



Agricultural Extension Policies in the Philippines: Towards Enhancing the Delivery of Technological Services¹

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INTRODUCTION

In the agriculture, aquatic, and natural resources (AANR) sectors, research activities are geared toward increasing productivity and improving efficiency to reduce costs and losses of and ultimately achieve welfare gains for the more than 500 million farming families in the world. Technologies, information, techniques and methodologies as well as products from research and development (R&D) initiatives are major inputs to production, post-production and distribution activities of these farming families. However, any R&D output is futile unless it is conveyed to its target users. This is where the role of extension becomes crucial.

Extension or rural advisory services (RAS) pertain to all activities related to the provision of information and services required by various stakeholders, especially in the rural areas, to assist and support them in the development of their own technical, organizational, and management skills and practices with the end goal of improving livelihoods and well-being. It covers training, farm or business advisory, demonstration and information and communication support services (PCAARRD et al., 2015). Davis and Heemskerk (2012) further indicated that extension has evolved to be considered as a system that is integral and central to innovation systems. It focuses on facilitating and learning rather than simply training farmers.

Extension provides assistance to farmers and fisherfolk to identify and find solution on issues of production, farm management and marketing through exchanges of information, techniques, and methodologies among and with co-farmers, extension agents, input suppliers, credit agencies and traders. From an innovation system perspective, extension plays a crucial role in strengthening capacities to innovate and brokering linkages (Spielman et al, 2011 as cited Davis and Heemskerk, 2012). The need for systematic perspective is emphasized by Bonifacio (1995) in his report which stated that technology complements the technical, social, political, and economic environment. It provides facilitation of interaction with partners in research, education, agribusiness and other relevant institutions. Ponce (1989 as cited by Bonifacio, 1994) pointed out that without the strong linkage of research and extension, the probability of generating inappropriate technologies increases since research will be likely based on incomplete data

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and information on farming needs and problems and challenges. Extension then is an essential facilitative instrument for needs assessment. It encourages participation to promote efficiency and effectiveness of technology development and use with emphasis on finding the fit between innovation from researches and farmers' practices. It is indicated as key investment for sustainable agriculture with considerable positive effects on knowledge, adoption, and productivity resulting into very high rates of return of 13 – 500% (GFRAS, 2012).

Despite the crucial role of agricultural extension services in achieving sustainable growth for the sector, it remained ineffective and received modest support from the government. Relationship between the level of funding support for agricultural extension and the issues in establishing and maintaining an effective agricultural extension service can be rooted back to the lack of realistic policy or unstable policy framework that lay-out the goals of an extension system. Several researches showed that poor family farmers can quickly achieve their productivity potential when enabling policy environment is effectively in place. The significance of extension policy is even emphasized in the FAO's Global Consultation on Agricultural Extension recommendation for all national governments to develop and periodically review their agricultural extension policy (Contado, 1998). The Consultation further stressed the importance of formally enacting agricultural extension policy. Hence, there is a need for a paradigm shift from the notion that research knowledge can drive innovation to the belief that change in the whole system, including extension services, is required for innovation. This must also take place in the thinking of extension administrators and policy makers.

In a developing country like the Philippines, the important role of extension in agriculture growth and development has long been recognized. As early as the Spanish colonization era, model farms (Granjas Modelos) were established by the Spanish missionaries for demonstration. To date, it is recognized and defined in the Agriculture and Fisheries Modernization Act (AFMA), the country's landmark law outlining development initiatives for the AANR sectors, as "the provision of training, information, and support services by the government and non-government organizations to the agriculture and fisheries sectors to improve the technical, business, and social capabilities of farmers and fisherfolk." This paper aims to provide information and insights on the significant policies that developed and supported the extension services in the country.

AGRICULTURAL EXTENSION POLICIES IN THE PHILIPPINES

Colonization period

The agricultural extension in the Philippines even started during the Spanish colonization period through the establishment of the model farms or the "Granjas Modelos" that were later transformed into Settlement Farm Schools (Serrano, 1987). Meanwhile, during the American regime, the division of Demonstration and Extension Service was created under the Bureau of Agriculture in 1910 to provide extension services including cooperative farmers' associations, rural credit and animal insurance. Under the Commonwealth Government, Commonwealth Act No. 85 was enacted in 1936 which created the provincial agricultural extension service.

UNDER THE PHILIPPINE REPUBLIC

Republic Act (RA) No. 680

The Bureau of Agricultural Extension (BAEx) created through Republic Act (RA) No. 680 titled "An act creating a Bureau of Agricultural Extension defining its powers, duties and functions and providing appropriations therefor," was signed into law on April 24, 1952. The BAEx is a consolidation of the Agricultural Extension Division of the Bureau of Plant Industry and the Livestock Extension Division of the Bureau of Animal Industry, and all those

working on agricultural extension in other divisions, sections, or services of any bureau or office under the then Department of Agriculture and Natural Resources (DANR).³

Section 2 of RA No. 680 stipulated that agricultural extension shall “consist of the diffusion, among the people, of useful and practical information on agriculture, soil conservation, livestock, fisheries, forest conservation, public lands and natural resources laws, home economics and rural life, in order to encourage their application through field demonstrations, lectures and conferences, publications and other means on imparting information.” The law focused on disseminating and imparting of practical and scientific knowledge to stakeholders of the AANR sectors, a typical illustration of a top-down approach.

The law created the "Agricultural Extension Fund" for the salaries and wages, purchase of equipment and supplies, for the operations of the BAEx, and for all expenses related to agricultural extension work. It specified that the BAEx shall be headed by the Director of Agricultural Extension. It also created the Provincial Agricultural Extension Service, consisting of one Provincial Agricultural Agent, Home Demonstration Agent (a woman) and the extension districts to be supervised directly by one District Extension Agent for men and one District Home Demonstration Agent for women⁴.

1. Republic Act No. 3844

Republic Act No. 3844 also known as the Agricultural Land Reform Code was signed on August 8, 1963. The law specified the strengthening of existing agricultural extension services through the consolidation of all promotional, educational and informational activities pertaining to agriculture. The Bureau of Agricultural Extension of the then Department of Agriculture and Natural Resources was placed directly under the executive supervision and control of the President and was renamed Agricultural Productivity Commission.⁵ The Commission shall be headed by the Agricultural Productivity Commissioner who shall exercise the same powers and duties vested in the Director of the Bureau of Agricultural Extension.⁶

The law intensified the promotion of agricultural cooperatives and promoted programs and projects to support agricultural land reform. Specifically, RA 3844 (Section 123) stipulated the requirement for extension workers to be graduates of agricultural college with adequate practical experience and training in actual crop, tree, poultry and livestock farming. While high school graduates can serve as extension workers, they were employed on temporary basis. To ensure maximum efficiency, the extension workers were trained in research institutions.

2. Republic Act No. 5185

Republic Act No. 5185 titled “An act granting autonomous powers to local governments” or the “Decentralization Act of 1967” was signed on September 12, 1967. The law specifically empowered the local government to conduct agricultural extension services. They were given additional powers and functions for undertaking field agricultural extension work deemed necessary by the Provincial and Municipal Boards or City Councils to assist or supplement existing national programs or services. The extension services shall be funded from the provincial, city, and municipal governments’ budget retained from the contribution to the National Government.

3. Executive Order No. 128, Series of 1968

Executive Order (EO) No. 128, signed on May 6, 1968, provided for the implementing details of RA No. 5185 on the relationship of the field agricultural extension work of the local governments and national government. Section 1 of the EO expanded the meaning of agricultural extension to include “stimulation, promotion and organization of agricultural cooperatives and encouragement in the formation and growth of private associations, study clubs,

³ Section 4, RA No. 680

⁴ Section 5 and 6, RA No. 680

⁵ Section 119, RA No. 3844

⁶ Section 121, RA No. 3844

committees and other groups of farmers and members of their family that will enhance their social and economic conditions.”

Sections 2 and 3 of the EO stipulated the funding sources from the provincial, city, and municipal funds and the appointment and salary of field agricultural extension personnel to enable the undertaking of field agricultural extension works. Moreover, Section 7 provided that the provincial or city agriculturists shall exercise direction and administrative management over the field agricultural extension service undertaken by the provincial or city government.

4. Executive Order No. 116, Series of 1987

With the change in administration from President Ferdinand E. Marcos to President Corazon C. Aquino in 1986, Executive Order No. 116 of 1987 was issued on January 30, 1987. The EO renamed the Ministry of Agriculture and Food as Ministry of Agriculture and reorganized its units. Among the Ministry’s powers and functions specified in Section 5e was to “provide comprehensive and effective extension services and training to farmers and other agricultural entrepreneurs on the production, marketing, and financing aspects of agricultural enterprises.” On the other hand, Section 20 on Mergers provided that “The Philippine Agricultural Training Council, Philippine Training Center for Rural Development, and Bureau of Agricultural Extension are hereby merged into the Agricultural Training Institute (ATI), which shall train Ministry field technicians in extension work with emphasis on technology transfer techniques; train generalists in regional field offices; and conduct multi-level training programs to promote and accelerate rural development.”

5. Executive Order No. 292, Series of 1987

Executive Order No. 292 of 1987, known as the Administrative Code of 1987 was issued on July 25, 1987. The EO provided the major structural, functional, and procedural principles and rules of governance and the changes in administrative structures and procedures. Title IV of the EO contained the provisions on agriculture. It specified the Department of Agriculture (DA) (former Ministry of Agriculture) as the agency mandated to promote agricultural development by providing the policy framework, public investments, and support services. Among the DA’s powers and functions retained was on providing extension services and trainings.

Section 25 of Chapter 4 under Title IV of the EO specified the ATI as the agency “responsible for the training of all agricultural extension workers and their clientele, who are mostly farmers and other agricultural workers.” ATI was also mandated to “ensure that training programs address the real needs of the agricultural sectors” and “that the research results are communicated to the farmers through the appropriate training and extension activities.”

6. Republic Act No. 7160

Republic Act No. 7160 also known as the Local Government Code of the Philippines of 1991 was signed on October 10, 1991. It provided for devolution or a system of decentralization, giving more powers, authority, responsibilities, and resources to the local government units. Section 17 of the law included extension services among the basic services devolved to the local government units. Section 482 implicitly specified functions, enumerated as follows, of an Agriculturist related to the performance of extension services.

- Ensure that maximum assistance and access to resources in the production, processing and marketing of agricultural, aquacultural, and marine products are extended to farmers, fishermen and local entrepreneurs;
- Conduct or cause to be conducted location-specific agricultural researches and assist in making available the appropriate technology arising out of and disseminating information on basic research on crops, preventive and control of plant diseases and pests, and other agricultural matters which will maximize productivity;
- Assist the local government through the governor or mayor, as the case may be, in the establishment and extension services of demonstration farms or aqua-culture and marine products;
- Coordinate with government agencies and non-governmental organizations which promote agricultural productivity through appropriate technology compatible with environmental integrity.

7. Republic Act No. 8435

Republic Act No. 8435, otherwise known as the Agriculture and Fisheries Modernization Act (AFMA) of 1997, was signed into law on December 22, 1997. On the other hand, the Department of Agriculture (DA) Administrative Order (AO) No. 6, Series 1998, signed on July 10, 1998, served as the Implementing Rules and Regulations of the AFMA. The law provided measures to modernize agriculture and fisheries sectors in order to enhance profitability and in preparation for globalization. Extension is among the many areas covered under AFMA including production and marketing support services, human resource development, research and development rural non-farm employment, and trade and fiscal incentives.

Under Title 3, Research Development and Extension, Chapter 2, Extension Services, of the AFMA, the country declared its pronouncement to support the development of a national extension system to aid in accelerating the transformation of Philippine agriculture and fisheries from a resource-based to a technology-based industry. Further, it is stipulated that extension services shall cover the following major services to the farming and fishing community:⁷

- a) Training services;
- b) Farm or business advisory services;
- c) Demonstration services; and
- d) Information and communication support services through tri-media.

AFMA stipulated the formulation of a National Extension System for Agriculture and Fisheries (NESAF) with three subsystems, namely: national government subsystem, local government subsystem, and private sector subsystem. It encourages multidisciplinary participation for the delivery of extension services to involve the farmers, fisherfolk, and their organizations, and those engaged in food and non-food production and processing, including the private and public sectors.

The local government units (LGUs) are mandated to deliver extension services to farmers, fisherfolk, and agribusiness entrepreneurs (Rule 90.1). Provincial governments are mandated to integrate the operations for the agriculture extension services within the province and undertake continuing and periodic annual evaluation of all municipal extension programs (Rule 90.2). On the other hand, the SUCs are mandated to focus their extension activities with their students and extension personnel of LGUs as their clients. For the improvement of the extension capabilities of LGUs, the SUCs are mandated to provide the following:

- Degree and non-degree training programs (Rule 90.8.1)
- Technical assistance (Rule 90.8.2)
- Extension and research activities (Rule 90.8.3)
- M&E of LGU extension projects (Rule 90.8.4)
- Information support services (Rule 90.8.5)

For the private sector's role, Section 91 of the law mandated DA to "encourage the participation of farmers and fisherfolk cooperatives and associations and others in the private sector in training and other complementary extension services especially in community organizing, use of participatory approaches, popularization of training materials, regenerative agricultural technologies, agribusiness and management skills." The law also authorized the DA to "commission and provide funding for such training and extension services undertaken by the private sector."

8. Administrative Orders (AO) of the Department of Agriculture

The approval of the AFMA and its IRR resulted to the issuance of a number of DA Administrative Orders (AOs) needed to implement the law. Among these are as follows:

- a. **DA AO No. 42, Series of 1999, dated October 14, 1999** – Guidelines in Planning, Implementing, Monitoring and Evaluating Extension Programs for Agriculture and Fisheries Modernization

⁷ Section 87, AFMA

The Guidelines provided the basic and governing principles, the scope and components of A&F extension, the major actors of A&F extension, and the specific guidelines on the planning, implementation, monitoring and evaluation, and budgeting and funding scheme for the A&F extension program.

- b. **DA AO No. 13, Series of 2005, dated March 31, 2005** – The National Extension Agenda and Programs (NEAP)

The NEAP included the thematic agenda and programs, the mechanisms and instruments for effecting collaboration/partnership, and institutional arrangements among the LGUs, the DA-RFUs, the DA-ATI, SUCs, National Government Agencies (NGAs) other than DA, and the private sector (NGOs and POs).

- c. **DA AO No. 14, Series of 2005, dated March 31, 2005** – Shift in the Role of the Agricultural Training Institute (ATI) as an Indirect Provider of Extension Services

The AO streamlined the operations of the ATI based on its role as indirect provider of extension and training services to LGU extension workers. This is to complement the LGUs responsibility to deliver direct agriculture and fisheries extension services to farmers and fisher folk.

- d. **DA Department Order (DO) No. 03, Series of 2007, dated June 8, 2007** - Designating the Agricultural Training Institute as Lead Agency for the Provision of e-Extension Services

The DO provided that the ATI should collaborate with the various agencies, bureaus, and organizational units of the DA for the development and content build-up of knowledge and database management in the provision of e-learning courses, farm and business advisory services.

- e. **DA AO No. 22, Series of 2008, dated May 29, 2008** – Implementing Rules and Regulations on the Accreditation of Private Extension Service Providers (ESPs) for the Provision of Extension Services

The AO provides the guidelines for private entities such as rural-based organizations (RBOs), cooperatives, NGOs, POs, and Multi-National Companies (MNCs), to obtain a certification from the ATI to undertake training and other complementary extension services, on behalf of the DA.

- f. **DA AO No. 24, Series of 2008, dated July 1, 2008** – Implementing Rules and Regulations on the Provision of Extension Grants to Accredited Private Extension Service Providers (ESPs)

The AO provided the guidelines on the availment of funding support in the form of grants to encourage the participation of accredited private ESPs. It covers extension services such as trainings, techno-demo, production/development of information, education and communication materials, and farm business advisory.

- g. **DA AO No. 11, Series of 2012, dated February 29, 2012** - Implementing Rules and Regulations on the Accreditation of Private Organic Agriculture Extension Service Providers (OA ESPs)

The AO provided the guidelines on the availment of accreditation that a private entity may undertake training and other complementary extension activities on organic agriculture, for target clientele along the value chain (input suppliers, producers, traders, processors and consumers).

THE AGRICULTURE TRAINING INSTITUTE (ATI) AS THE PHILIPPINE APEX AGENCY FOR EXTENSION SERVICES

A number of laws identified ATI as the lead agency to provide A&F extension services in the Philippines. AFMA IRR (Rule 88.1) mandated the ATI to issue the “Guidelines for the Planning and Implementation of Agriculture and Fishery Extension” and to maintain an inventory, computerized database, of the extension force covering all the A&F extension personnel of the LGUs, the DA and its attached agencies and bureaus, other Departments, State Colleges and Universities (SUCs), Non-Government Organizations (NGOs), and People’s Organizations (POs).

Among the mandates of ATI stipulated in the AFMA IRR are as follows:

- Issue the “Agriculture and Fishery Participatory Planning Manual for LGUs” (Rule 90.4);
- Coordinate with the Planning Service (PS) of DA in preparing the learning materials on local A&F development planning (Rule 90.5);
- Periodically assess the A&F planning and programming capability of LGUs and formulate a long-term program to provide continuing education and technical assistance to LGUs in sectoral planning and programming (Rule 90.6);
- Develop the “Guidelines in the Preparation of Extension Programs of SUCs” (Rule 90.9);
- Develop specific guidelines harnessing the resources and the expertise of the private sector in the provision of extension services (Rule 91.3);
- Compile a database and an accreditation system for private entities qualified to provide extension services (Rule 91.4);
- Undertake the extension functions of the DA through its training centers (Rule 92.1);
- Supervise the National Training Centers and Institutes (NTCIs), the Regional Training Centers (RTCs), and the Provincial Training Centers (PTC) (Rule 92.2, 92.3, 92.4);
- Form a task force to work with the Departments of Finance (DOF) and Interior and Local Government (DILG) to propose parameters, modes, guidelines and mechanisms for co-financing agreements with the LGUs on the financing of agriculture and fisheries extension (Rule 93.1);
- Draft, submit for evaluation, and implement the program, parameters and guidelines for the evaluation of agricultural and fisheries extension performance, activities, institutions and outputs, incorporating the Output-Oriented Performance Standards (Rule 94.1); and
- Provide continuing development communication support through the tri-media for the nationwide extension system (Rule 95.2)

Further, the DA AO No. 28, Series of 2008, dated July 29, 2008 titled “Designating the Agricultural Training Institute as Apex Agency for a Unified and Efficient Agriculture and Fisheries Extension System” was issued to strengthen the ATI’s functions as mandated by the AFMA. It specified the following functions for the ATI and repealed previous inconsistent issuances:

- Provide leadership in the development of national extension policies in agriculture and fisheries;
- Orchestrate the development of a national extension strategic plan for agriculture and fisheries to accelerate the achievement of the goals of the agriculture and fisheries modernization;
- Develop and implement national programs aimed at the continuous improvement of the quality of extension methods, products, and services towards a more efficient, participatory and client-responsive knowledge management system;
- Manage the national extension resources for agriculture and fisheries and ensure a sustainable cost-effective system of funding public agriculture and fisheries information, education and communication;
- Provide leadership in the development and implementation of the National Agriculture and Fisheries Knowledge Network (NAFKN) of the Department through a system of partnerships that includes the LGUs, the academe, the civil society organizations (CSOs), stakeholders along the value chain, the RBOs, and the private sector;

- Provide national leadership in developing extension partnerships towards increased investment and private sector participation;
- Team up with the SUCs of agriculture/fisheries as key partners in the implementation of the national programs specifically in the areas of extension innovation, national training, and monitoring and evaluation of extension institutions and programs; and
- Provide leadership in developing and implementing a national system of strengthening institutional extension capacities at all levels of implementation.

At present, ATI has 16 training centers established in the different regions of the country and one international training center known as the ATI-International Training Center on Pig Husbandry (ITCPH) located in Lipa City, Batangas. ATI offers training programs for national, regional, and local government extension personnel. It also offers international training courses for extension workers in the ASEAN member countries. These training programs include the following:⁸

1. e-Learning courses on A&F
Certificate courses on agricultural technologies of different commodities are offered through distance mode of learning. This is done through the website: www.e-extension.gov.ph/elearning.
2. Regional training programs
ATI offers commodity-based courses; social technology courses; and agribusiness and technology courses to extension workers of the LGUs, farmers, fisher folk, women, youth, and other stakeholders. These courses support the food security and poverty alleviation program thrusts of the DA and are conducted in the ATI Training Centers.

Scholarship programs for degree and non-degree training in AANR are also provided through the Expanded Human Resource Development Program (EHRDP) and the Youth in Agriculture and Fisheries Program. The former is designed for the staff of DA and for deserving technical, scientific and extension workers and practitioners in AANR while the latter is for deserving children of small farmers and fisherfolk. Scholarships are provided through SUCs, and private colleges and universities/training institutions.

Aside from the training and scholarship programs, the ATI also implements the following key programs and projects:

- e-Extension Program for Agriculture and Fisheries
 - e-Learning
 - e-Farming services through the Farmers' Contact Center
- Techno Gabay Program
- School-on-the-Air Program
- Galing Saka Program
- Sikat Saka Program
- Produktibong Pinoy
- Ladderized Training Programs for Out-of-School Youth
- School for Practical Agriculture
- Reaching the Unreachable: Enhancing Capacities of Senior Citizens and Physically Challenged Rural Poor
- Gender and Development Interventions
- Early Child Care Interventions
- From Arms to Farms: Fostering Peace through AF Development in Conflict Areas
- Training and Modelling of Agri-preneurship, Agri-cator and Agri-techure
- Farm Tourism Program and Farm School Network
- Organic Agriculture Program
- Climate Smart Farmers' Field Schools

⁸ ATI website

⁹ ATI website

- ATI Tree for Life, Food for Life Project
- Greening the Cities for Food and Environment

ISSUES AND CHALLENGES IN EFFECTING A NATIONAL EXTENSION SYSTEM

In the 1950s and 1960s, the lack of access to modern production and technology and the stubborn adherence of farmers to traditional practices predominantly weakened the agricultural growth in the country. Social scientists and development enthusiasts in the 70s and 80s, on the other hand, scrutinized modernization underpinning growth in the sector. Concerns on ecological-soundness and sustainability of modern technologies were questioned, hence, focused on technological development with consideration of and built on traditional practices were proposed as crucial rural development strategies. However, failure to consider participation of rural beneficiaries – farmers and fisherfolks, limited the full achievement of the goals of rural development strategies. With the declining interest on and popularity of top-down approach, the situation put emphasis on the emergence and predominance of participatory approaches, diffusion of innovations models, and process-oriented strategies of technology transfers involving farmers.

While several policies were crafted to support and encourage the active participation of farmers and key rural development beneficiaries, the country’s extension system is still haunted by the following issues and problems:

- Extension is only part and parcel of policies and guidelines in the country. After the BAEx, no law has been enacted to explicitly stipulate the coverage and scope of extension and lay-out the rules and guidelines in implementing it. An elaborate, while not comprehensive, description of agricultural extension services is specified in the AFMA.
- The devolution of the extension functions and services to the local government units through the Local Government Code addresses the issues on technologies being viewed from the “outside” or the top-down approach. It was observed that the devolved extension system encouraged the broad-based participation of farmers and rural stakeholders. Greater empowerment of farmers was also achieved since they were provided greater access or become closer to service providers. However, crucial issues are still apparent:
 - Lack of funding support. Funds allocation for agriculture, in general, and for extension, in specific, compete with other major programs such as infrastructure, health, tourism, environment and others. In most cases, infrastructure projects received the majority of the LGU budget, sharing an estimate of about 40% of the total funds (Ocenar et al., 2004).

Mobility of extension workers is slow and limited. They are usually office bound due to shortage of operational funds for travel. They encounter difficulty in providing extension services and support especially to far-flung areas. Budgetary constraints also limit the production of information, education and communication (IEC) materials, if not downgrade the quality of these IEC materials due to photocopying.

Ocenar et al. (2004) further noted that decentralization of powers without financial decentralization is meaningless. Programs of LGUs should be supported through transfer of financial resources thereby limiting funding dependency from the national government.

- Human resources development issues. The lack of career development plan and opportunities for extension workers provide disincentive for quality and efficiency of service delivery. This is even aggravated by low salaries and poor incentive systems. It should be noted that continuous capability building of extension workers are needed to facilitate re-orientation to community-based and participatory approaches and enhance technical knowledge and skills. If not provided, extension workers may become “obsolete” resulting to the collapse of extension at the local level (Malvicini, 1996 as cited in FAO, 2009).

Extension workers have become “jack of all trades, master of none” since they have to address all agricultural related issues in their respective localities. Because funds are limited, extension workers were transformed from commodity or subject matter specialists into generalists.

- Political interventions largely determine the type and quality of extension services to be provided. In some extent, political influences affect the hiring of staff, thereby affecting focus of initiatives and effectiveness of extension service delivery.
- At the national level, no functional apex agency for agricultural extension. DA has no institutional channel to work with LGUs while LGUs have no national institution to work with matters concerning agricultural extension policy, coordination, support and monitoring (Saliot, 2006).
- Farm or home individual visits appear to be the most common extension modality. As mentioned, due to the limited funds, the extension staff serves very few farmers per visit in a locality. Use of other forms of providing extension services such as mass media and social media (i.e. Facebook) is not fully explored and maximized.
- Issues on the supply and demand complexities of extension. On the supply side, there is an apparent disconnect and disharmony of programs and agenda of various agencies providing extension. Overlapping and redundancy of functions and activities are observed.

On the other hand, the demand side did not show much evidences that farmers’ voice are heard and included in the prioritization of research and extension initiatives and agenda.

CONCLUSION AND POLICY IMPLICATIONS

Extension plays crucial role in bolstering growth in the AANR sectors. It is an important node that links research outputs to its ultimate beneficiaries. Research community has already been sensitized of the role of extension in helping the farmers to participate in technology development and transfer. In the Philippines, the importance of research-extension linkage is recognized by the government through different laws and administrative orders. Among the various laws enacted and administrative orders crafted, the AFMA is the principal policy that stipulates provisions on how extension shall be undertaken in the country. Specifically, AFMA defines extension as initiatives undertaken by the government and non-government organizations to improve the welfare of the various stakeholders in the AANR sectors through provision of trainings and information and sharing of knowledge and skills.

While policies are in place, several issues impede the effective and efficient delivery of extension services in the country. Among others, the problems include limited funding support, poor synergy of programs and initiatives of agencies and institutions on AANR development, inadequate human resources development programs and limited use of mass and social media as means of providing extension services. Given such, a review of the extension policies, through consultative meeting with all key stakeholders may be necessary. In addition to the above-mentioned concerns, policies should also consider the declining interest on agriculture and decreasing number of students taking agriculture-related courses. If policy environment will not provide adequate incentive mechanisms to future extension workers, collapse of the extension system may be inevitable. Opportunities to look at extension system on digital perspective may also be explored to maximize availability and access of technologies and provide for quicker and more responsive services. Also, it must be high time to consider the role of the private sectors and engaging into co-payment systems in the provision of extension services. This will provide farmers and key AANR stakeholders to articulate priorities while enabling a more effective and efficient use of scarce government resources. Lastly, the need for a comprehensive and exclusive law on agricultural extension services in the country may be regarded.

Recent development on the policy environment for extension services in the AANR sectors in the country includes the crafting of house and senate bills. During the 16th Philippine Congress, the following bills were initiated. These policies can be reviewed and refiled to the 17th Congress to strengthen the agricultural extension in the country:

- Senate Bill 681 and House Bill 4066, An Act Prescribing the Strengthening of the National Agriculture and Fisheries Extension System to Accelerate Agriculture and Fisheries Development, Appropriating Funds Therefor and for Other Purposes, otherwise known as the “Agriculture and Fisheries Extension Act of 2014” by Senator Loren Legarda and Representative Maximo B. Rodriguez Jr., respectively

The proposed bill recognized the role of agriculture and fisheries extension as key driver of growth and development of the sector. The law aims to: (1) establish equitable access to assets, income and basic support services and infrastructure; (2) promote science, technology, and human resource development as essentials for national development and progress; and (3) utilize and research results and support the development of national extension system.

- House Bill 2804, An Act Prescribing the Strengthening of the National Extension System to Accelerate Agriculture and Fisheries Development, Appropriating Funds Therefor and for Other Purposes, otherwise known as the “Agriculture and Fisheries Extension Act of 2013” by Representatives Diosdado Macapagal Arroyo and Gloria Macapagal Arroyo.

The proposed bill recognized that knowledge-intensive agriculture (KIA) is anchored on a dynamic, responsive agriculture and fisheries extension with strong linkage to knowledge generation. The bill aims to: (1) strengthen the country’s extension system by decentralizing it to the appropriate level of political unit; (2) obtain the salaries and wages of extension personnel from the national government; (3) professionalize and standardize the salaries and wages of the LGU extension personnel equivalent to that of the national government; and create national agency to be called “Philippine Agriculture and Fisheries Extension Agency (PAFEA).

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