

AGROFORESTRY EXTENSION IN THE PHILIPPINES

In the Philippines, agricultural extension is decentralized to the local government units, in accordance with the Local Government Code of 1991. However, national government agencies and state universities and colleges also contribute to the body of knowledge and professionalization of extension in the country. The Agricultural Training Institute (ATI) serves as "the national apex agency for extension of the Department of Agriculture (DA) in order to orchestrate the agriculture and fisheries extension system for a unified and efficient delivery of extension system."

Climate change and the continuing degradation of natural resources in the country, especially in the upland regions, most certainly affects the state of living in these areas, especially in terms of sustainable agroforestry and natural resources management.

The Philippine Council for Agriculture, Aquaculture, Forestry, and Natural Resources Research and Development

(PCAARRD), one of the research councils under the Department of Science and Technology (DOST), houses the Agroforestry Information Network (AFIN). The AFIN is a data bank. AFIN's objectives are as follows (PCAARRD, n.d.):

- to serve as a focal point to various information on agroforestry
- to facilitate the sourcing, building-up, delivery and exchange of information on agroforestry to support the sustainable development of natural resources, and
- to promote agroforestry development strategies to interested individuals who have access to the internet.

The Department of Environment and Natural Resources (DENR) and the Department of Agriculture (DA) are also involved in agroforestry programs. DENR adopted agroforestry for its community-based forest management (CBFM) programs "to enhance the sustainable development of the country's forest resources and promote people empowerment and social justice." (Atienza, Dimla, & Feliciano, 2003).

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Also playing a role in agroforestry research and extension in the Philippines is the University of the Philippines Los Baños Institute of Agroforestry (IAF). Started as the UPLB Agroforestry Program, it became an institute under the CFNR in 1998. Its mandates are as follows (IAF, 2011):

- Facilitating agroforestry education development
- Developing responsive agroforestry research program
- Enhancing rural development services and policy advocacy
- Forging linkages with development organizations

IAF offers trainings in agroforestry, particularly in agroforestry project planning and management, integrated pest management for agroforest farms, seed technology and nursery management, agroforestry technology verification through on-farm trials, soil and water conservation and management for agroforest farms, and agroforestry production and post-production systems (PCAARRD, n.d.). IAF provides these trainings to local government units and nongovernment organizations. The institute also provides technical assistance and information, education, and communication services to the aforementioned clients (Cabahug, 2017).

In the academe, the Philippine Agroforestry Education and Research Network (PAFERN), an organization of universities and colleges engaged in instruction, research, and extension in agroforestry, was established in 2001. With its secretariat housed at the Institute of Agroforestry (IAF) of the University of the Philippines Los Baños College of Forestry and Natural Resources (UPLB-CFNR), PAFERN performs the following (PAFERN, 2007, p.11):

- Building institutional capacities for improved delivery of agroforestry education
- Strengthening institutional capacities for collaborative agroforestry research
- Improving learning facilities in agroforestry
- Promoting multisectoral partnerships in agroforestry development and promotion
- Creating venues for information exchange among agroforestry stakeholders
- Securing quality agroforestry education
- Intensifying institutional linkages

A report from PCARRD in 2003 cited 143 completed and 41 ongoing agroforestry projects being monitored by the council, most of which were implemented by the DENR, state universities and colleges (SUCs). While there are many programs on agroforestry, most of these are actually from grant-funded projects.



Figure 1. Agroforestry Projects in 2003

EMERGING FORESTRY EXTENSION ISSUES TO BE ADDRESSED

Bias for Agriculture in Forestry Extension Services

Most of the banner programs of the national government in the field of agriculture are focused on lowland crops. There remains a need for effective, efficient, and relevant extension programs for upland regions in the country, especially with their unique topographical, geographical, and community contexts and nuances. Programs of various national government agencies (NGAs) involving agroforestry should provide services more appropriately, to serve smallholder farmers in these regions, who are usually of indigenous roots with a rich history of age-old but effective agricultural, natural resources management, and governance practices .

Participatory agricultural extension planning, implementation, monitoring and evaluation for forestry extension must be considered, given the uniqueness of their agro-forestry contexts. Agricultural extension approaches, particularly methods, tools, techniques used in the lowlands must be revisited for their appropriateness under upland conditions due to resource limitations. CHARMP 2 project in the Cordillera Region, Philippines, funded by IFAD has illustrated innovative practices along these, which are now ripe for upscaling.

Harmonizing Extension Services for Agroforestry

There is a need to enhance agroforestry extension in the Philippines, given the demand for natural resources management in the uplands and the need to mainstream the needs and demands of indigenous peoples and the marginalized in the highlands.

Funding for Agroforestry Programs

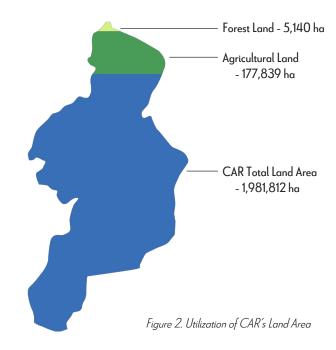
DENR has "no regular funding assistance for agroforestry in its devolved district offices, except for technical assistance to upland farmers," while DA and DAR "have no comprehensive programs for agroforestry development" (Prodigo & Dimzon, 2004).

A UNIQUE REGION WITH UNIQUE RAS SITUATIONS: THE CASE OF THE CORDILLERA ADMINISTRATIVE REGION

The Cordillera Administrative Region, composed of the provinces of Abra, Apayao, Benguet, Ifugao, Kalinga, and Mountain Province, stands out from the rest of the regions in the country not just in terms of its topographical characteristics, but also in terms of unique indigenous practices in agriculture, forestry, natural resources management, tribal leadership and governance. Country STAT Philippines describes the region as follows:

"Its rugged terrain and breath-taking topography have been home to the sturdy and industrious indigenous tribes collectively called the Igorot, while its climate has bred an equally unique culture distinct from that of the country's lowland colonized regions (2017)."

Of the 1,981,812 ha total land area of the region, 177,839 ha is used for agriculture. Moreover, 5,140 ha of CAR's agricultural land area is used as forest land (lbid).



The Second Cordillera Highland Agricultural Resource Management Project (CHARMP2), housed at the Department of Agriculture Regional Field Office, and funded by the International Fund for Agricultural Development (IFAD) and OPEC Fund for International Development (OFID), is one of the most successful agroforestry endeavors in the Cordillera in recent years. One of CHARMP2's components is Community Watershed Conservation, Forest Management, and Agroforestry (CWCFMA). This component aims "to promote the rehabilitation of watersheds in the target areas to enhance conservation of major watersheds in CAR... and to provide

the indigenous communities with opportunities to improve their socio-economic well-being." (CHARMP2, 2011). Included in this component is the promotion of agroforestry and the documentation of indigenous forest management practices (Ibid).

Best indigenous forest management practices were documented in each province. As of 2015, only the Mountain Province has records of their practices. Table 1 shows the indigenous practices that they identified, documented, and mainstreamed:

PROVINCE	INDIGENOUS PRACTICE
Abra	Lapat
Apayao	Lapat
Benguet	Kijowan, Kaiwan
lfugao	Muyong
Kalinga	lmong
Mountain Province	To be identified

Table 1. Indigenous practices per province identified by CHARMP2 (lifted from Tingonong & Listino, 2015).

POLICY RECOMMENDATIONS: TOWARDS A HARMONIZED AND LOCALLY-ROOTED CAR AGROFORESTRY EXTENSION

APIRAS has put forward that the DENR, DAR, and PCAARRD should take part in a proposed country forum for the country (Cardenas, Calalo, & Garma, 2017). Through the country forum, these three agencies may harmonize their agroforestry programs and efforts, together with other extension stakeholders from the government, academe, and private sectors which also comprise the country forum. These three agencies can elevate their concerns, issues, and capacities needed in agroforestry extension. These three agencies can also use the country forum as a platform for their policy advocacy in agroforestry implementation, research, and extension.

The respective regional offices of DENR and DAR, PCAARRD, and other agroforestry and rural advisory services stakeholders in the Cordillera Administrative Region should also collaborate in creating a unified agroforestry extension program for the region. At the same time, the country forum can evaluate the gains and good practices of past and present agroforestry and extension programs in the region, including those from CHARMP2. Evaluating the gains from these programs can help in the formulation of the unified agroforestry extension program. The academe, through the UPLB IAF, can also contribute its expertise in the formulation of the unified program.

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