main development tool is "Facilitation".
  – allows a voluntary and motivated participation
  – does not prescribe nor coerce.
  – gives an opportunity to engage in a discovery and learning

• Development Strategy
  – IEC is the main development strategy.
  – development investment is centered on human knowledge and skills enhancement
  – approach total human development in an incremental manner

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Element 1: Appropriate upland technologies

- Information, education and communication (IEC)
- Farmers cross farm visits
- Farmer-to-farmer knowledge sharing
- Conservation team approach
What are the Landcare Technologies?

- SALT (I to IV)
- NVS (Simplified hedgerow cropping system)
- Ridge tillage
- Trash building
The NVS technology

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Trees on farms...
Multistorey systems
Tree Farms
Nurseries (fruit and timber trees)

Vegetable crop farming

Dairy and Beef farming

Composting
Other activities ...

- Backyard gardening
- Backyard and community beautification
- Solid waste management
- Micro-saving mobilization/micro-lending
- Water watch
- River and creek rehabilitation
- Income generating projects
- Building meeting houses
- Land use planning (farm and community planning)
- Working animals, seeds, and planting materials dispersal program
- Participatory monitoring and evaluation
- Organic farming (composting and orga-pesticide)
- Experimentation (FRC)
- Training (Farmers Training Group)
- Paligsahan (community/group competition)
- Other activities ...
Element 2: Community institution building

• Enhancing leadership and participation in conservation farming and agroforestry practices dissemination and adoption

• Landcare groups are organized at the hamlet level or at sub-political unit – the “sitio” level or a community of 20-30 households

• Each Landcare group had a set of officers, and self-governing group
• federated at barangay (village or micro-watershed) level, called "Chapter" (composing of 8-12 hamlet/sitio level Landcare groups),

• chapters were federated at the municipal (macro-watershed) level
Organizational structure of Municipal Landcare (Claveria Landcare Association)

**ACTORS**
- President, Municipal Landcare Association
- Barangay level Presidents (Chapter presidents)
- Municipal Mayor
- Municipal council
- Municipal Agriculture Officer
- Academe and research institution
- NGO’s

**ACTORS**
- Chapter president
- Sub-chapter level Presidents
- Agriculture technicians
- Village councils
- Tribal leaders

**ACTORS**
- Sub-chapter Landcare president
- Households
- Agriculture technicians
- Sitio leaders
- Tribal groups

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Element 3: Partnership building- the triadic approach: Building synergy among stakeholders

- **Local Government Units**
  - Provide policy support and appropriate incentives
  - Provide financial and material support
  - Complement technical and facilitation needs
  - Provide capacity building programs

- **Landcare Groups**
  - Share knowledge, skills, time and low-cost materials
  - Committed to resource conservation
  - Share experiences and draws local support
  - Adapt and innovate conservation and AF technologies
  - Share information on appropriate technologies
  - Facilitate group formation and development
  - Provide IEC programs
  - Provide capacity building programs
  - Provide network support

- **Technical Facilitators (ICRAF, MAO, SCUs, Line agencies, etc)**
  - Support
  - Feedback

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Element: Partnership building- the triadic approach: Building synergy among stakeholders

- **Support**
- **Feedback**
Claveria LGU’s contribution

Facilitation

- Policies: municipal ordinances
- Funds:
  Municipal: P 1.2 M (50K/barangay)
  P 250K Landcare management
  Barangay: 20% of development fund
Impacts of Landcare

- Greatest success is changing attitude of farmers, policy makers, LGUs, landowners on conservation farming
- Emerging as an approach that empowers local communities and LGUs to disseminate and implement conservation farming
Impacts of Landcare

\[ Y = 2.0321e^{0.3326x} \]

\[ R^2 = 0.9597 \]

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Types of adopters of soil and water conservation measures

- Unassisted Landcare members: 49%
- Technician assisted (ICRAF, DAR, MAO): 24%
- Landcare members assisted: 27%
Cost of Landcare

- Conventional reforestation = P50,000/ha/3yrs
- 30% success so total cost = P150,000/ha/3yrs
- Cost of Landcare variable
- P 15,000-20,000 per ha/3 years
- P 3 million in 3 years (500 ha site)
- ACIAR project (3 years)
  - P5 million for Bohol, Claveria and Lantapan
  - 1 PM, 3 site coordinators and 9 field facilitators
Lessons Learned in promoting conservation farming and agroforestry practices through the Landcare approach

• **Stepwise technology dissemination** was more effective, simplifying complex technology packages

• **Technologies must:**
  – fit to the bio-physical and socio-economic environments
  – be simple and “triable”
  – be profitable and have low risks
  – have short and long term impacts
  – be low cost and culturally acceptable

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Lessons Learned in promoting conservation farming and agroforestry practices through the Landcare approach

• Farmers should:
  – be involved in technology generation, verification or adaptation trials
  – be involved in technology dissemination and role modeling

• Encourage more technical learning sites and knowledge sharing venues and opportunities
Lessons Learned in promoting conservation farming and agroforestry practices through the Landcare approach

- Community institution development should promote small groups formation, but link to a broader organization base and networks at the barangay and municipal level enhancing vertical and horizontal information flow and knowledge sharing processes.

- Partnership, like the triadic approach, must be promoted where key players support each other, pooling resources together, doing complementing, but non-duplicating roles, and forming an interdependent relationship.

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Summary

• **Appropriate technologies** are needed to enhance the productive and environmental services in a sustainable manner in the upland areas
  – **Technologies** should be simple, affordable and adaptable to the diverse conditions of resource-poor upland farmers

• **Landcare** can be a rapid and inexpensive way of extending conservation farming and agroforestry technologies, improving the lives, livelihoods and landscapes in the uplands
UN Special Adviser Impressed by ICRAF’s Projects in Western Kenya.

The residents of Sauli, Western Kenya were hungry, thin, and ill. Surprisingly, they stayed for three and a half hours, speaking to special advisor to UN Secretary-General Kofi Annan on the Millennium Development Goals with dignity, eloquence, and clarity. Jeffrey Sachs, on his visit to the area in July, 2004 observed that with fertilizer, fertilizer trees introduced by ICRAF, water harvesting, and improved seeds, Sauli’s farmers could triple the food yields per hectare and quickly end hunger. With this approach farmers will be salvaged and...
Any questions?

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