Agriculture and Fisheries Modernization:
Remaining a Pipe Dream

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I. INTRODUCTION

Concerns over poverty and globalization have compelled Philippine development analysts to give closer attention to agriculture. The incidence of poverty in the Philippines is highest among people engaged in agriculture. In 1994, the government's working group on poverty statistics placed the total number of poor families at 4.53 million, or 35.5 percent of the total number of families. Three million or 66.4 percent of poor families are in the rural areas and predominantly engaged in agriculture. Of the total number of families that earned under PhP40,000 in the rural sector in 1994, 69.5 percent derived their income principally from agriculture activities. Even in the urban sector, a considerable proportion (33 percent) of families that earned below PhP40,000 in 1994 was agriculture-based. Combined, 57.2 percent of families that earned under PhP40,000 in 1994 derived their income principally from agriculture.

Increasing globalization has given the agriculture problem another dimension. While there will be winners in the opening up of the agriculture sector to greater competition, there will likewise be losers in the process. Globalization has also exposed the economy to vulnerabilities that can trigger economic reverses, in turn affecting the poverty situation. After posting appreciable reduction in poverty from 49.5% in 1988 to 31.8% in 1997, poverty is again on the uptrend, increasing to 34.2 % in the year 2000. The problem is more pronounced in the rural sector, where poverty incidence has remained high and exhibited the same reversal in trend. This pattern in poverty reflects the country's recent economic growth experience. The poverty reduction was achieved during the relatively higher growth years of the first half of the 1990's, while the reversal was precipitated by the economic slowdown following the 1997 Asian crisis. And the future is not encouraging as the economy reels from a weak global economy that has been shaken by the September 11 terror attack in the US and its aftermath.

Poverty Incidence in the Philippines (%)

	1988	1994	1997	2000
Total	49.5	35.5	31.8	34.2
Urban	34.3	24.0	17.9	20.4
Rural	52.3	47.0	44.4	47.4

Source: ADB; NSCB

Many analysts gave identified the key interventions needed not only to address poverty in agriculture but its lack of competitiveness as well. These include investing in rural infrastructure, investing in human resource development, and investing in agriculture research and extension.

Investing in rural infrastructure. The provision of rural infrastructure will be critical in raising agriculture income and productivity. Access to paved roads, electricity, and piped water is known to have a high impact on agriculture income and productivity. These goods create production alternatives that increase the mobility of agriculture capital and allow it to seek more profitable activities. In many instances, these goods also reduce production seasonality and afford greater scale economies, thereby increasing capital turnover and intensities.

Investing in agriculture research and extension. The government must increase investments in agriculture research and extension. A principal objective is to introduce new production systems that will improve the productivity of existing resources. To have an appreciable impact on the poor, the new production systems must minimize dependence on commercial inputs. This is needed to reduce the need for cash capital, which is hardly available to poor farmers.

Extension work must be pro-active. It must not merely respond to the community's perceived needs but endeavor to increase adoption of new production systems. Thus, the extension worker must look at what types of activities are best suited for the area, suggest these to the communities, and make training and other support services available. Pro-active extension will hopefully facilitate the wider adoption of a particular type of productive activity within a community. Such widening could produce industry scale economies despite micro-ownership in areas like marketing and transportation, increase positive externalities such as learning from experiences and demonstration effects, and create incentives for cooperative production.

Government assistance in market promotion will be critical. Market promotion should include programs that will develop export markets and increase forward integration of farm products and food processing. This will help reduce the risk of seasonal supply gluts.

Investing in human resource development. The quality of human resource, of which health and education are important determinants, has great impact on well being.

An empirical inquiry made by Balisacan (1994) on the relative contributions of various socioeconomic factors to rural household poverty status showed education to have the strongest positive effect. Education of the household head raises the income/needs ratio, affirming the importance of education in increasing the well being of the household. As for health, its impact on the productivity and income of the poor should be self-evident. Improvement in health status improves the quality of labor, often reflected in longer hours of vibrant work.

Aside from their impact on labor productivity, we can also expect education and health status to bear an appreciable correlation with entrepreneurship. Improvement in health and education status brings about better access to information and knowledge, which are essential in developing the ability to allocate resources efficiently.

Given the identified needs in agriculture, the approval on 22 December 1997 of Republic Act 8435, otherwise known as the Agriculture and Fisheries Modernization Act of 1997 (AFMA), was a welcome development. The signing of this bill into law came at the heels of the country's accession to the World Trade Organization in 1994. The law responds to the need to address problems in the agriculture sector to make it better prepared for globalization and facilitate a considerable reduction in poverty in the sector. The title of the Act summarizes the objective and means of the law, that is, to modernize the agriculture and fisheries sectors in order enhance their profitability and prepare them for the challenges of globalization through adequate, focused and rational delivery of necessary support services.

The AFMA is ambitious in its comprehensive approach to agriculture development. It seeks to promote higher productivity through support services and advances in production systems at the technological, manpower and organizational levels. It aims to increase marketability and value added through greater vertical and horizontal integration and further processing.

This paper looks into the status of implementation of the AFMA, identifies existing implementation problems, and proposes adjustments towards a more effective implementation.

II. THE AGRICULTURE AND FISHERIES MODERNIZATION ACT

The AFMA has five major components: (1) production and marketing support services; (2) human resource development; (3) research development and extension; (4) rural non-farm employment; and (5) trade and fiscal incentives.

Production and Marketing Support Services

Central to having a focused, adequate and rational delivery of social services is the identification of a Network of Protected Areas for Agriculture and Agro-industrial Development (NPAAAD), from which the Strategic Agriculture and Fishery Development Zones (SAFDZ) shall be selected.

All lands suitable for economic and commercial development of the Agricultural and Fisheries industries will be designated as the NPAAAD and protected from unwarranted conversion. From this, the SAFDZs will be identified based on their competitive advantage brought about by their agro-climatic and environmental conditions, strategic location, and the presence of agrarian reform beneficiaries and small farmers and fisherfolk in the area. SAFDZ sites are declared as the country's food basket and shall constitute the zone of investments for modern technologies and infrastructure.

NPAAAD areas not classified as SAFDZ will still be protected from conversion for future expansion of SAFDZ. Model farms, chosen among the SAFDZs, will be developed to showcase the modern methods of production, processing and efficient marketing of farm products.

Having identified the strategic development areas, the AFMA mandates the DA to formulate and implement a medium- and long-term Agriculture and Fisheries Modernization Plan. This plan shall focus on the concerns of food security, poverty alleviation and income enhancement, global competitiveness, and sustainability. The plan will weave together the support services intended for the network of areas for agricultural and agro-industrial development, as well as the other components of AFMA.

The AFMA has identified the key support services intended for the network of areas for agricultural and agro-industrial development as follows:

Credit. The DA is required to phase out all its directed credit programs and instead deposit all its loanable funds and place them under the management of cooperative banks, rural banks, government financial institutions and viable NGOs, under the Agro-Industry Modernization Credit Financing Program (AMCFP). The AMCFP shall be designed to benefit principally the farmers, fisherfolk, those engaged in food and non-food production, processing and trading, cooperatives, farmers'/fisherfolk's organization, and SMEs engaged in agriculture and fisheries. The program shall include the packaging and delivery of various credit assistance programs for agriculture and fisheries production inputs, implements and infrastructure, and other related activities.

The transfer of the management of the credit program to existing suitable financial institutions is for the purpose of aligning agriculture credit to market conditions, resulting in a more efficient allocation. A similar “rationalization” is envisioned for existing credit guarantee schemes and funds.

Irrigation. The development of effective, appropriate and efficient irrigation and water management technologies shall continue to receive government support. National irrigation systems shall remain under the management and authority of the National Irrigation Administration (NIA), but with a view to gradually turning over the operation and maintenance of the national irrigation system's secondary canals and on-farm facilities to Irrigators' Associations. The DA, for its part, shall devolve the planning, design, and management of communal irrigation systems, including the transfer of NIA's assets and resources in relation to these systems, to the LGUs. The Government shall also encourage greater private sector participation in the construction of irrigation facilities through the various build-operate-transfer schemes.

Information and marketing support service. Two key elements of the information and marketing support service are the establishment of the Marketing Assistance Program and the setting-up of a National Information Network to make widely available such information as will facilitate greater market transactions involving the agriculture and fisheries sectors. The program and network shall link the DA, LGUs, and research institutions, which network shall be made accessible to farmers, fisherfolk, cooperatives, traders, processors, and all others engaged in agriculture and fisheries enterprises. Among the information that will be provided are: supply data; demand data; price trends; product standard; directory of cooperatives, traders, key market centers, processors and business institutions concerned with agriculture and fisheries; research information and technology; international, regional and local market forecasts; and resource data. The assistance of relevant institutions shall be tapped to provide these information.

Other Infrastructure. The DPWH, the DOTC, the DTI, and the LGUs shall coordinate with the DA to address the infrastructure requirements of the agriculture and fisheries sectors. The allocation of resources shall be based the agro-industrial potential of the areas, the socio-economic impact of the investments in the area, the absence of public investment in the area; and the presence of agrarian reform beneficiaries and other small farmers and fisherfolk in the area. Among the related infrastructure that shall be developed are: fishports, seaports and airports; farm-to-market roads; rural energy; communications; water supply systems; research and technology infrastructure such as farm laboratories and demonstration farms; post-harvest facilities; and public market and abattoirs. The DA shall also support the development and promotion of appropriate agricultural machinery and other agricultural mechanization technologies.

Product standardization and consumer safety. The AFMA mandates the establishment of a Bureau of Agriculture and Fisheries Product Standards (BAFPS). The Bureau will set and implement standards for fresh, primary- and secondary-processed agricultural and fishery products. Such product standards are intended not only to ensure consumer safety but to promote the competitiveness of agriculture and fisheries products as well.

Human Resource Development

The human resource development component of AFMA gives priority to the development of education-related programs oriented towards agriculture and fisheries. Three programs are identified in the law. First, the Commission on Higher Education (CHED), in coordination with the DA and other government agencies, shall establish a National Agriculture and Fisheries Education System (NAFES) that shall be integrated in the elementary, secondary and post-secondary education curricula.

At the elementary and secondary levels, the program shall aim to: develop appropriate values that form the foundation for sustained growth in agriculture and fisheries modernization; increase the attractiveness of agriculture and fisheries education to make agriculture and fisheries an acceptable options for career and livelihood; promote appreciation of science in agriculture and fisheries development; and develop among students positive attitudes towards entrepreneurship and global competition.

At the post-secondary education level, the TESDA shall develop and implement a program that includes the following: a mechanism for a flexible process of curriculum development; integration of the dual training system in the various agricultural curricula and training programs; integration of entrepreneurship and global competitiveness in the agro-fisheries curricula; institutionalizing agriculture and fisheries skills standards and technician testing and certification; regular upgrading of learning/training facilities, school buildings, laboratory equipment; and development of a system for the strict enforcement of school regulations regarding standards and requirements.

Second, the law establishes a Network of National Centers of Excellence in Agriculture and Fisheries Education at the tertiary level. The network shall comprise of qualified public and private colleges and universities, duly accredited as National Centers of Excellence (NCE) in the field of agriculture and fisheries under an accreditation system formulated and implemented by the CHED. These NCEs shall receive financial support from the national government and the LGUs. The CHED, in coordination with the DA and other agencies, shall develop and implement an integrated human resource development plan in agriculture and fisheries which shall serve as a guideline in the setting of priorities in curricular programs, enrollment, performance targets, and investment programs. A complementary skills development program shall be made available to teachers, professors and educators in agriculture and fisheries.

Finally, the law creates an Agriculture and Fisheries Board in the Professional Regulation Commission to upgrade the Agriculture and Fisheries profession. The Board shall develop and implement a professional examination for B.S. Fisheries and Agriculture graduates.

Research Development and Extension

Research and extension shall receive greater resources from the DA. The law provides budget allocation floors for these expenditure items. Research excellence and productivity shall be promoted and national guidelines in evaluating research and development activities and institutions shall be evolved. Research information and technology shall be communicated through the National Information Network (NIN).

Extension services to the farming and fishing community shall include training services, farm or business advisory services, demonstration services, and information and communication support services. Extension services shall be integrated into a system involving the DA, LGUs, and the private sector. The LGUs shall be responsible for the direct delivery of extension services. The DA and state colleges and universities shall implement programs that will enhance the capacity of LGUs to provide quality extension services to agriculture. The DA shall encourage the participation of farmers and fisherfolk cooperatives and associations and others in the private sector in training and other complementary extension services such as organizing and the popularization of technologies and management systems.

Rural Non-Farm Employment

Opportunities for rural non-farm employment shall be increased to increase household income in the rural sector. This will be done through basic needs programs that directly create employment, promoting greater integration of agriculture and fisheries to manufacturing and industries, and developing the skills of workers in rural communities. Greater integration shall be facilitated by giving priority in the grant of incentives to business and industries with linkages to agriculture through the BOI. LGUs will make available useful information to these businesses and industries, and support investment and marketing missions. Various workers and entrepreneurs training programs shall be implemented by the DA, TESDA, DENR, and the Technology and Livelihood Resource Center (TLRC).

Trade and Fiscal Incentives

The AFMA provides a limited tax exemption scheme to certified enterprises engaged in agriculture and fisheries. For a period of five years from the effectivity of AFMA, these enterprises shall enjoy exemption from the payment of tariff and duties for the importation of all types of agriculture and fisheries inputs, equipment and machinery such as fertilizer, insecticide, pesticide, tractor, trailers, trucks, farm implements and machinery, harvesters, threshers, hybrid seeds, genetic materials, sprayers, packaging machinery and materials, bulk-handling facilities such as conveyors and mini loaders, weighing scales, harvesting equipment, spare parts of all agricultural equipment, fishing equipment and parts thereof, refrigeration equipment, and renewable energy systems such as solar panels.

Funding

The AFMA will be funded by am initial appropriation of P20 billion, which can be achieved though the re-alignment of the appropriations of the DA. The law prescribes resource allocation percentages for the different components of AFMA. Thereafter, the DA is mandated to include in its annual appropriation program for the next six an amount not less than P17 billion for the implementation of AFMA.

III. IMPLEMENTATION

Identification of the NPAAD and the SAFDZ

The Bureau of Soils and Water Management (BSWM) is the lead agency in charge of identifying the NPAAAD and SAFDZ. In consultation with LGUs, NGOs and organized farmers and fisherfolks, it completed the list and composition of the NPAAAD by second quarter of 1998. Subsequently, it completed the identification and mapping of the SAFDZs in December 2000. One thousand five hundred ninety nine (1,599) municipalities comprising 89% of the total number of municipalities nationwide submitted their respective Sangguniang Bayan/Panlalawigan resolution adopting NPAAD and SAFDZ. Such large number of proposals made the final selection of SAFDZs difficult.

In the end, the area classified as SAFDZ and NPAAAD from alienable and disposable lands totaled 12.8m hectares representing about 91% (SAFDZ-74%, remaining NPAAAD-18%) of total alienable and disposable lands. Luzon accounted for 42% of the total SAFDZ area, while Visayas and Mindanao accounted for 20% and 38% respectively. The SAFDZ is further divided to seven strategic sub-development zones: crop, livestock, fishery, integrated crop/livestock, integrated crop/fishery, integrated crop/livestock fishery, and integrated fishery/livestock. Areas not classified as NPAAAD or SAFDZ are called marginal lands and can be watershed/forestry zones, agro-forestry zones, built-up areas, lahar areas, economic zones, military reservations, or beach areas. The maps for the NPAAAD and the SAFDZ at the national, regional, provincial and municipal levels are now available to the public. Still, only three municipalities (Narra, Palawan; Calabanga, Camarines Sur; and Tagum City, Davao del Norte) have incorporated SAFDZs in their comprehensive local land use plan (CLUP). The inclusion of SAFDZ in the CLUP is still ongoing for most provinces.

Formulating the AFMP

The Agriculture and Fisheries Modernization Plan (AFMP) is still in the process of being completed. The AFMA implementing rules and regulations mandates a participatory planning method, to involve farmers, fisherfolk, NGOs, people's organizations, the private sector and government agencies involved in the agriculture and fisheries sectors. The mechanisms for participatory planning are stakeholder consultations and institutionalized involvement of the Agriculture and Fisheries Councils (AFCs) in planning and plan implementation.

The plan framework has the following key features:

- The plan will focus the limited public resources on few strategic interventions. It will also attempt to unify the planning system of all line agencies involved in the agriculture and fisheries sectors. Among the strategic interventions are expanded infrastructure, unified research and technology generation, enhanced distribution of seeds and planting materials, reinforced communication, training and extension support, and improved access to credit in the rural areas.
- The AFMP is envisioned to provide the strategic context for DA's annual budget. The DA shall attempt to integrate strategic planning and annual budgeting, in contrast to the previous practice of annual budgeting based on historical level of expenditures.
- The AFMP will have an integrated regional development and SAFDZ focus. The SAFDZs provide a spatial context that will allow planning that cuts across LGUs based on natural resource endowments and market linkages. The regional plans will be the principal basis for the national AFMP.

- The AFMP exercise will simplify the planning process by adapting matrix-based planning instead of narrative planning. The goal is to produce consistent planning outputs in terms of format and content to facilitate easier consolidation.

So far, the planning framework has resulted in the drafting of the Agrikulturang MakaMASA Programs. These programs focuses DA resources on the country's most important agricultural products: rice, corn, sugar, coconut, high value commercial crops (HVVC), abacca, livestock, and fisheries. Interventions like infrastructure, R&D and marketing assistance cut across these major commodities and spatially concentrated in SAFDZs. The National AFMP covering the period 2001-2004 is also about to be completed and only awaits refinement to accommodate the ideas of the new DA secretary.

Phasing-Out Directed Credit Programs by Non-financial Agencies

The Agricultural Credit Policy Council (ACPC) in collaboration with the National Credit Council (NCC) formulated the Agricultural Modernization Credit and Financing Program Design and Implementing Guidelines following a series of consultations with identified stakeholders. On January 7, 1999 and July 26, 1999, the ACPC approved the AMCFP Design and the Implementing Guidelines respectively.

Under the design of the AMCFP, the implementation of directed credit programs by government non-financial agencies such as the DA will be a thing of the past. Instead, the DA shall focus on the provision of public goods. Lending programs will be limited to viable lending cooperatives and NGOs. Lending rates shall be market-determined, allowing conduits to cover the cost of funds, administrative & inflation cost, and the risk premium of lending in rural areas.

The AMCFP has four key players: the program/fund owner; the oversight committee; the program administrator; and the fund managers. The DA is the program/fund owner. The ACPC, composed of the DA Secretary as chairman, the BSP Governor as Vice-Chairman and the respective secretaries of DOF, DBM and NEDA as members, shall act as the oversight committee. A government financial institution will be selected as program administrator. The program administrator shall formulate and implement guidelines governing the accreditation, evaluation and release of funds to participating private financial institutions who shall act as fund managers. In effect, the program administrator acts as a wholesale lender for the AMCFP. It is also tasked with investing funds in high yielding government bonds/securities, which earning will revert to the AMCFP Fund. The fund managers, in turn, will lend to the intended beneficiaries. They shall channel credit to potential borrowers according to a set of criteria. As retail lenders, they assume full credit risk.

A total of P100M was initially allocated to AMCFP from the Comprehensive Agricultural Loan Fund (CALF) as of March 2001. This forms the core funds of AMCFP while it awaits the phase out of all directed credit programs of the DA. The phase-out plans of 23 out of 24 directed credit programs operated by the DA has been completed in March 2001. The total loanable funds (as of June 2000) under these programs amount to almost P4 billion.

The review of the mandates of LBP, PCIC, GFSME, Quedancor and ACPC was completed in January 2001. The Review proposes two alternative institutional frameworks for the delivery of financial services to target beneficiaries under AFMA. They are called modified first best and second best structures. The modified first best institutional structure consolidates all rural financial services under the LBP board. It aims to implement a coherent policy that integrates credit, guarantee, and insurance services. In this scenario, LBP is going to take charge of the marketing and operation of financial services. Quedancor and PCIC will perform programming functions while also administering the guarantee fund. The DA, through ACPC, will be able to monitor, synchronize, and evaluate all government policies and programs regarding agricultural credit.

The second best institutional framework calls for allowing the GFIs to operate independently but reforms on the corporate and governance structures of the GFIs have to be made to reflect their core competencies, and make the structure better supportive of the AFMA policies.

The study "Review, Consolidation and Rationalization of all Existing Guarantee Programs for Agriculture and Fisheries" was also completed in February 2001. According to this Study, Quedancor Guarantee should operate as a wholesale guarantee institution. It should also be independent of other Quedancor functions (e.g. direct lending) not envisioned under AFMA. The Quedancor Board has approved the creation of the Wholesale Guarantee Window in December 2000 to operationalize the recommendations of the Study. Presently, there are 7 credit guarantee programs made available to the market by Quedancor and Guarantee for Small and Medium Enterprises. These programs aim to benefit small farmers, agri-processors and market retailers who do not have access to credit. Quedancor's mandate, for example, is to establish and implement a credit guarantee system that would upgrade the bankability of rural workers, improve their access to formal credit and in turn, increase their income. Quedancor encourages banks to lend to the A&F sectors by assuming the credit risk in case the borrowers fail to pay their obligations. Under the Sole Guarantee Mode, accredited banks provide 100% of the loan funds while Quedancor guarantees 85% of the bank's exposure.

Irrigation

The National Irrigation Authority (NIA), a government owned and controlled corporation attached to the DA, is the lead agency implementing the irrigation-related component of AFMA. The NIA has two kinds of funds: corporate and project. Corporate funds are internally generated, and include irrigation service fees (ISF), equipment rental, pump amortization, and management fees. The corporate funds support the operation and maintenance of national irrigation systems and regional irrigation offices. Project funds support the implementation of new irrigation projects. These principally come from loans or grants from multilateral agencies. Presently, there are 190 national irrigation systems (NIS) nationwide with a total service area of 683,571 hectares.

The medium-term (2001-2010) Irrigation Development Program of NIA involves ongoing and pipeline projects for the rehabilitation of existing systems and establishment of new irrigation systems. There are 28 on-going projects with total cost of almost P72billion as of May 2001. These will generate 288,795 hectares of new irrigated land and rehabilitate 293,006 hectares of existing national irrigation systems.

The draft criteria for selection and prioritization of irrigation projects was completed in December 2000 and is now under review by NEDA and DA consultants. Proposed national irrigation projects are judged according to their technical, socio-economic and financial feasibility. Irrigation projects that have better prospects of achieving higher cropping intensity are given more points and so are systems that require less rainfall for wet season crops.

To implement the policy of gradually turning over the operation and maintenance of the national irrigation system's secondary canals and on-farm facilities to Irrigators' Associations and devolving communal irrigation systems to LGUs, the NIA has prepared the Irrigation Management Transfer Program (IMTP). It has also drafted the guidelines delineating the roles and responsibilities of LGUs and NIA in the planning, design, construction and management of communal irrigation systems. The transfer has been piloted in the North Diversion Canal, and the program will eventually be implemented nationwide. In relation to devolution, the NIA provides advice and guidance to LGUs in all phases of the construction of communal irrigation systems. LGUs coordinate with the NIA and IAs in supervision, monitoring, quality control, and contract management of communal irrigations systems.

The NIA is presently actively promoting the development of privately owned and operated irrigation systems. The guideline for the selection, prioritization and implementation of the Groundwater Irrigation Project (GIP) has been distributed to provincial irrigation offices. A task force, headed by DA-Planning was organized to formulate programs to promote the development of minor irrigation systems that the private sector can build exclusively.

The AFMA implementing rules and regulations requires the review of irrigation service fee rates. The 1975 rates then applicable stipulate that service fees of 2 cavans of palay per hectare during the wet season and 3 cavans during dry season for the use of diversion irrigation systems, and 2.5 cavans of palay during the wet season and 3.5 cavans during dry season for the use reservoir or storage dams. The service fees for pumps are higher at 3-8 cavs/hectare during wet season and 5-12 cavans per hectare during dry season for rice given its higher operation and maintenance costs.

The socialized irrigation service fees embodied in AO 17 dated 31 August 1998 replaced the 1975 rates. The new rates take farm size into consideration. For diversion irrigation systems, 1 cavan of palay per hectare is collected for rice during the wet season and 1.5 cavans per hectare during dry season, if the farm size is 2 hectares and below. If farm size is between 2-5 hectares, 2 cavans of palay per hectare is required for rice fields during the wet season and 3 cavans per hectare during dry season. For farm size greater than 5 hectares, 3 cavans of palay per hectare is paid out to the NIS during the wet season and 4.5 cavans per hectare during dry season. The ISF for other crops still amounts to 60% of what is being collected for rice, the farm size criteria also applies. For annual crops, the rate used is equal to the sum of ISF for wet and dry season of rice fields greater than 5 hectares.

The implementation of the new rates resulted in a considerable reduction in NIA's collection from service fees. In view of this, there is a pending recommendation by the NIA board of directors to increase the rates to even higher than the 1975 rates. A new scheme that is also being piloted is volumetric pricing, which bases the fees on the volume of water used in irrigating the farms. This pricing scheme aims to enhance NIA's cost recovery and to encourage efficient use of irrigation service.

Information and Marketing Support Services

The AFMA implementing rules and regulations mandates the establishment of the Agribusiness and Marketing Assistance Service (AMAS). The main task of AMAS is to facilitate and coordinate the efforts of DA in all matters pertaining to agribusiness development and marketing activities. AMAS conducts various market-intervention activities. Among the activities and projects under AMAS are:

- conducts trainings and seminars on production and post-production technologies for various agriculture products
- the National Marketing Assistance Program (NMAP) and the terms of reference for its implementation was submitted to the DA Secretary in May 2001 for approval
- the inventory and assessment of utilization levels of all post-harvest facilities owned by NFA, FTI, PFDA and other government agencies are on-going
- facilitated market matches for agriculture products
- assisted LGUs in the pilot production and marketing of various agriculture products
- opening and upgrading agribusiness techno parks
- initiating the Cold Chain Project, which will provide cooperative-beneficiaries with refrigerator trucks to be used to transport products
- organized fairs, exhibits, shows and other events to promote various agriculture and fishery products
- participated in international fairs or selling missions

The setting-up of the National Information Network (NIN) is ongoing. The NIN Implementation Group is composed of the Information Technology Center for Agriculture and Fisheries (ITCAF), Bureau of Agricultural Statistics (BAS) and the Agricultural and Fisheries Information Service (AFIS). BAS will serve as the central information server, ITCAF will ensure the provision of all NIN requirements, while AFIS will ensure that NIN services are directly applicable to marketing conditions.

To operationalize the information systems, BAS designed the Aquaculture Survey 2001 round and the Agriculture Foreign Trade Statistics. It revised the processing of the Farm Prices Survey and created relational database forms, tables, reports and query system. ITCAF, for its part, formulated DA's Information System Strategic Plan for 2000-2004.

There is now a DA-wide computer area network linking various DA units such as the BAS, BFAR, NIA, BSMW. The DA-wide Internet Service connects 150 PC/Workstations of DA units nationwide. The DA Web Site was set up, as well as those of its attached agencies and bureaus. The network and communication backbone is presently being expanded and upgraded.

The information that will be made available includes: production supply & demand data; price & price trends; product standards and consumer safety; research and technology information generated by R&D Institutions; marketing data and forecasts; resource accounting data; credit facilities and programs; and a directory of scientists, experts, importers, exporters, traders, processors, training centers, and services.

Other Infrastructure

The DA's infrastructure support program has as one of its thrusts the development of the country's postharvest facilities and technology. To deflect this thrust, the DA has designated an assistant secretary for Infrastructure Support and created an Agricultural Engineering Division. The DA conducts postharvest related trainings nationwide. It has formulated standard specification procedures for testing and evaluating the performance of machinery manufactured and sold in the country such as mechanical grain dryers, rice threshers, rice mill, corn sheller, and corn mill. It has conducted an inventory of postharvest facilities and a provincial postharvest master plan is being developed.

On a more general level, the DA is refining the criteria for prioritization of government resources for rural infrastructure. In coordination with other agencies, the DA conducted an assessment rural infrastructure services, policies and regulations. It provides inputs on policy and legislative matters related to rural infrastructure concerns. The DA also conducting an inventory of existing infrastructure to form part of the basis for public works planning.

Product Standardization and Consumer Safety

The Bureau of Agriculture and Fisheries Product Standards (BAFPS) has already been established. The BAFPS intervention program has five components: food safety, product quality, trade facilitation, international standards, and consumer protection. The BAFPS has the authority to formulate and enforce standards of quality in processing, preservation, packaging, labeling, importation, exportation, distribution and advertising of agricultural and fisheries products. The BAFPS implements the following international standards: Codex (for food), OIE (for animals), ISO, UNECE, IPPC (for plants), among others. National standards covering a number of crops including organic products are being developed. The BAFPS also enforces standards on dioxins, mycotoxins in corn and copra meal, lead and BADGE/BFDGE in tuna, listeria in processed meat, cholera in coconut and fish, and bovine spongiform encepalopathy (BSE). The BAFPS aims to harmonize local standards with international standards.

Human Resource Development

The National Agriculture and Fisheries Education System (NAFES) Committee has approved the NAFES Plan in June 2000. The NAFES Plan includes the agriculture and fisheries education program for elementary and secondary levels, post-secondary education program, the design and establishment of National Centers of Excellence (NCE) for agriculture and fisheries tertiary education, and the network of NCEs. The agriculture and fisheries education program for elementary and secondary levels promotes the appreciation of science in agriculture and fisheries development and the attractiveness of agriculture as an option for career and livelihood. The Post-Secondary Education Program integrates trainings in various agro-fisheries curricula and training programs.

The network of NCEs was identified based on an evaluation and accreditation system approved by the NAFES Committee on June 2000. The criteria includes: (1) institutional accessibility, population, and economic contribution of agriculture and fisheries in the community; (2) quantity and quality of research studies conducted by the institution; (3) degree of utilization of research results; (4) quantity and quality of faculty members; (5) type of facilities; (6) linkage with international organizations; and (7) potential contribution to agriculture and fisheries development in the target area. Public and private institutions not designated as an NCE shall redirect their programs to other fields or merge their agriculture and fisheries program with accredited NCEs.

The DA is also expanding existing scholarship programs for degree and non-degree training in agriculture and fisheries. Beneficiaries include DA employees, practitioners in the agriculture and fisheries sectors, and deserving youths.

Research, Development and Extension

The Bureau of Agricultural Research is the lead agency for the research and development component of AFMA. It will closely coordinate with national, regional, provincial and municipal research and development institutions. The knowledge and information will come from national research and development institutions like the Philippine Carabao Center, PhilRice, and national state colleges and universities. Regional research and development institutions shall develop the technology for provincial application and the municipal extension personnel will develop site-specific technology that the farmers and fisherfolk can use.

The Council for Extension, Research and Development for Agriculture and Fisheries was organized in July 1999. It was created to support the National Research and Development System in Agriculture and Fisheries and ensure effective linkage with the National Extension System in Agriculture and Fisheries through research development and extension networks.

Crop-Based National Research and Development Networks

Commodity	Lead Agency
Rice	PhilRice
Vegetables	UPLB
Fruits	UPLB
Coconut	BPI-NMRDC
Sugarcane	PCA
Sugarcane	SRA
Plantation Crops	USM
Fiber Crops	FIDA
Ornamentals	UPLB
Legumes	UPLB
Root Crops	ViSCA
Livestock & Poultry	UPLB
Aquaculture	UPV
Capture Fisheries	UPV

National RDE Networks, Discipline-based

Sector	Lead Agency
Biotechnology	UPLB
Soil & Water	BSMW
Social Science & Policy	PIDS
Crop Protection	UPLB
Agricultural Engineering	UPLB
Postharvest, Food Science & Nutrition	BAFPS
Irrigation	UPLB
Urban Agriculture	CavSU
Plan Genetics Resources	BPI

Rural Non-farm Employment

The DA initiated the organization of an inter-agency task force to facilitate the institutionalization of a basic needs program. The basic needs program aims to implement community and household-based projects focused on non-farm employment generation and increasing productivity. Projects include skills training programs, courses in entrepreneurship, and support for small and medium enterprises. The target beneficiaries are displaced rural farm workers, subsistence farmers and fisherfolk, rural women, out-of-school youth, and families with malnourished children. The task force has members from the DA, CHED, DOH, DECS, DILG, DSWD, TEDSA, and TLRC. The basic needs program design has been completed presented and approved by the Congressional Oversight Committee on Agriculture and Fisheries Modernization. The program is now being implemented in select municipalities.

Trade and Fiscal Incentives

On 31 July 1999, the President issued Executive Order 133 which exempts enterprises engaged in agriculture and fisheries from paying tariffs on the importation of agriculture and fisheries inputs, machinery, and equipment. EO 133 also reduces the tariffs of certain imported articles to zero. The EO took effect in September 1999 and shall remain effective until February 2003.

EO 133 covers almost all inputs, machinery and equipment. They are classified into two groups. The first group is comprised of articles exclusively used for agriculture and fisheries activities, such as seeds, planting materials, breeding animal, fertilizers, and vaccines. Agricultural equipment such as ploughs, harrows, dryers, greenhouses, irrigation system and fishing vessels & accessories are also included in the list. The second group is composed of articles not exclusively used for agriculture and fisheries activities such as medicaments, packaging materials and cold storage facilities. Only eligible agriculture and fisheries enterprises are allowed to import tariff-free. EO 133 defines agricultural enterprises as any single proprietorship, partnership, cooperative, corporation, farmer's organization/association or juridical entity engaged in the cultivation of the soil, planting of crops, growing of fruit trees, raising of livestock or poultry, harvesting and marketing of farm products and other farm activities and practices. Fisheries enterprises are defined as any single proprietorship, partnership, cooperative, corporation, farmer's organization/association or juridical entity engaged in producing, harvesting, processing, marketing of fish/aquatic products and developing and conserving aquatic resources and fisheries areas.

IV. ISSUES

Public Finance

For the budget implications of AFMA, the implementing rules set the fiscal year 1999 as the first year of implementation and the fiscal years 2000 to 2004 as the second to sixth years. The law mandates that P20 billion be appropriated for the first year, in addition to the amount provided as regular appropriations for 1998. For the following five years, the law mandates an annual appropriation of not less than P17 billion.

By government's own reckoning, the AFMA was not funded for the year 1999. It was only in the year 2000 that the budget reflected AFMP as an expenditure category, with a total appropriation of P18.4 billion.

Two observations are worth noting. First, it may not be accurate to say that AFMA was unfunded for 1999. This is because there appears a mere re-categorization of appropriations under GATT into AFMA. The Department of Agriculture budget categorized as GATT-related in 1999 was P11.6 billion. Second, it should be conceded that there was a considerable increase in the DA budget for the year 2000. The total Agriculture budget for the year 2000 was P20.8 billion, of which P16.6 billion was categorized as AFMA budget. The total budget was P5.7 billion higher that the 1999 total budget. In contrast, the 1999 total budget was P0.6 billion less than the 1998 total budget. Still, the P16.6 billion allocation fell short of the P20 billion mandated budget for the first year of AFMA implementation as well as the P17 billion minimum also set by AFMA.

While the year 2000 provided some hope in terms of increased budget allocation, the year 2001 marked a quick reversal. Total budget dropped to P14.4 billion, of which only P11 billion was characterized as AFMA budget. Taking big cuts were research and development (from P1.3 billion in 2000 to P0.7 billion in 2001), post harvest facilities (from P1.8 billion in 2000 to P0.45 billion in 2001), infrastructure other than post harvest facilities and irrigation (from P2.97 billion in 2000 to P0.86 billion in 2001), and capability building for farmers and lgus (from P1.16 billion in 2000 to P0.8 billion in 2001). Thus, three years into AFMA's implementation period, it has joined the long list of the so-called "unfunded mandates".

The drop in agriculture budget also adversely affects the allocation of the agriculture budget across programs. The growth in agriculture budget for the year 2000 allowed government to prepare a more balanced allocation across programs with the share of support services and infrastructure improving in relation to the traditional budgetary focus on rice and corn. With the budget reduction, the government is reverting back to its traditional budgetary focus on rice and corn. Such allocation pattern has been criticized as being contrary to the vision of agricultural modernization which requires product diversity.

The government's unsustained effort to provide the AFMA the necessary budgetary support is not a matter of choice but an imposition of the government's resource constraints. Every year, the Department of Agriculture submits a huge budget proposal, only to be cut in half when the executive finalizes its national budget submission to Congress, and finally cut further by Congress to levels commensurate with the government's revenue performance.

Thus, the government's weak revenue effort is a major stumbling block to the implementation of AFMA and the attainment of agriculture modernization. If agricultural modernization is to be achieved, the government must radically improve its fiscal position

Unfortunately, no appreciable improvement in government's finances appears in sight. The BIR's tax effort, contributing about 70 to 80 percent of total National Government tax revenue, has disappointingly slid down to pre-CTRP levels. After peaking at 13% in 1997, it has gone down to 12.6% in 1998, 11.5% in 1999, and 10.9% in 2000. This is lower than the 1994 BIR tax effort of 11%.

The government has responded by proposing substantive reforms in the tax system. The most controversial of these is the proposal to shift from net income to gross income in the determination of taxable income for corporations and individuals engaged in trade or business or practice of profession. This proposal has come under fire from various sectors.

For one, the supposed revenue impact of the measure is highly speculative. In the BESF for 2002 submitted to Congress, the Executive projects an additional tax take of P4.5 billion for the measure. It argues that the shift “will make our tax system competitive with the other countries in the region, thereby making the Philippines another investment hub in Asia”. This assumption is unrealistic given the dire prospects in foreign capital flows. As for the supposed increase in the tax base, the executive has yet to present the combined effect of the trimming down of allowable deductions and the reduction in the tax rate. Add to this the revenue effect of a comparable reduction in the top rate for compensation income earners, which may be required to address equity effects of the present proposal. Thus, until the executive shows credible basis of its estimates, the projections remain speculative.

The more compelling argument against the measure is that insisting on it at this time is counterproductive and diverts the focus on the problem recognized by all, namely, tax administration. A study by Rosario Manasan places the evasion rate in individual income tax at 60% and that in VAT at 62% in 1999.

The growing general awareness and consensus that tax administration is key is recently being transformed to positive actions by the government and the private sector. On the part of government, we see the reform program of the new BIR Commissioner having a high tax administration content. On the part of the private sector, more organizations seriously taking up the issue. Even the media has shown a big interest, with the PCIJ running a series of investigate reports on corruption in the BIR. Private funds are also now flowing to programs related to this concern.

By putting into the picture a highly debatable measure, the march towards forming a critical mass in support of decisive reforms in tax administration to take a sidestep. The Executive must therefore put off the debate on the shift to gross income tax for another time. Instead, it should not miss the opportunity to clinch a critical mass for decisive reforms in tax administration. This is key is resolving the government’s fiscal woes and allow it the necessary funds to support agriculture modernization.

In addition to addressing the revenue problem, the government must also find ways to shift resources from the urban to the rural areas. In this respect, privatization in the major urban areas will necessarily form part of the strategy. This proposition proceeds not from the framework of reducing government to its barest. It simply reflects an exercise in prioritization and resource allocation to arrest the imbalance brought about by the urban bias of resource allocation in the past. The idea is to free public funds by privatizing certain activities that used to be undertaken by government, and making such funds available to other regions and activities. It is also a way of mobilizing private capital in areas with high social benefit, but which used to be the exclusive domain of the public sector. Privatization is reasonable, even necessary, in areas where efficiencies associated with government intervention have been greatly diminished because of changes in the market structure or changes in technology.

Local governance

While responsibility for most of the medium- and long-term public investments in agriculture will fall on the national government, the need for sustainability warrants local government involvement in a big way. Studies so far indicate that there is as much a problem in local budget structures as there is for the national government. Local governments must also restructure their public investment priorities in line with the national thrusts.

Local development programs in agriculture need to be harmonized with the national objectives. At first blush, this may be taken to imply a reversal of decentralization. This is not the case, however. While objectives are harmonized at the national level, the choice of projects and programs and their implementation should remain devolved to local government. Local governments will play the main role in identifying poverty groups, assessing their needs, matching programs, and evaluating program effectiveness internally and in comparison to similar programs in other areas.

The AFMA strengthens the devolution of most agricultural services such as extension, on site research and other support services to local government units (LGUs). The lack of technical and financial capabilities of LGUs, however, is a major problem. As a result, their role in the planning and implementation of agricultural development programs has been minimal.

The MTPDP acknowledges the need to upgrade the capabilities of LGUs in the following areas: design, planning, implementation and monitoring of sectoral projects; policy formulation and advocacy of local level ordinances supportive of sector development; effective enforcement of policies; tax collection to increase funds available for the sector; natural resources management; and overall managerial, technical & administrative competency. Programs towards this objective must be implemented fully But as noted earlier, the budget for capability building of LGUs has been among those that suffered a big cut in 1991.

The DA-PS, ATI, and FOS are tasked under AFMA to upgrade the technical capabilities of LGUs. DA-PS has distributed information materials that will guide RFU planners in formulating regional AFMPs that best respond to the needs of the sector in their respective region[1]. It has also provided expert assistance to the RFUs when it was time to consolidate their regional plans. ATI and FOS, on the other hand, conduct trainings and seminars to disseminate the new processes (and information) coming out of the research system. However, these extension services have not been fully effective because of the weak link between research and extension, especially now that basic extension services are already devolved to LGUs.

The challenge lies in strengthening the link between the country's decentralized extension service and centralized research system. As noted in a recent study by Tolentino, et. al. (2001), extension services must be used as a channel of communication between farmers and researchers to reflect location-specific needs and priorities of farmers and be more effective in transfering technology.

Another way to increase the participation of LGUs in agricultural development is to devolve to them as much irrigation activities as possible. The government should encourage LGUs and POs to co-finance the rehabilitation and construction of communal systems and minor irrigation projects. The DA "Balikatan Sagip Patubig Project" which makes irrigation rehabilitation funds available to any LGU that is willing to put up local counterpart fund should jump-start the effort.

Under AFMA, LGUs should be involved in the identification, planning, construction and maintenance of rural infrastructure. Unfortunately, the DA Central Office continues to have a dominant control of the budgetary resources despite decentralization and devolution efforts. Project design and budget control remain to be the responsibility of the central office. Thus, the ability of LGUs and regional units to influence policies and programs developed by the central office has been limited to a few stakeholder consultations. Likewise, the Internal Revenue Allocation (IRA) set aside for LGUs is not commensurate to the responsibilities devolved to them. As a result, the degree to which they can effectively perform the responsibilities devolved to them under AFMA and LGC is limited. These problems must be addressed to make LGUs an effective partner agriculture modernization.

The poor as a productive force

Public investment in agriculture, to be optimal, must be responsive to the level of development of farmers and fisherfolk as productive forces. If differences in levels of development are ignored, then public investments may work in certain areas but fail in others. The level of education, the quality of entrepreneurship, and the existing property relations are only some of the important considerations in identifying appropriate programs and projects.

For example, in areas where landlessness is not severe and where the quality of human resource is appreciable, we can expect poor farmers to be more capable than others in absorbing market-based interventions such as credit programs and agriculture

[1] The Guide for Participatory Municipal Agriculture and Fishery Development Planning Manual, draft Municipal Planning Guide for Trainers and Planners, AFMP Preparation Manual, and the SAFDZ Primers

insurance. We can also expect infrastructure projects to yield immediate income and productivity effects in these areas.

In contrast, areas with a high incidence of landlessness will benefit more from property reforms than from market-based interventions and infrastructure projects. Without the necessary property reform, the landed elite will more likely capture the benefit from public investment, giving little impact to poverty reduction. We can expect land redistribution in these areas to register immediate effect on poverty reduction even if a productivity dip results in the initial years.

One way to increase the responsiveness of marginalized farmers and fisherfolk to market interventions is to increase their level of organization. The local government at the baranggay level as well as non-government organizations will be critical in this regard. The organization of marginalized farmers and fisherfolk is necessary to provide an institutional mechanism for their education, resource pooling, and having access to information.

If the state of the farmers and fisherfolk as a productive force is ignored, there will be projects in AFMA that will fail to reach the target beneficiaries. The credit policy under AFMA and the trade and fiscal incentives are cases in point. Under AFMA, the credit policy is to phase-out directed credit programs by government non-financial agencies. Lending programs will be limited to viable lending cooperatives and NGOs. Lending rates shall be market-determined, allowing conduits to cover the cost of funds, administrative & inflation cost, and the risk premium of lending in rural areas. It is clear that the shift to market-based lending will create a bias against marginal farmers and fisherfolk. They constitute a higher market risk given their limited assets and low level of entrepreneurship and mechanization. Without the necessary intervention to upgrade their institutional preparedness for the shift in credit policy, the marginal farmers and fisherfolk will not be able to avail of the credit programs under AFMA.

As for the trade and fiscal incentives, it is now clear that only the big corporations have been able to take advantage of the tariff incentives. Based on the DA-RFU 4 data, the top five firms which have availed of the incentives are Purefoods, Vitarich, San Miguel Corporations, Biscom Sugar and Swift Foods. EO 133 has not been successful in encouraging ordinary farmers and fisherfolk to import their inputs abroad while at same time forgoing a significant amount of tariff revenue for the government.

Reforms in agriculture ownership relations

Reforms in agriculture ownership relations will remain a critical component of any agriculture modernization program. Most studies on poverty find that poverty incidence is high and severe among landless farmers. Giving these landless farmers the opportunity to own land will provide both immediate and long-term impact on poverty reduction.

The Comprehensive Agrarian Reform Program (CARP) initiated by the Aquino administration is nearing its target completion phase, but the record of actual implementation so far misses the target badly, particularly in relation to the distribution of private agricultural lands. Among the constraints cited are loopholes in the provisions of the law, the high cost of implementation, and political opposition by landowners. Many analysts propose adjustments in the program if its implementation is to appreciably contribute to poverty reduction without sacrificing growth.

The World Bank (1996) proposes the following:

- a refocusing of the program to areas such as Bicol and Western Visayas where land tenure problems are most pressing;
- that the agrarian reform program be oriented to assisting the poorest agricultural workers;
- that land reform efforts be halted in rapidly urbanizing areas where the value of land in non-agricultural uses exceeds that in agriculture uses;
- the removal of lands under 24 hectares from the program; and
- that prohibitions on certain tenancy arrangements be removed.

Agrarian reform activists must evaluate these proposals. Many find unacceptable the proposed removal of lands less than 24 hectares from the land redistribution coverage, as it will considerably reduce the program’s coverage. However, some compromise on size, say 10 or 15 hectares, could be reached.

Given the current implementation record, certain adjustments may indeed prove beneficial. One area that needs to be re-appraised is the composition of the target beneficiaries. Land transfer should focus on the landless farmers, whether they are agricultural workers or tenants. Ownership, even if small, ensures access to land even if only for subsistence purposes. Access to land may then be expanded beyond the land that farmers own by deregulating tenurial arrangements.

The problem of land conversion must also be closely looked into. Land conversion is known to persist despite the conversion moratorium under AFMA as well as penalties involved for premature or illegal conversion. An independent study of the matter must be initiated, with a commitment from government to afford access to relevant information.

V. CONCLUSION

Overall, the AFMA provides a workable framework for agriculture modernization in the Philippines. The law responds to the need to address problems in the agriculture sector to make it better prepared for globalization and facilitate a considerable reduction in poverty in the sector. The AFMA is comprehensive in approach. It seeks to promote higher productivity through support services and advances in production systems at the technological, manpower and organizational levels. It aims to increase marketability and value added through greater vertical and horizontal integration and further processing. If implemented well, the AFMA can provide continuity to agriculture policy.

Still, certain substantive aspects of the program must be reviewed. In particular, the credit policy as well as the fiscal and trade incentives under AFMA must be adjusted to make them sensitive to the level of development of farmers and fisherfolk. The design of the program should allow for responsiveness to marginalized farmers and fisherfolk. This will require creative interventions, including institution building among farmers and fisherfolk organizations.

Lack of resources has seriously hampered the full implementation of AFMA. Often, crucial components of the program, such as the provision of support services and capability building, are sacrificed in the face of resource constraints. Addressing the national government's fiscal problem is therefore key to the success of AFMA. This requires a combination of measures increasing the revenue effort, principally through reforms in tax administration, as well as in changing the expenditure priorities to favor countryside development.

Finally, problems in complementary programs such as land reform should be addressed. It should be remembered that agriculture modernization is not an end in itself; its should also be seen as a means to addressing the poverty situation in the countryside. Land reform is crucial if marginalized farmers and fisherfolk are to participate and share in the benefits of agriculture modenization.

If government does not act to address problems in the implementation of AFMA, agricultural modernization and poverty alleviation in the countryside will remain a pipe dream.

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