DEVELOPING AND WEBBING LOCAL EXTENSION CAPACITIES FOR IMPROVED UPLAND FARMING: EXPERIENCES IN SOUTHERN MINDANAO[1]

Alexander U. Tabbada, Dashiel P. Indelible, Wiebe van Rij, Dinah Q. Tabbada and Ben Hur R. Viloria[2]

(With inputs from Lovielyn Caytona, Bryan Lee Eslao, Ralf Melencion, Saldy Pepino and Edith Tejada)

I. Introduction

Republic Act 7160 or the Local Government Code in 1991 devolved the implementation and management of services of the Department of Agriculture (DA) to local government units (LGUs). Clearly, RA 7160 directs the municipal government to provide extension services for agriculture and environment. While this should make agricultural extension services more accessible, inadequate or unstable funding for extension, low priority by local officials and the vulnerability of posts to political manipulation resulted otherwise. David (2004) pointed out that devolution has considerably weakened the research-extension-farmer linkage and consequently affected the responsiveness of extension and research to the changing needs of farmers and agro-industries.

Extension worker to farmer ratio has widened and extension services have become less and less accessible, especially to the resource-poor upland farmers. With continuing cutbacks in annual budgets, public sector extension is likely to remain financially constrained and the pressures towards slimming-down and re-focusing will continue (John Farrington, 1994).

Farmer led extension which promotes farmers and other rural people as the principal agents of change in their communities, has been one popular innovation in local advocacy. With their experiences in principles and methods in farmer to farmer extension, Chris Garforth and Nicola Harford (1997) observed changes in the way people view extension, namely, the recognition that extension is not the exclusive domain of extension agencies; the growing variety of forms of provision; an expansion of the agenda which extension is expected to address; and changes in our understanding of how extension works

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[2] ICRAF-Lantapan Natural Resource Management Research Officer, UDP National Project Co-Director, UDP European Project Co-Director, UDP-ICRAF Project Consultant, and UDP Sustainable Agriculture Development Coordinator, respectively.

II. Background of the Project

Agriculture in the uplands is an incontestable reality. Uncontrollably, more and more people are pushed to the uplands to survive the ever-escalating poverty and economic uncertainty and despite regulations, policies and inhibitions, people continue to till the sloping lands.

In its objective assessment of the state of the uplands in five provinces in Southern Mindanao, the Upland Development Programme in Southern Mindanao (UDP)[3] found that about 60,000 hectares of slopes have been cultivated and a significant large proportion of these are alarmingly degraded and unproductive due to indiscriminate clearing, soil erosion and improper farming practices, calamitous enough to endanger more than 80,000 hectares of watersheds.

With the above reality, UDP underscored the need for upland extension system that can provide farmers with information and technology and mobilize them to address the urgent need to reverse effects of destructive cultivation in sloping lands, practice sustainable technologies for food sustenance and income needs, and facilitate mechanism for timely and systematic delivery of agriculture services in these very rugged terrain, far-flung and hardly ever reached upland communities.

Thus, UDP came up with an evolving extension delivery system that started with increasing the number of extension workers in the municipality. In agreement with its partner Municipal Local Government Units (MLGUs), UDP provided mobility support to Agricultural Technicians (ATs) in terms of motorcycle and a monthly travel allowance. For its part, the MLGU, through the Office of the Municipal Agriculturist, assigned one AT for each of the 120 barangays covered by the Programme.

The second approach was identifying model farmers and appropriate technology adopters to be trained as paratechnicians. The selection was done with the communities, MLGUs and partner institutions. With their farms as showcases of improved practices, these farmer-extensionists assisted the ATs by hosting site visits, demonstrating technology options and convincing other farmers to adopt good practices.

The third was winning barangay investment in extension through the institutionalization of the paratechnician. Now called the Barangay Extension Worker (BEW), the farmer-extensionist is tasked to facilitate extension in his/her barangay with close guidance of the AT. Through the formal recommendation of the Barangay Chair, the BEW is given a Special Order by the Municipal Mayor.

As a barangay-based extension worker, the BEW is entitled a modest monthly honorarium, the amount of which is decided upon by the barangay. In some cases, the MLGU has a share in the monthly allowance which is largely for mobility purposes. Understandably, the BEW is accountable to the barangay government.

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[3] UDP is a special project of the Department of Agriculture. It is funded by a grant from the European Union and equity from the Philippine Government. The seven-year Programme started in October 1998 and will end in January 2006.

In developing the BEWs, UDP implemented a responsively enabling capacity building program by tapping the services and facilities of the Agricultural Training Institute in the provinces of Davao del Norte and South Cotabato. UDP also engaged the services of NGOs in Southern Mindanao. To further enhance their technical capacity, UDP sent the 120 BEWs to the World Agroforestry Centre (ICRAF) Research Site in Lantapan, Bukidnon. In ICRAF, the BEWs underwent thorough hands-on training on soil and water conservation and agroforestry and received an orientation on landcare as an approach to technology dissemination.

The positive initial post-training impacts of the BEWs led UDP and ICRAF to an agreement to further develop and expand the local extension system. Through a collaborative project entitled "Enhancing the Upland Extension System in Southern Mindanao", UDP and ICRAF started developing Learning Sites and Farmers' Training Groups (FTGs) in 30 selected barangays representing 30 municipalities in the region.

III. Objectives

The general objective of the UDP-ICRAF collaborative project is to strengthen local capacities for sustained upland extension by tapping credible upland farmers, local organizations, local governance and providing capacitating mechanism for sustained partnership with municipal, provincial, regional and national services, and eventual linkages and networks. These capacities are expected to play a bold role in improving farming in the uplands.

Specifically, the project aims to:

1. Establish among 30 UDP covered municipalities 30 Learning Sites and 30 accountable Farmers Training Groups managed by their respective Upland Barangay Associations (UBAs)[4];
2. Establish and strengthen the institutional base of local extension team of BEW and FTG;
3. Develop and implement capacity building and sustainability mechanism for community-managed extension; and
4. Facilitate the involvement of other local stakeholders and institutions in the development and operationalisation of local extension systems.

IV. Conceptual Framework

Using the systems approach to analysis, the project aims to develop sustainable local extension systems that are capable, accessible and accountable. This will be accomplished by subjecting local and external resources and existing laws, programmes and initiatives into processes that include awareness and commitment building, organizing, learning site

[4] An Upland Barangay Association (UBA) is composed of the sitio-based Upland Community Organisations (UCOs). The latter are in the sitios covered by UDP.

development, capacity building, institutionalising, linking and amalgamating, IEC and policy advocacy. The impact on the upland farming systems shall be the improvements on productivity, profitability and resource conservation. A feedback mechanism shall be established as avenue for some adjustments or changes in inputs and processes. The diagram of this conceptual framework is presented in Figure 1.

A. The Inputs

Considered as inputs to the development of sustainable local extension system are both existing and potential internal and external resources – human, institutional, material, natural, financial, information/technology and social capital. Also included are the existing laws, programmes and initiatives affecting local communities and their resources.

B. The Processes

Selection of Learning Sites

There are very direct implications for agricultural education in the area of human resource capacity building since by definition the term (and the process) has education, both formal and non-formal, at its core (FAO).

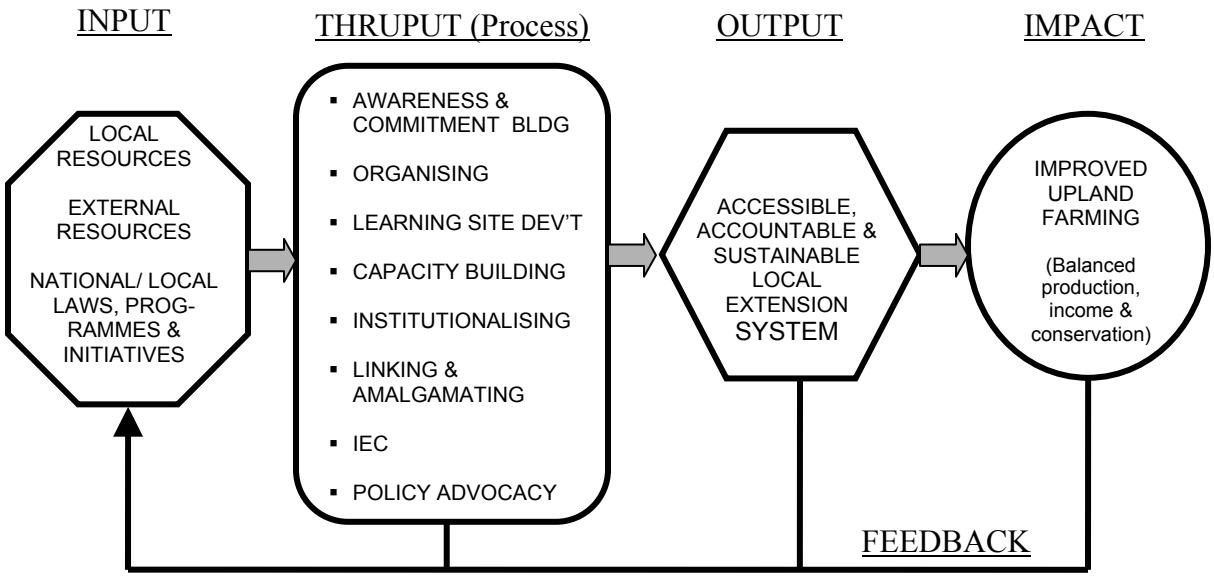

Figure 1. Conceptual framework of developing a sustainable community-managed local extension system for improved upland farming.

The project envisions continuing education to be accessible, responsive and proactive, and the most practical way to do it is to make it local and community-managed. Thus, a Learning Site was identified in each of the 30 municipalities.

A venue for participatory, experiential and farmer-managed learning, the Learning Site is considered as the seat of farmer-to-farmer knowledge sharing, technology dissemination and development and team building.

The selection of Learning Sites was based on the following criteria:

1. Existing and well developed diversified farming system (DFS) or model farm with both production and conservation components
2. Demonstrates appropriate technologies on the various slope classes and represents the dominant land facets of the locality
3. Accessible to neighboring sitios and barangays
4. Willing and volunteering owner to become Learning Site cooperator and host of learning and extension events
5. Barangay must have an active BEW
6. LGU willing to provide some incentives aside from technical advice. The model farmers could be recipients of dispersal inputs or existing programs like "Plant now, pay later".

Awareness building and consultation

Prior to the implementation of activities in the Learning Sites, the stakeholders (UCO, UBA, BLGU, MLGU, PLGU, regional and national agencies, state college) were informed of the project through an orientation at the provincial level. They were also consulted as to the priority agricultural and forest commodities and the corresponding appropriate technology options that should be demonstrated and learned at the Learning Sites. The consultation started with the review and validation of the results of training needs assessment that was conducted earlier among the BEWs. The output was a list of the priority training and development activities.

Planning and commitment building

The details of the activities to be conducted in each Learning Site were planned through a follow-up workshop. The threefold objective of which was to: bring together all local support to the project; ascertain institutional roles, parameters of collaboration and accountability; and prioritize and schedule identified training and other activities over the seven effective months of the project.

With selected representatives of the various stakeholders, the schedule of activities, the participants, the resources needed and the partners involved were identified and agreed upon. Barangay governments gave a range of commitments ranging from financial, material and policy supports. Municipal and provincial governments gave assurances for technical support, resource persons, planting materials and training kits. In Maitum, Sarangani Province, a learning and research center that was established and managed by the municipal and provincial governments was offered to be as an additional Learning Site. A demonstration farm of the MLGU of Mabini in Compostela Valley Province was also offered as another Learning Site.

Development of Learning Sites

The development of the Learning Sites are being undertaken by the cooperator, BEW and other members of the FTG. Providing support in various forms are the UBA, BLGU, AT, UDP and ICRAF. The physical development of the sites are guided by the Slope Treatment Oriented Practices for Soil Erosion (STOP Soil Erosion) that UDP is promoting. Through the STOP approach, farmers learn of the appropriate management options for different slopes, soil types, soil depths and household needs. The options are based on productivity, income and soil and water conservation agenda.

UDP also presented the following suggestions with respect to the development of Learning Sites:

1. The aim is to substitute corn-based mixed farming on steep slopes with perennial crops, or agroforestry with vegetative soil and water conservation techniques.
2. Cogon grassland will be converted to fruit tree orchards.
3. Fallow land, with clay loam to clay soils over 100 cm deep on slopes below 45%, should be targeted for terracing through a combination of grass strips and contour ploughing.
4. The production of highly erosive crops (e.g. corn, peanuts or root crops) is to be relocated or restricted to limited areas of gently sloping land facets, and high-yielding varieties are to be planted with recommended applications of fertilisers.
5. Vegetable production is to be intensified, starting with improving backyard systems and land where supplementary, gravity-fed watering is possible.

Unlike the traditional project demonstration farm, the Learning Site is managed by the farmer cooperator or owners. It is supported by the UBA and is integrated into the barangay system.

The number of Learning Sites in each province is presented in Table 1.

Formation of Farmers Training Groups

Farmers can be very active partners in extension and can set an agenda and direct a process in which government agencies and NGOs can participate to meet the needs of the farmers and their communities (Scarborough, et al, 1997).

A Farmers Training Group is a group of farmers so selected to become local trainers for other farmers in the locality. Although members were nominated following a process, membership in the FTG is voluntary.

For this project, one FTG was established in each of the 30 barangays where Learning Sites were established. With the guidance of the AT, the FTG is the official and recognized "training arm" of the UBA. It is led by the barangay-appointed BEW who has been trained intensively under the capacity building programme of UDP.

Table 1 also shows the number of FTG members in each province covered by the project.

Table 1. Number of Learning Sites and FTG members in each province.

Province	No. of Learning Sites	No. of FTG Members	Mean
Compostela Valley	7	50	7
Davao Oriental	9	44	5
Davao del Sur	6	24	4
Sarangani	6	36	6
South Cotabato	3	15	5
Total	**31**	**169**	

The process of selecting FTG members

Each FTG was designed to be composed of the BEW, the Learning Site cooperator, and farmer-members (one farmer per sitio) representing the sitios within the barangay where the Learning Site is located. The BEW and Learning Site cooperator automatically become members of the FTG.

The members from the sitios were nominated and selected based on the following criteria:

1. He/she must be a member of UCO
2. Adopter of DFS and other programs of UDP
3. Has undergone some training on sustainable agriculture and sustainable upland organisations
4. Respected in the community
5. Confident that the community is capable of achieving the goals of sustainable development
6. Confident of his/her capacity to teach other farmers
7. Willing to learn new technologies, methods and strategies
8. Willing to work with others in a team
9. Willing to spend part of his/her time in sharing his/her knowledge, experiences and skills on voluntary basis

The selection of FTG members was guided by the following procedure:

1. Selection and nomination of two candidates from each sitio by the UCO based on agreed criteria.
2. Interview and final selection of one from the two candidates by the UBA and/or by the Barangay Watershed Management Team.
3. Presentation of selected members to the Barangay Assembly by the UBA and the Barangay Council.

Some UBAs and UCOs modified the suggested procedure to fit to some cultural and social considerations. For instance, some UCOs opted to nominate only one farmer-member,

instead of two, to avoid ill feelings that may hold back cooperation. The FTG members were presented to the Barangay Assembly for informal recognition.

Building and Capacitating FTGs

A "partnership" is a relationship in which there is some equality between the parties in the agreement (www.scn.org/cmp/, 2004). In many triadic partnership involving GOs, NGOs and communities, the weakest leg has been the community. Projects take the communities as partners to ensure their plans get implemented and their objectives achieved, and many a times, contribution (labor for instance) is mistaken to participation.

Community participation is far more than the contribution of labour or supplies; it is participating in *decision making,* to choose a community project, plan it, implement it, manage it, monitor it, control it. It promotes the activities of a target community, with a view to the community taking more responsibility for its own development, starting with decisions about what projects to undertake, and stimulation to mobilize resources and organize activities. The realistic aim is for communities to get into partnerships with municipal or district authorities, and work towards more equal relationships (www.scn.org/cmp/ 2004).

For the locals like the FTGs, to become partners of GOs and NGOs in development, they need capacities comparable or equal to the parties. Thus, central to all the capacity building processes is webbing local capacities and strengths so that communities can evenly partner with GOs and NGOs in development efforts. This means assembling together local government and institutions to supply capacitating energy to the FTG and the UBA.

Capacity building was aimed at strengthening knowledge and skills of FTGs, as well as their organisational support at the local base so that the local extension team can ably partner with LGUs, NGAs, NGOs and other institutions in the delivery of extension services in the uplands.

Setting Up the Institutional Base for Sustainability

The next important step was to ascertain the institutional base and grip for the FTGs to provide sustaining structure for local extension right at the start.

A strong structure of farmers' organizations offers the opportunity for greater efficiency, effectiveness and equity of provision and access. They can also be a vehicle through which farmers can pay a contribution for services, become actively involved in the planning and management of extension, and act as a voice for their members, in getting services which meet their needs (Garforth and Nicola, 1997).

In many projects employing farmer-to-farmer strategy, farmer-promoters disappear the moment the project ends. Based on MANAGE-ODI (1997) experience, the farmer-to-farmer methodology is more sustainable when the promoters work to coordinate and organize activities that benefit the community, but only when they are located within the farmer organisation.

The farmer organisation will be much more interested in "keeping" the farmer promoters, especially, when they work on priority needs identified by community members of the organisations. This will optimise sustainability.

The organisation must have the holding structure, stability, means and motivation to keep the farmer promoters. On the other hand, farmer promoters must have a full grasp of the task and the theme, knowledge of the area, and the commitment to accomplish for the benefit of the community (MANAGE-ODI, 1997).

Looking at organisations and institutions around the Learning Site and the FTG, the UBA was found to be the strongest partner, primarily because like the FTG, its goal is to promote sustainable and economically viable farming and farm enterprise through resource-conserving technologies.

The officers and committees of the UBA are the UDP's local implementing and monitoring arm for its sustainable agriculture-related components. UBA has been formally linked with the BLGU and holds a seat in the Barangay Development Council.

In terms of access to government resources and services, the Barangay Council has been the strongest link. It can adopt community initiatives, like local extension by the FTGs, that blend with barangay development agenda and can easily link with the municipal and provincial LGUs. So, as early as the consultation and planning phases of the collaborative project, barangay officials have been involved, together other partners.

Linking and Amalgamating

Local extension systems need to be linked and integrated into larger systems. By this, they can access external support that can enhance their development and make them more prepared and more qualified for partnerships.

IEC

The production of appropriate Information, Education and Communication materials has been identified as one of the needs of local extension workers during the consultation workshop. In response, the project started an innovative and participatory approach to the development of localised, gender fair and culture sensitive awareness building and training materials for use by the FTGs and ATs.

Policy Advocacy

Local extension systems need to be supported by policies in order to be effective and sustainable. Involving the barangay officials in the process of developing local extension systems shortens policy advocacy and facilitates the formulation of supportive ordinances.

C. Initial Results

The first seven months of the project saw the development of 30 organised, capable and accountable local extension teams formally or informally supported and jointly capacitated by the UBAs and LGUs at the barangay, municipal and provincial levels. Through the Learning Sites, these teams were trained on group extension strategies and on various technologies using participatory methods.

BEW-FTG-AT local extension team

The local extension team started by the BEW-AT tandem became stronger with the coming of the FTGs and the Learning Sites. ATs and BEWs found the approach advantageous in that:

1. Extension delivery is faster and less stressing
2. Able to serve more farmers at a time
3. Easier to contact and meet farmers
4. Easier to win trust
5. The presence of AT is more felt by the community
6. Barangay kagawad, district kagawad and purok leaders are getting involved in the extension system
7. Extension activities at the sitio are easier to coordinate
8. Assessment of sitio needs is done by the respective FTG member and the purok leader
9. Barangay efforts for agriculture and natural resource management is more visible

Status of recognition and adoption

The Learning Sites and FTGs have been embedded in the Upland Barangay Association structures. For UBAs that have been integrated with cooperatives, FTGs are now in the education committees.

All the 31 Learning Sites and 31 FTGs have already been recognised by their respective Barangay Councils. As of to date, two Learning Sites and 2 FTGs have already been adopted by the concerned Barangay Councils through resolutions.

Knowledge and skills enhancement

The FTGs have completed more than 50 percent of their training plans. Among these are Slope Treatment Oriented Practices for Soil Erosion (STOP Soil Erosion), soil analysis, soil and water conservation, nursery establishment and management, agroforestry, organic farming, entrepreneurship, basic trainer's course, planning and designing IEC materials, and crop production technologies for integrated farming systems.

Organisational Support to FTG

Support from the UBAs varied from one Learning Site to another. Nevertheless, support came in the following forms:

1. Endorsing the Learning Site and FTG for recognition by the Barangay Development Council
2. Updating FTGs with supportive/related barangay and municipal ordinances
3. Ensuring presence of barangay officials during on-site extension activites
4. Presence in every FTG activity in and out of the Learning Site
5. Fund allocation under the education committee in UBAs turned cooperatives
6. Linking with the Barangay Council for direct assistance
7. Linking with barangay officials to mediate for support from municipal and provincial LGUs.

Extension activities of FTGs

Part of the skills enhancement agenda of the FTGs is coaching and immersion where, with the guidance of the Project Field Facilitators, ATs and Municipal Support Officers, the members go into farmer-to-farmer knowledge sharing at the Learning Sites and in the farms of other farmers in their barangay or neighboring barangays. This learning-by-doing phase enabled the FTGs to carry out actual extension work.

As satellites of the Learning Sites, the farms of the FTG members have already started serving the neighboring farmers.

To date, the FTGs have conducted extension activities such as cross visits and farmer-to-farmer demonstrations.

Support provided by partners

Support from partners came in various forms, namely: organisational (linking, recognition and accreditation, monitoring, management and mediation), resource persons/facilitators, training materials, supplies, facilities, infrastructure and community labor. The types of support extended by the different partners are indicated in Table 2.

Table 2. Support provided by partners to the development of community-managed extension system.

Partners	Support to Local Extension
Barangay LGUs (Barangay Council, Purok Leaders)	• Continuance of BEW support • Funds for construction of Learning Site structures • Enforcement of ordinances to support FTG advocacy and IEC • Policy • Recognition/Accreditation • Community labor • Steering sitio leaders for on site FTG extension activities • Mediation for UBA requests for MLGU/PLGU assistance • Food during meetings • Plastic bags
Municipal LGUs (MAO, ATs)	• Seeds and seedlings • Plastic bags • Resource persons • Training facilities • Monitoring
Provincial LGUs (PAGRO/PAO, ENRO)	• Seedlings • Subject Matter Specialists • Training materials • Training facilities • Labor for training materials preparation
ICRAF	• Host to cross visits of FTGs, UBAs, barangay officials, Watershed management teams • Resource persons/Subject Matter Specialists • Facilitation • Germplasm materials • IEC materials • Monitoring
UDP	• Technical assistance • Funds for capacity building • Logistics • Infrastructure • IEC materials • Planting materials
NGAs/R&D institutions (ATI, DTI, FIDA, BPI-DNCRDC)	• Trainers/Subject Matter Specialists • Training materials • Training facilities • Information
SUCs (DOSCST)	• Resource person/facilitation • Information

D. Initial Impacts

The extension activities of the FTGs have, in one way or another, contributed to the changes in lifescapes and landscapes. More timber tree seedlings have been propagated and planted in farmers' fields. The adoption of diversified farming or agroforestry systems with soil conservation measures has been enhanced.

Incomes of UBAs and FTG members have increased with some income generating activities such as catering (to training and cross visits), sale of organic farming materials, mushroom production and collection of entrance/training fees (from visitors/trainees from other places).

The involvement of the MLGUs, PLGUs, CENROs and other partners has also increased their presence in the barangays.

E. Initial Impressions

The experiences with the project and the earlier initiatives of UDP have given some early impressions that may be worth considering for deeper analysis. Some of them are as follows:

1. Local extension is one area where PO-LGU partnership can be enhanced.
2. Local people doing extension can intensify the services of MLGUs, PLGUs and NGAs at the community level.
3. Local extension makes local governance more responsive to natural resource management (NRM).
4. Strong institutional base is necessary for local extension.
5. As part of local extension systems, BLGUs can provide to institutionalisation & sustainability.
6. Among cooperatives, FTGs can broaden organisational concerns to include NRM.
7. The availability of FTG members for extension activities is affected by priorities for basic household needs.

F. Next Moves

Learning and Earning Sites

In the ensuing year, the Learning Sites shall be developed also as "earning" sites. They will demonstrate the management of upland farms as business enterprises with environmental concerns.

Dovetailing with government extension system

While there is an on-going initiative to develop a national extension programme, dovetailing the community- based extension systems with the former shall be initiated. Upon completion of the formal adoption of the local extension teams and their Learning Sites by the Barangay LGUs, their adoption by the Municipal LGUs shall be worked out together with the concerned Barangay Captains.

Networking

As the managers of the community extension systems, the UBAs shall be encouraged to establish networks at the provincial level. The FTGs shall also be encouraged to establish provincial networks. The networks shall be developed to enhance the exchange of strategies, information, germplasm and other resources.

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