

Policy Framework for Agricultural Extension in Timor Leste

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Abbreviations

AusAID	Australian Agency for International Development
ACIAR	Australian Centre for International Agriculture Research
ASC	Agricultural Service Centre
AMCAP	Ainaro and Manatuto Community Activation Project
ARP III	Agriculture Rehabilitation Project
CCT	Cooperativa Café Timor
CDF	Community Development Fund
CFET	Consolidated Fund for East Timor (designated government budget)
CSO	Civil Society Organisation
DNADCA	National Directorate for Agricultural Community Development
DDP	District Development Plan
DPPS	MAF National Directorate of Policy and Planning Services
EC	European Commission
EU	European Union
EO	Extension Officer
FAO	Food and Agriculture Organization
MAF-SOL2	MAF-Seeds of Life 2 Program
PDG	Group Definitive Plan
PDNG	Group Development Resourcing Plan
GTL	Government of Timor Leste
GTZ	Gesellschaft fuer Technische Zusammenarbeit (German Agency for Technical Cooperation)
MAFF	Ministry of Agriculture, Forestry and Fisheries – until 2007
MAF	Ministry of Agriculture and Fisheries – from 2007
M&E	Monitoring and Evaluation
NAES	National Agricultural Extension System
NDP	National Development Plan
NGOs	Non-Government Organizations
OECD	Organisation for Economic Cooperation and Development
PPL	<i>Penyuluhan pertanian lapangan</i> (field agricultural extension worker)
SIP	Sector Investment Program
SMS	Subject Matter Specialist
TL	Timor-Leste
TLSS	Timor-Leste Suco Survey
UN	United Nations
UNDP	United Nations Development Programme
UNTAET	United Nations Transitional Authority for East Timor
UNTL	University of Timor Leste
USAID	United States Agency for International Development
WFP	World Food Program

POLICY FRAMEWORK for AGRICULTURAL EXTENSION in TIMOR LESTE

Background

Over eighty per cent of Timorese people are involved with agricultural production. However, a number of studies have identified that agricultural productivity in most sectors is low as compared with proven potential in Timor Leste as well as in neighbouring countries with similar conditions.

A key role of the Ministry of Agriculture and Fisheries (MAF) is to encourage and assist (directly and indirectly) farmers and their families in this sector to help them improve their livelihoods and food production. A rapid improvement in food production, food security and farm incomes is a pressing national priority and Government has been directing considerable resources to this objective. However, MAF has previously lacked the capability to work effectively with farmers. Part of the Government's strategic response to the food security challenge has been to establish a new agricultural extension system with the capacity to provide support and encouragement to farmers in all parts of the country.

Donors have been providing consultancy assistance to develop policy and strategy to guide the operations of new extension service. A first Draft Policy for Agricultural Extension was prepared in May-June 2008 with assistance from the MAF-Seeds of Life 2 Program, and this second consultancy, through the Agricultural Rehabilitation Project III (ARP III), has now progressed the policy debate and prepared a second draft of the Policy for consideration by MAF.

The Draft Policy document contained considerable background material, including a synopsis of the international experience with agricultural extension and its relevance to Timor Leste. This material is not duplicated here in detail, and familiarity with it is assumed.

The Policy Framework for Agricultural Extension has been prepared at a time when MAF and the new National Directorate for Agricultural Community Development and Extension (DNADCA) have already taken a number of significant policy decisions in regard to the new extension service, so that the general architecture of the new extension system has already been determined and implementation commenced. Much remains to be done, however, to capacitate and develop the new MAF extension service and make it fully operational, and these needs are identified.

Introduction

The Government's *State of the Nation Report for the Agriculture and Fisheries Sector*¹ of April 2008 provides the most recent official overview of the sector and its relationship to the national economy. An extract from Chapter II - *The Importance of the Agricultural Sector to the Economy* follows:

"Agriculture constitutes the main economic activity of the rural population. ----- More than 80 % of the population lives in rural areas and derive their livelihoods from agriculture, livestock, forestry,

¹ This report was prepared using data and information from various sources, particularly from Ministry of Agriculture and Fisheries, Directorate of National Statistics, Ministry of Finance, key stakeholders, available studies on agriculture, livestock, forestry and fisheries conducted by various agencies/institutions. Inputs were also provided by national officials and international advisors of MAF and other agencies.

and fisheries. Farming is the sole source of income for about 85 percent of rural households. From an estimated 153,212 rural households, 247,733 people are engaged in agriculture² of which more than 50 % engage in subsistence farming producing no saleable surplus and generating no off-farm income, while less than 50 % produce a modest saleable surplus, mainly coffee, rice, vegetables and/or fruit, chicken, pigs, eggs, fish and other grains. Subsistence production of staple food crops, such as rice, maize and cassava dominates, while smallholder coffee and coconut are important cash crops. The farming systems are largely dependent on rainfed conditions thereby excessively exposing producers to production uncertainties. Lack of water and/or irrigation facilities restricts the majority of producers to a single, rain-fed crop per year.

Agriculture contributes about 30 percent of the non-oil GDP. About 60 percent of the agricultural share is derived from crop production, non-food crops account for 33.5 percent, while livestock, fisheries and forestry contribute the remaining 6.5 percent. About 23 percent of export earnings come from industrial crops, mostly from coffee exports. Agricultural production is important for food security, but productivity is still very low and quality problems also hinder exports.

A recent survey of living standards³ (TLLSS, 2007), reveals that poverty, unemployment and underemployment are widespread phenomena, with over 40 % of the population living below the national poverty line of US\$ 0.55 per capita per day. Over 40 % households are either food-insecure or vulnerable to becoming so. Though the open unemployment rate is less than 20 %, it is not a true reflection of the unemployment problem as it hides the fact that there are large numbers of people that are under-employed. Rural areas are poorer than urban areas.

The slow growth and quality of food production over the last five years, as well as distributional problems, has increased food import requirements with a marked deterioration in the agricultural trade balance with high levels of food imports, particularly rice. Improving productivity in all sub-sectors and addressing losses due to spoilage and pests, enhancing the quality of agricultural crops, livestock and fisheries production, increasing investment in rural areas and addressing the issue of land property are key steps in reducing rural poverty and improving food security.”

Against this background of weak agricultural productivity and continuing rural poverty, the Ministry of Agriculture and Fisheries (MAF)⁴ has been steadily building its capacity to respond, having started from a very low base in 2002. Despite the steady strengthening of MAF’s capacity, the productivity of Timorese agriculture has remained low with continuing high levels of rural poverty, little private sector investment and ongoing fragility in national food security. In 2006, a period of uncertainty over rice availability in Dili fuelled, and interacted with, social and political unrest to precipitate a national crisis. The severity of the ‘rice’ crisis highlighted the dependence of the nation of imported rice for some two-thirds of its total requirement and the consequent vulnerability of Timor Leste to international food-price and availability shocks. These events combined to elevate the issue of food security to the highest national priority

A Short History of Policy Development for Timorese Agriculture

The first five-year National Development Plan (NDP) of May 2002 set out the new nation’s vision, goals and broad policies for development. The NDP emphasised “*economic growth as a pre-condition for sustained poverty reduction with the active participation of citizens, private sector and NGOs as the driving force, while the government acts as facilitator*”. A ‘Road Map’ was then prepared for the agriculture sector in 2003, in which the overall development program for agriculture was further refined, however. The Road Map did not provide a programmatic structure with clear priorities for investment. In

² See, MAF, 2008. Agriculture Data.

³ See RDTL, 2007. Timor-Leste Living Standard Survey (TLLSS)

⁴ The name of this Ministry was changed from the Ministry of Agriculture Forestry and Fisheries (MAFF) in 2006. MAFF and MAF refer to the same Ministry and, for the purposes of this document, the names are taken as synonymous.

mid 2003, in response to a government request for assistance in implementing the NDP, FAO assisted the Ministry of Agriculture Forestry and Fisheries (MAFF) with the preparation of a Sector Investment Program (SIP) that identified a number of high priority programs in support of the NDP. SIPs were then developed for most ministries and these programs became the basis for annual planning, budgeting and negotiations with donors for complementary assistance during 2004-06⁵. However, the initial SIPs had been developed in the absence of a clear policy framework for agriculture other than the very broad guidelines provided by the NDP. Subsequently, the first policy framework for the sector was developed by MAFF in 2004, through GTZ and FAO assistance. The 2004 Policy and Strategic Framework⁶ set out the Ministry's policy directions for agriculture, livestock, forestry and fisheries, with a focus on five priority areas, namely to:

- (1) improve food security and raise self-reliance
- (2) increase value-added production and marketing
- (3) achieve sustainable production and management of natural resources
- (4) strengthen the balance of trade by promoting commodity exports, and
- (5) increase income and employment in rural areas.

The 2004 document presented strategies to increase food security, raise self-reliance, improve animal and fish production, support the development of agricultural industries and to enhance export income and employment creation. The 2004 policy framework also underlined the importance of sustainability and capacity development as well as the involvement of the private sector as important elements of development. However, the Ministry's 2004 policy framework was unclear in respect to both agricultural extension and research, and provided only a very general statement of intent without proposing policies, strategies or resources to build capacity in research and extension services.

In 2006-07, the incoming IV Constitutional Government set out its development agenda and priorities in the *IV Constitutional Government Programme (2008-2012)* and in April 2008 published a report on the *State of the Nation for the Agriculture and Fisheries Sector*⁷ that evaluated progress with the National Development Plan.

These high-level policy decisions, and the subsequent re-organisation of the Ministry, have evolved prior to planned revisions of the National Development Plan (NDP) and of the 2004 Policy and Strategic Framework (which would ideally be based upon the revised NDP) but these revisions had not been finalised as at December 2008. In the interim, the 2004 policy objectives remain broadly appropriate and are still being referred to by the Ministry.

The IV Constitutional Government's priorities for the sector are centred on achieving two main objectives⁸:

- 1) *To achieve food security, through increasing production and productivity beyond subsistence level, and*
- 2) *To contribute to economic growth through promoting/increasing export earnings, employment creation, enhancing technical and management capacity in all sub-sectors. Agricultural infrastructure will also be strengthened.*

Priority interventions and commitments for the short and medium term have been identified as:

⁵ The SIP process was discontinued in 2006.

⁶ MAFF, 2004. Policy and Strategic Framework.

⁷ This report was prepared using data and information from various sources, particularly from Ministry of Agriculture and Fisheries, Directorate of National Statistics, Ministry of Finance, key stakeholders, available studies on agriculture, livestock, forestry and fisheries conducted by various agencies/institutions. Inputs were also provided by national officials and international advisors of MAF and other agencies.

⁸ For more details, see the IV Constitutional Government Programmes (2008-2012).

- 1) To develop and implement agriculture production through intensification, diversification and expansion of agriculture production areas. Production should be geared towards a more market-oriented production, while ensuring food security. The initial focus will be to establish an internal market that will guarantee the flow of farmers' produce and promote self sufficiency and, in the medium term, to create external 'market niches';
- 2) The government commits to the sustainable management of natural resources through establishing policies and regulations to protect and/or preserve natural resources and its biodiversity. A macroeconomic framework will also be developed to protect the current generation's interests while safeguarding the interests of future generations.
- 3) Enhanced coordination of diverse initiatives in the sector and with all agricultural development partners, within the framework of an integrated rural development program covering education, research and agricultural resource centres including training, education, investigation and agriculture resource centres.
- 4) Promotion of fish production that will enhance the quality of food intake through improving fisheries management and performance while developing adequate infrastructure for better supply and marketing in a sustainable manner;
- 5) Promotion of livestock development to improve household nutrition and creation of an enabling environment for the development of small and medium agriculture-livestock industries for internal consumption as well as for export.

The Government is determined to (i) shift from subsistence agriculture towards a market oriented agriculture; (ii) shift from small and fragmented production areas towards *zoning/specialised production*⁹ areas; (iii) shift from rain-fed farming towards the establishment of irrigation infrastructure to ensure agriculture production; and (iv) reduce regional disparities in agriculture production through the *establishment and/or rehabilitation of extension centres in rural areas*, rural feeder roads and *marketing*. Particular emphasis will be placed on improving the livelihoods of rural communities in up-land and low land areas in order to achieve food security through improved production and sustainable systems, along with strategies to sustain yields through *the introduction and testing of new seeds for local farmers* as well as the *provision of agricultural inputs*. *The government will ensure markets for farmers' produce*.

The notable changes in emphasis and direction expressed in the IV Constitutional Government Programmes (2008-2012) relative to the 2004 Policy and Strategic Framework are:

- Establishment of a new national agricultural extension system
- Increased investment in irrigation infrastructure and rice production.
- Direct intervention by Government in internal markets.
- Direct supply of inputs¹⁰ to farmers to stimulate production.
- Adoption of specialised production zones.
- Adoption of a coordinated rural development framework.
- Establishment of agricultural resource centres.

Discussions with the Minister and his Executive have further informed the emerging policy framework. These indicate that there is a high level and over-riding imperative that rapid and tangible progress must be made in agriculture and rural development, and especially in food security and rice production, as a matter of national priority.

Extension Policy - The International Experience in Brief

The decision to establish a national agricultural extension service in Timor Leste has been taken against a background of widespread international disappointment with the cost-effectiveness of

⁹ Emphasis added for those elements directly affecting extension.

¹⁰ In 2008-09, MAF is supplying a range of inputs, free of charge, to farmers. The extent to which these inputs will continue to be supplied by Government is not yet determined.

publicly funded and delivered extension systems. However, it also comes at a time when international attention has returned to the basics of food production and the important relationship between food supplies and socio-political security, due to a sharp increase in international food prices during 2006-07 and concerns in both developed and developing countries about the security of world food supplies. These risks were never more obvious than during the national rice crisis of 2006, when Timor Leste's dependence upon imported rice became a cause of serious civil unrest¹¹.

The international resurgence of interest in agriculture and food security, after the neglect and complacency induced by two decades of food surpluses and declining prices to consumers, has driven a worldwide revival of attention in agricultural extension, education and research. The OECD-FAO Agricultural Outlook for 2008-2017, (p12), presents analyses, forecasts and recommended policy responses to address the expected trends in food production over the next 10 years, and summarizes these as follows –

For the Least Developed Countries, especially the food-deficit group, the projections thus show greatly increased vulnerability and uncertain food supplies during an era of high commodity prices and high price volatility. This underscores the importance of developing their domestic supply capacity by improving the overall environment in which agriculture operates through enhancing governance and administrative systems and investing in education, training and extension services, research and development and physical infrastructure. (emphasis added).

However, investment in these necessary services alone is unlikely to be sufficient to guarantee improvements in food production and rural incomes due to the dependence of farmers' production decisions on multiple factors that are beyond the influence of extension, education or research. There is also the need to ensure that investments in extension, education, training and research are effective and efficient in their support of improved productivity, given the history of questionable performance of extension on both criteria. Therefore, in designing suitable policies and strategies for extension in Timor Leste, the lessons from the international record need to be taken into account.

Since the demise of Training and Visit (T&V) extension, most international extension systems have moved towards the privatisation and out-sourcing of all but core government services to agriculture such as regulation, natural resource management and environmental protection¹². The problems of traditional, government funded and delivered extension that are claimed to have contributed to the interest in privatisation and contracting-out of extension can be summarised as:

- large, expensive, hierarchical bureaucracies unable to respond effectively to farmers needs,
- poor levels of management and accountability for results,
- capture of benefits by elites,
- weak and ineffective linkages with research,
- focus on one-way technology transfer, and
- poor program design.

These in turn have led to overstuffed bureaucracies, under-resourced field offices, de-motivation, low morale and redundancy among extension staff and to very little progress in agricultural productivity or poverty reduction. As a result, government and donor support for public extension has declined sharply over the past two decades, along with general government support for

¹¹ See Douglas Kammen and S.W. Hayati, 'Crisis and Rice in East Timor', www.etan.org/news/2007/03food.htm, for an overview of the rice crisis in Timor Leste.

¹² Marsh and Pannell, (2000) caution that this policy direction is producing some quite unintended consequences and risks, which include a neglect of research and technology generation in support of environmental extension and the misdirection of extension policies and resources. (Marsh, S.P. and Pannell, D.J. (2000), "Agricultural Extension Policy in Australia: The Good, the Bad and the Misguided", Australian Journal of Agriculture and Resource Economics 44 (4)).

agriculture, in favour of policies that encourage private-sector driven services to farmers, often under cost-sharing arrangements between beneficiaries and government.

While there have been many failures and disappointments with national extension systems in developing countries and in this region, it should be noted that not all public extension systems have been failures. The present highly productive agricultural industries of North America, Europe and Australia were all developed under publicly-funded and delivered, free-to-user, research and extension systems. These major agricultural economies have all moved towards mixed public-private systems over the last 25 years, with a transition from their earlier publicly funded - publicly provided research and extension systems, through a mixed model with both public and private provision, to predominantly privatized models. In the region, India has moved from regular famines to being a food exporter under publicly funded research and extension, including a significant contribution from its extension service that has been verified by World Bank research¹³. Thailand and Vietnam have become the world's largest rice exporters through a combination of private sector entrepreneurship and efficient supply chains, supported by public research and extension. Indonesia has moved from a traditional top-down extension system (as was practiced in Timor Leste) to a much more decentralized system combining strong public sector extension with emerging private sector activity and community-driven activities. In several countries, the contracting-out of the services required by communities, based on community plans and priorities using direct financial support by government, has met with some measure of success.

The international experience has been analysed by the World Bank and FAO¹⁴, and the key lessons extracted. These lessons present a daunting list of challenges for extension policy and strategy that, either alone or in combination, are claimed to have led to ineffective extension. They are:

- i) the size of the task – its sheer scale and complexity,
- ii) extension effectiveness being dependent upon wider policy settings in the economy,
- iii) extension effectiveness being limited by external factors – roads, trade, transport, inefficient and corrupt markets, communications, low education levels, etc.,
- iv) top-down, recipe-driven extension methods driven by government objectives that did not address farmers needs
- v) great difficulty in maintaining the technical proficiency of Extension Officers (EOs)¹⁵, especially in linking with external sources of new knowledge and innovation, especially with research
- vi) inability to respond to farmers' needs as these become more complex
- vii) overload with non-extension work – input supply, credit, statistics, regulation,
- viii) very poor accountability and ability to demonstrate effectiveness and impacts, with consequent loss of political and budget support,
- ix) focus on processes, activities and inputs rather than on producing results and outcomes/impacts,
- x) inability to provide equitable service to poorer, more remote and disadvantaged farmers and communities and difficulty in retaining competent staff in remote areas
- xi) very weak farm business management, production economics, marketing and commercial orientation in extension workers
- xii) weak management systems with unmotivated staff.

¹³ Gershon Feder and Roger Slade. (1986), *The Impact of Agricultural Extension: The Training and Visit System in India*, World Bank Research Observer 1: 139-161.

¹⁴ Comprehensive overviews of the international extension experience are provided by the World Bank and FAO in the studies by Feder, Willett and Zijp (1999), Anderson and Feder (2002) and by the contributors to FAO's Reference Manual on Agricultural Extension (1996), along with earlier work by FAO (Axinn, 1986).

¹⁵ The term 'Extension Officer (EO)' is used throughout to describe the new Timorese, suco-level extension staff.

The Neuchâtel Group (1999) also brought together the lessons on agricultural extension from all international sources into a set of six principles. These principles provide a practical guide to donors and governments on the most successful approaches to improve extension in the face of declining public expenditure of agricultural services. These principles may be summarized as :

1. Sound overall agricultural policies are indispensable.
2. Extension is facilitation as well as simple technology transfer.
3. Producers are clients and stakeholders, not only beneficiaries.
4. Balance is required between the interests of producers and those of private business.
5. Public funding and the engagement of private providers in the delivery of extension.
6. Pluralism, decentralization and coordination of extension services.

To the extent possible, these principles and lessons need to be incorporated into MAF's extension policy for Timor Leste. This will allow the policy framework for extension to anticipate, minimise and manage the well-known risks facing a new extension service while building upon the proven successful approaches from the international record and from recent local experience.

Agricultural Extension in Timor Leste since Independence

During the period of Indonesian government (1975-1999), Timor Leste had an extensive network of locally based extension officers, with over 700 PPL¹⁶ servicing all villages with technical advice, promotion of national programs and the provision of a range of input and market support services.

From 1999 until the formal declaration of independence in 2002, the new nation was under transitional administration by the United Nations through UNTAET¹⁷, which established the Ministry of Agriculture Forestry and Fisheries (MAFF), under advice and support from the World Bank and donors. The MAFF was established with a skeletal structure that had no provision for extension at the local level, nor for vocational or technical education in agriculture, and only a minor research capacity. Hence the previous extension system was abandoned at independence and not replaced, although a number of extension officers remained in the country, either returning to their villages or being engaged by MAFF and other agencies in a variety of roles.

The original UNTAET/World Bank decision that Timor-Leste would not have a publicly funded extension system assumed that a publicly funded and delivered extension system was both unaffordable and unnecessary, and that extension would become the responsibility of the private sector, NGOs and civil society. MAFF's original budget and staffing were therefore severely limited (around US\$ 1.6 million in 2003-04) with extremely limited extension and research capacity. MAFF continued to struggle with lack of budget and human capacity for service delivery to communities for several years, while arguing strenuously for an increased share of the CFET budget, in keeping with its mandate to improve national food security and rural economic development¹⁸.

The government's Sector Investment Programs (SIPs) of 2004-06 and MAFF's Policy and Strategic Framework of 2004 documented severe market failure in the private sector approach to agricultural extension, whereby very little of the expected private-sector capacity to provide extension services had been forthcoming. The District staff of MAFF had quite limited capacity or budget to conduct any formal extension, and very limited services were being provided by numerous, scattered and uncoordinated projects conducted by a number of donors and NGOs, often in cooperation with the

¹⁶ PPL: the village based extension worker under the Indonesian extension system.

¹⁷ UNTAET – the United Nations Transitional Authority for East Timor – the UN agency that administered East Timor between the vote for independence in 1999 and the formal inauguration of the elected Government of Timor Leste in 2002. The World Bank coordinated donor assistance to agriculture and the creation of MAFF during this period.

¹⁸ See World Bank bi-annual reports of the various review missions for the Transitional Support Program (TSP) and Consolidation Support Program (CSP), 2004-2006.

district MAFF/MAF¹⁹ staff. However, donor and NGO projects have necessarily had limited coverage both geographically and in content, were of variable quality and impact and were limited in scalability (that is, their potential to be scaled-up to provide national coverage). No significant progress had been made in improving food production or farm incomes, or in the movement of farmers out of subsistence, and most *sucos* remain unserved by any type of agricultural extension.

Donor projects, NGOs and MAFF district staff were also experiencing great difficulty in obtaining sustained ownership by farmers of project led activities for historic, technical and cultural reasons. These were explored in a detailed study by OXFAM-MAFF²⁰ in 2004 and can be summarized as:

- a. Very high levels of expectation for free government services and hand-outs, and generally strong resistance to contributing to the cost of activities.
- b. Over 4 centuries of surviving under foreign administrations, which had led to a dichotomous relationship with government – highly developed strategic dependency in dealings with government, existing in parallel with high levels of underlying self-reliance.
- c. Low levels of trust in government and outsiders; trust has been a key factor in working effectively with Timorese farmers and is hard-won. Poor skills among some project staff in gaining the trust of farmers and community leaders have been an important constraint.
- d. Very low levels of education and functional literacy and numeracy in communities.
- e. Subsistence production systems in multiple, fragile, high-risk agricultural environments.

Following these early lessons, and in keeping with its 2004 policy objective to strengthen service delivery, MAFF gradually began to strengthen extension capacity in the Districts and, as budget allocations allowed, the number of staff in the Districts rose to around 6-8 per District. However, the capacity and mandate of these few District staff to conduct extension or adaptive research remained limited by their physical inability to provide coverage to the numerous *sucos* in their District, low CFET²¹ budget, inefficient procurement procedures, poorly qualified staff with weak skills, unclear management systems, generally low staff motivation and multiple demands on staff from donor programs and the Dili-based Directorates.

In the absence of a clear extension and decentralisation policy, MAFF had also become heavily Dili-centred with a large complement of administrators relative to field operatives. Initial attempts to address this imbalance through a devolved regional structure were discontinued and, until 2008, the existing District-based officers had been administered by Dili on a traditional commodity basis, with the national directorates each responsible for its own extension. This followed an earlier structure where research and extension (confined largely to information support) had been the responsibility of a separate Dili-based Directorate, which is now only responsible for research and laboratory services. The outcome has been very limited, fragmented and unorganised national capacity in extension and adaptive research, which has lacked clear policy direction and resources.

Nevertheless, some progress was made from 2003 to 2006 as the Ministry, donors and NGOs applied the lessons from earlier experience in working effectively with Timorese farmers. MAF's projects and programs, as well as NGOs cooperating with MAF, have been piloting various extension approaches, as well as training staff in extension and technical recommendations. For example, the EU and GTZ Rural Development Programmes have developed and refined demand-driven group extension methods (using participatory technology development, the cluster approach and subject matter specialists) and trained staff in these methods across 4 districts. NGOs, such as CARE, OXFAM, World Vision and Concern, have been introducing and refining participatory extension methods and training communities and staff in various districts. The Seeds of Life

¹⁹ MAFF – the Ministry of Agriculture Forestry and Fisheries from 2002-2006. MAF – the Ministry of Agriculture and Fisheries from 2006-.

²⁰ OXFAM and the Ministério de Agricultura, Florestas e Pescas 2004, Study on Lessons Learned in Implementing Community Level Agriculture and Natural Resource Management Projects in Timor Leste - Final Report. Dili, Timor Leste, June 2004.

²¹ CFET – the Consolidated Fund for East Timor – the national budget, comprising pooled revenues from donor Trust Funds and GTL sources.

program (MAF/ACIAR/AusAID), while nominally a research activity focusing on varietal evaluation of key food crops, has also been training MAF personnel in participatory methods for on-farm research and extension. It has been notably successful in gaining the participation and trust of farmers.

MAF has also been developing basic infrastructure for the testing of improved farm technologies and has been devising ways of channelling information to farmers. Four regional research centres have been established with the assistance of donors and international experts, with the first of these concentrating on the testing of newly introduced varieties of food crops.

There has also been some limited success in engaging the private sector in the delivery of services to farmers. The ARP III program has trained Village Livestock Workers as private service providers for the livestock sector with some promise, although the methodology needs further adjustment. ARP III also piloted a system of Agricultural Service Centres (ASC) under the Ministry, which were designed to assist farmers with access to inputs and markets. While some minor successes were achieved, the ASC's have not yet become privatised or commercially viable. The *Café Cooperativa Timor* (CCT), with USAID support, has developed potentially sustainable extension and market services for coffee, agroforestry and beef cattle to the 19,945 members of its cooperative. A number of other export commodities are being marketed and exported in small quantities, but none are yet being supported by private extension services.

The first initiative to formally review the extension system and extract the policies and principles that might guide future development was taken in October 2006, when a national workshop was convened by MAFF to bring together all agencies with recent experience in extension in Timor Leste. Each donor or project presented their experiences and lessons learned from working with farmers and these were discussed by the workshop sessions. The findings from these presentations and discussions²² provided the basis for the first National Agricultural Extension Policy. With few exceptions, these findings are entirely compatible with, and reinforce, the broader lessons from the international experience. The key principles for effective and efficient extension services in Timor Leste were agreed as follows:

I. EQUITY:

All members, male and female, young and old, of all types of rural households are entitled to extension services.

II. EFFICIENCY

Cost-effective services, provided by well-trained, highly skilled extension agents, must be provided to help assist farmers to solve and/or overcome their problems. Cost effectiveness will be improved by active co-operation between all institutions (government, NGOs, other agencies, etc.) who provide extension services.

III. DECENTRALIZATION

Agricultural extension programmes should ideally be determined locally because agricultural conditions and farmers' needs will be different according to location, agro-climatic conditions and social customs.

IV. DEMAND-LED EXTENSION

The agenda of extension programmes should be set according to farmers' problems, needs and demands. Issues requiring attention need to be identified jointly by both farmers and extension staff using participatory techniques.

²² This summary was prepared by the then MAFF Director of Research, Sr. Lourenço Borges Fontes, (currently Director General of MAF). See *Workshop for a National Agricultural Extension Policy & Strategy, Ministry of Agriculture, Forestry and Fisheries, Baucau, Timor Leste, 26 – 27 October 2006*.

V. GROUPS

Working with groups offers the opportunity for more cost-effective use of limited extension resources, improved sharing of information, and the opportunity for grassroots decision making and participation.

VI. STRONG EXTENSION-RESEARCH LINKAGE

Extension and research activities cannot function independently. There must be free flow of information between extension and research to deliver effective services to farmers.

VII. TRAINING OF EXTENSION PERSONNEL

All extension agents need to be confident of their ability to solve farmers' problems, work together with all types of clients and collaborate with other agencies or individuals. Training is essential for this purpose.

VIII. APPROPRIATE EXTENSION METHODOLOGY

No single extension method is suitable for all extension activities. Extension agents can use farm visits, mass media, training, demonstrations, group meetings, farmer field schools and many other methods.

IX. INTEGRATED EXTENSION SUPPORT TO FARMERS

Advice and information provided to farmers must take integrated farming systems perspective. Extension agencies with differing expertise must collaborate if they are to provide whole farm advice.

X. CO-ORDINATED EXTENSION ACTIVITIES

Co-ordination underlines all components of the National Agricultural Extension Policy. Extension services provided by different agencies must be coordinated at all levels in order to optimise the use of resources. This can be achieved by sharing information and expertise between the agencies involved.

XI. INTEGRATED ENVIRONMENTAL SUPPORT

The National Agricultural Extension Policy supports extension programmes seeking to encourage farmers to apply sustainable and environmentally friendly agricultural practices. Efforts should be made to support and learn from farmers as well as from the formal research system.

The above eleven principles, together with information from MAFF's original Policy and Strategic Framework (2004), subsequent Sector Investment Programs, the State of the Nation Report, the IV Constitutional Government Programme (2008-2012), donor, NGO and project reports have been synthesised with the international experience to provide the foundation for MAF's new Policy Framework for Agricultural Extension.

Legal Basis of the National Agricultural Extension System

In early 2008, the IV Government took a number of major policy decisions in regard to agriculture aimed at achieving a rapid increase in food production and farm incomes, with priority attention to increased rice production. With the relaxation of the previous financial constraints on the national budget²³ and a renewed urgency to improve national food security, the Government introduced a number of parallel policies to support agricultural production, food security and marketing, that are to be administered by various ministries, and mandated the establishment of a public agricultural extension service under MAF. MAF has received a major increase in its budget and staffing for 2008 to support these initiatives.

²³ MAF's budget has increased steadily from 1.6 million in 2003-04 to the 2008 level of some \$16.66 million

Decree Law No. 18/2008 of 19th June 2008 (The Organic Law) provides the legal basis for the operations and organization of the Ministry of Agriculture, with the structure and mandate to work with equity, efficacy and efficiency towards the objectives of achieving food security and enhancing national economic growth. *Article 12* of the Organic Law provided for the establishment of a new National Directorate of (DNADCA) and set broad guidelines for its operations. These are as follows²⁴ :

National Directorate for Agricultural Community Development and Extension

1. *The National Directorate for Supporting Agro Community Development and Extension, abbreviated as DNADCA, has the mission of implementing programs for increasing agricultural production and for the agro--community development fund.*
2. *DNADCA is responsible for the following:*
 - a) *To define the national policy for extension, formulation of its strategies, priorities and goals, and to participate in the elaboration of plans, programs and projects for the respective areas;*
 - b) *Under cooperation with all Ministerial services, to establish a network of extension workers at the local level;*
 - c) *At rural local level to disseminate relevant information for the farmers who have been upgraded by MAP Technical Officers;*
 - d) *To ensure the implementation and stability of rural development programs, under strict performance linkage under Ministry supervision;*
 - e) *To establish the coordination, operating procedures and implementation of the Agro-Community Development Fund;*
 - f) *To ensure technical support for the proposals already approved for the Agro-Community Development Fund and, under coordination with the local Authorities, to monitor the implementation of the projects;*
 - g) *To provide an annual report on activities;*
 - h) *To undertake others duties as required.*

The Organic Law expressly charges the DNADCA with responsibility to define a national policy for extension, with the formulation of strategies, priorities and goals, and to participate in the *elaboration of plans, programs and projects for the ‘respective areas’*.

Vision and Goals

The National Development Plan (NDP) and policy framework for agriculture are still under revision and offer only general guidance for the policies of MAF and the new DNADCA. The policies outlined in this document must therefore be regarded as interim until such time as the NDP and the over-arching Ministerial policies have been revised and finalized. Therefore, this Policy Framework presents indicative goals, policies, goals, and strategies for implementation of the new National Agricultural Extension System, as mandated of DNADCA under the Organic Law.

The vision for MAF is to have by 2020 sustainable, competitive and prosperous agricultural, forestry and fisheries industries that support improved living standards for the nation’s people.

Similarly, the shared Goals of MAF and the DNADCA are the achievement of :

- Sustainable increases in national food production, food security and nutrition
- Sustainable increases in farm incomes

²⁴ Organic Law for DNACDA, as translated into English by MAF.

- Improved marketing of agricultural produce and the commercial development of agriculture
- Improved capacity of farmers to participate in and benefit from development

Clearly, all Directorates of MAF and other Ministries, along with the private sector, farmers, NGOs and civil society will need to contribute to the realisation of these common goals. This shared responsibility further emphasises the critical importance of coordination and cooperation between all actors in achieving agricultural development. Agricultural extension, by virtue of its close relationship with farmers, is in a position to play a key role in facilitating many of the processes that are necessary to achieve the common goals for the sector. MAF recognises that its objectives cannot be achieved through extension alone, but neither can they be achieved without an effective extension system. Many external factors beyond MAF's control, need to develop in parallel with the NAES – roads, transport, communications, literacy-education, land laws, input prices, private markets, financial services, trade policies and security. These factors, especially lack of efficient markets and adverse terms of trade for agricultural products, can reduce farmers' incentives to change production methods and so prevent even the best extension system from being effective. Government is currently developing its policies and strategies for rural development, the form and implementation of which are likely to impact on the new MAF extension system.

The urgency surrounding the policy environment in the sector dictates that MAF will take a strategic approach to policy development that addresses short-term imperatives, while at the same time seeking to build a sound basis for the long-term effectiveness and efficiency of the national extension system. In such an environment some compromises will be inevitable, as it will simply be impossible to meet all expectations in the short term and this risk is acknowledged at the outset. Equally, it will be important that short-term strategies and implementation methods do not unintentionally build a foundation for future irreversible failures in the system. Therefore the NAES will evolve over the medium-term in the light of lessons learnt in the field and in response to the changing needs of farming communities and the emergence of efficient markets and private sector capacity. Over the longer term, it is expected that the MAF extension staff will gradually become partners and facilitators in local development plans and activities, with increasing participation by civil society, NGOs and the private sector in an increasingly pluralistic system. This is consistent with development the pattern seen in other countries, where public extension has evolved into a 'facilitator' of community development planning and capacity building, in which most services are delivered by agents other than the extension facilitator, who then plays a decreasing role as a technical resource person.

The national extension policy needs to be kept under close review and be sufficiently flexible to learn from experience and to incorporate any necessary changes. To this end, constant internal monitoring will be most important, supported by some measure of formal, external, independent review, at least at three-yearly intervals. This monitoring and review process will help to manage the most serious risks to success, which include a creeping irrelevance of extension to the needs of farmers as these needs become ever more complex. The monitoring process will also help to manage the political and financial risks that are inevitable if the extension service becomes unable to demonstrate its outcomes, impacts and cost-efficiency. The draft policy framework therefore recognises the short-term imperatives facing MAF, with their inherent compromises, while also building towards a longer-term, sustainable, effective and efficient national system.

Donors have been providing assistance to develop policy and strategy to guide the operations of the new extension service. A first Draft Policy for Agricultural Extension was prepared in May-June 2008²⁵ with assistance from the MAF-Seeds of Life 2 Program, with a second consultancy, through

²⁵ The Draft Policy document (June 2008) contained considerable background material, including a synopsis of the international experience with agricultural extension and its relevance to Timor Leste. This material is not duplicated here in detail, and familiarity with it is assumed.

the Agricultural Rehabilitation Project III (ARP III)²⁶, which progressed the policy debate and prepared a second draft of the Policy for consideration by MAF. In addition to adjusting and confirming the overall policy settings for extension, the second consultancy developed strategies, guidelines and recommendations that will assist MAF to establish an effective extension system. Much remains to be done, however, to capacitate and develop the new MAF extension service and make it fully operational. The development partners are likewise invited to continue to assist MAF in the further development of the national extension system by supporting ongoing policy development and capacity building, and by aligning their programs with MAF's extension policy and strategy.

The National Agricultural Extension System (NAES)

The National Agricultural Extension System has been established as a publicly-funded and publicly-delivered service, that will be free-of-charge to farmers and will operate at the suco level, with an initial complement of one extension officer to every suco. The extension officers will be generalists who are expected to develop a detailed knowledge of the agricultural and social situation within their sucos and to monitor and report changes in conditions. The extension officers will work and reside in their respective sucos and be coordinated at the Sub-district level by Senior Extension Officers or Coordinators.

The organisational and administrative arrangements for the extension service are under development and are yet to be finalised. The new Directorate faces the daunting challenge of quickly establishing its internal management systems to support the new field extension officers while simultaneously undertaking a major exercise in capacity building at all levels and clarifying the working relationships between its staff and those of other units of MAF and external agencies. Consultations with DNADCA and the Directors of the other national directorates in December 2008 explored the issue of coordination and management of MAF's programs in some detail, with focus on the working relationship between the new extension officers and the technical directorates at District level and below. The consensus position from these meetings is incorporated under *Policy Issues 4, 5 and 6* below. While not binding, the policy recommendations from these consultations do offer MAF a set of guidelines for an organisational structure that enjoys the general support of the National Directors and senior staff.

MAF has already taken the first step by recruiting 188 extension offices and 12 supervisors, and these appointments have been of high calibre, some with previous experience in extension. This first cohort has been assigned to the sub-districts and sucos, with priority to the rice producing districts, in keeping with government policy. Approximately another 212 appointments are scheduled for early 2009, so that there will eventually be one extension officer for each of the sucos, plus an extension coordinator in each of the sub-districts with a senior extension manager in each district. Some 15 percent of the first intake are women. The new appointees will serve a probationary period before confirmation of their appointments.

Capacity building for the new extensionists and their supervisors is a very high priority. Some pre-service training in extension methods and technical messages has been delivered for the first cohort of new officers through donor cooperation, but much remains to be done to develop and deliver systematic in-service training programs. In addition, the overall extension policy and systems are yet to be developed, including linkages between farmers, extension agencies/agents, research agencies, seed and input supply systems as well as with NGOs and the private sector. Arrangements for technical support, adaptive research, participatory planning, seed multiplication and distribution, additional basic training programmes and in-service training activities for extension officers and administrators also need to be developed and implemented. The coordination and harmonisation of

²⁶ The policy document has been prepared in close collaboration with MAF under cooperative technical assistance from the MAF-SOL2 Program (AusAID/ACIAR), the MAF-ARP III Project (EU/The World Bank) and the EU-RDP II Program managed by GTZ.

MAF's own activities across directorates and with donors' and NGO's projects in the sucos also presents a major management challenge.

Policy Objectives

The high-level policy objectives that have been derived from, and based upon, the Organic Law in respect of agricultural extension are as follows:

The National Agricultural Extension System is expected to be effective, efficient and equitable in contributing towards the following national objectives:

- The achievement of national food security through a rapid increase in food production, with emphasis on rice.
- Sustainable increases in farm incomes.
- Improved marketing of agricultural produce and the commercial development of agriculture.
- The sustainable management of natural resources.
- Improved local capacity in leadership, organizing, planning, problem solving and self-reliance.
- Improved community access to resources by mobilizing, accessing and utilizing both local and external resources.
- Increased employment through job creation in rural areas.

Government has also determined that, at least in the short term, it will provide farmers with inputs such as machinery, fuel and seeds to farmers, and will provide price support for the main farm commodities. It will also ensure the availability of sufficient imported rice to meet local demand in excess of local capacity to produce and supply. The provision and management of these inputs is not the responsibility of DNADCA and rests with other MAF Directorates and other Ministries. The Community Development Fund, by which MAF provides funds direct to community groups for the implementation of approved development projects, will be administered by DNADCA.

Responsibilities, Roles and Functions of Extension

The Organic Law formally mandates the national extension system with responsibility for –

- i) the delivery of extension services and information to farmers,
- ii) the implementation of the rural development plans of the Ministry,
- iii) the operation and monitoring of the Agro-Community Development Fund in coordination with the local authorities,
- iv) annual reporting to the Ministry, and
- v) other duties, as required.

The Organic Law also allocates a number of extension-related responsibilities to National Directorates other than DNADCA. These responsibilities will need to be harmonized with those of the new extension service to prevent duplication and maximize efficiency in the delivery of services at the Sub-District and suco levels.

DNADCA views agricultural extension²⁷ as ‘*a learning process by which the main agricultural actors and agricultural business players are capacitated to organize themselves and to access market information, technologies, capital and other resources in order to increase productivity, work efficiency, incomes and living standards, while also improving their understanding of the importance of sound environmental management.*’

DNADCA therefore places emphasis on the role of extension in -

- i) building social capital through encouraging group formation, participation, cooperation, planning, organisational and leadership skills in communities,
- ii) facilitating access to information and new technologies
- iii) supporting self reliance and problem solving skills
- iv) building business management, marketing and financial skills
- v) managing natural resources sustainably.

The extension officers are also expected to become highly knowledgeable about the agricultural and social systems of their sucos and to become experts in the local farming systems. MAF expects that the extension officers will play a central role in the monitoring and reporting of agricultural indicators in each suco, most importantly in the collection of key indicators of food production and local food supplies, along with any emerging threats to food security. MAF also requires the extension service to promote MAF’s priority programs, such as rice intensification.

DNADCA is also charged with the administration of the Agro-Community Development Fund, and local extension officers will have a role in monitoring the operations of the Fund at suco level, in conjunction with local authorities. However, the operational aspects of this role are not yet defined.

The multiple expectations and functions defined for the extension service will inevitably result in some degree of stress between ‘top-down’ and ‘bottom-up’ objectives and priorities, which will have to be carefully managed by DNADCA. Strategies are presented below to minimize these conflicts.

MAF’s operational guidelines for the national agricultural extension system (NAES) are as follows. These policy guidelines differentiate the new Timorese system from the previous Indonesian system with which farmers and many MAF staff are familiar:

- The extension system will guide (not ‘train’ or ‘teach’) farmers to help them to learn about the potential benefits of new technologies. It will not be a ‘top-down’, recipe-driven system but will be built around a detailed knowledge and analysis of farmers’ production problems, constraints and potentials.
- The Timor Leste extension service will assist farmers in four main ways:
 - By helping farmers to identify and solve problems in their existing farming systems
 - By assisting farmers to access and evaluate information, new technology and production methods (from outside the local knowledge system)
 - By building local capacity in organisation, planning, leadership and self-reliance
 - By encouraging profitable, market-driven production
- The NAES will help to build self-reliance in the sucos, while reducing dependency upon government inputs. However, this can only be achieved gradually, given the historical dependence upon governments for subsidized or free inputs and subsidized market prices.

²⁷ *Draft Guidelines for Agricultural Extension Service*, Ministry of Agriculture and Fisheries, National Directorate of Agricultural Community Development Support, November 21st 2008.

- The NAES will also be responsible for the promotion of priority government programs in the sucos, such as the national rice production program, and for the monitoring and timely reporting of local problems and on key indicators of productivity.
- The NAES will balance and integrate national programs with those initiated by communities through a coordinated annual planning process.
- MAF is committed to a policy of equity in the delivery of extension services to remote communities and to disadvantaged groups within communities and to those that are not served by the private sector or civil society. The NAES will be sensitive to the variability in farmers' wants and needs across socioeconomic groups, including youth, women and the disadvantaged.
- The short and medium term need and priority is for the introduction, local validation and adoption of simple, proven technologies that can quickly improve productivity and food security, in parallel with market development. Rice technologies will receive priority attention.

The initial functions of the Extension Officers will therefore be to –

- a) Engage effectively with their communities and gain their respect and trust
- b) Study and document the agricultural and economic environment of the community as a baseline and to assist planning
- c) Conduct PRA activities with the whole farming community²⁸
- d) Form agricultural interest groups and make initial agricultural development plans with these groups
- e) Obtain necessary resources (including information) to implement the plans
- f) Assist the interest groups to implement plans, with full participation and ownership
- g) Monitor progress and results with full participation by interest groups
- h) Conduct field days, meetings and visits with stakeholders²⁹
- i) Report and monitor progress, including for the CDF activities.
- j) Evaluate results and re-plan for next growing cycle with all stakeholders

In its initial work with communities, extension will concentrate on agricultural matters (including land use, irrigation, forestry, fisheries and livestock) and the early development plans will be confined to these interest groups. In time, and given dynamic community leadership, interest groups may emerge to address non-agricultural priorities and to formulate and implement broader community development plans. Agricultural extension does not have the resources to lead this broader, but desirable, development planning process, which is both beyond the current mandate of DNADCA and assumes a capacity to respond effectively to these additional community demands

The policy towards public-private sector interaction has also been evolving and is in need of review in light of recent strong interventions by government in rice supply, commodity pricing and input markets. Likewise, ongoing revision will be needed to accommodate any new initiatives arising from the Government's emerging strategies and policies for rural development.

IMPORTANT: It is important that Extension Officers should not be involved in regulatory or enforcement roles. These should never be the responsibility of extension because they cause

²⁸ Timor Leste has an extensive network of local NGOs, and most International NGOs are also very active. The Catholic Church remains a key partner in rural development and its influence is often undervalued by donors and planners. Civil society actors are mainly active in urban areas, but can be vocal on agricultural issues.

²⁹ Stakeholders include NGOs, donor projects, other MAF programs and CSOs.

conflict at the village level – one day the Extension Officer is a ‘friend and helper’ to the farmers – the next day a ‘policeman’. Trust cannot be maintained under these conditions. Similarly Extension Officers should not be directly involved in the distribution or management of free hand-outs to communities due to the potential for conflicts, social capture of benefits and other interference with their main extension functions. More seriously, such involvement would act against MAF’s policy of encouraging independence and self-reliance in communities.

Risk management

The new Timor Leste extension system is exposed to a number of risks that may reduce its effectiveness and efficiency. This Policy document acknowledges and anticipates these risks, to the extent possible, and sets out strategies to avoid, reduce or minimise their impact. Some external risks are well beyond the control of MAF or GTL, being determined by international or global events of natural and human origin. These external threats to the effectiveness of extension might include -

- Natural disasters
- World commodity prices and cycles
- International trade agreements and policies
- Terms of trade for agricultural commodities
- Climate change
- Rural transport and infrastructure
- Communications
- Private sector business conditions, markets and finance
- Health, education and literacy levels
- Peace and security
- Government budget situation
- Government policies and laws affecting land use and rights

Government and other Directorates of MAF have the responsibility, to the extent possible, to devise policies and strategies to manage these risks to agriculture and food security. However, the extension service will likely be impacted by some of these issues, especially those directly affecting food production (disasters, climate change) and extension efficiency through weak communications, infrastructure and education. Most importantly, these constraints and risks can negate the effectiveness of even a strong extension service by reducing the incentives for farmers to change their production practices. Further analysis of these external factors and the development of strategies to mitigate their impact could be considered under MAF’s revised policy framework.

In the short term, however, it is more appropriate to consider only the more immediate risks to extension effectiveness and those within MAF’s sphere of influence. These are the more manageable, but equally serious, risks that arise from the internal environment principally through capacity constraints in planning, execution and administration. The policy challenge is to identify and analyse the main risks that face the new extension service, and to devise explicit strategies and plans to minimize these risks, while building on the strengths and opportunities within the extension and farming systems. This analysis has helped to identify the key *Policy Issues* that are set out in the following section, together with *Policy Responses* and *Strategies* that provide managers with a basis for planning and implementation.

Policy Issues and Strategic Responses

The major Policy and Strategic issues for extension in Timor Leste are considered under the following seven headings. These are derived from a combination of international and local experience and consideration of the risks facing a new public extension system.

1. Attaining and maintaining Technical Proficiency in Extension.
2. Attaining and maintaining Proficiency in Extension Methods.
3. Achieving Scale and Coverage: the provision of equitable service to poorer, more remote and disadvantaged farmers.
4. Achieving Balance in Extension Programs and Priorities.
5. Extension Coordination.
6. Administration of Extension.
7. Accountability and Evaluation.

These Policy Issues are selected from an analysis of the lessons from international and recent local experience and the unique challenges and risks facing extension in Timor Leste. Each issue is considered from both policy and strategic perspectives, in a deliberate attempt to bridge the common gap between policy ‘statements of intent’ and the translation of these policy intentions into suitable strategies that may expedite implementation. In most cases, the strategies presented do propose quite specific actions that are designed to assist DNADCA managers to respond quickly in high priority and urgent areas. Further refinement of these strategies and activity plans will be possible following the proposed Functional Analysis of DNADCA in early 2009.

Policy Issue 1. Attaining and Maintaining Technical Proficiency in Extension

Policy Issue:

How to ensure that extension officers have ready, timely and ongoing access to the technical information and capacity building that they need in order to respond effectively to farmers’ problems, and to ensure that this information is the best available in the region. Extension officers can never know everything about agriculture, even in a limited area. It is not the role of extension to be the technical expert on everything, although some experienced EO’s will become very knowledgeable in technical matters. The extension officer must achieve competence in two main areas - extension methods and technical agriculture. The effective EO is a skilled communicator and facilitator who is able to gain credibility with farmers by building a reputation as a trusted and valued resource person. Thus the EO needs to know how to work with farmers to analyse problems and identify opportunities, know how to get potentially relevant information and how to help farmers evaluate it.

The Timorese experience has shown that adoptable technology must not only respond to farmers concerns but be able to demonstrate, to the farmers’ satisfaction, clear and significant advantages over present practice, be low risk and not require new, expensive or complex inputs.

At first, farmers’ problems may be relatively simple, with technical solutions readily available through the EO’s personal knowledge or the knowledge of other farmers, or by simple field trials where the farmers and EO work together to test some possible solutions and options. As the farmers’ problems become more complex, the EO and the farmers find it increasingly difficult to make progress and the EO then needs to access information from outside sources. Even greater complexity occurs when opportunities are identified that require major changes in the farming system. A related problem is that not all farmers will have the same problems, and it is usual to find that the more commercial or larger farmers have quite different needs and priorities from their subsistence neighbours, and can also exert greater influence on the priorities and activities of the EO thus leading to an equity question.

Policy Response:

DNADCA will provide technical support to extension officers in the field by providing regular technical training, technical updating, ready access to technical and marketing information and ongoing, face-to-face, mentoring and administrative support. DNADCA will coordinate requests for information from extension with the appropriate resource persons, both in-country and international, and will ensure that extension has ready access to up-to-date, sound technical information. DNADCA will further liaise with other directorates of MAF and other agencies to convey feedback from extension about the usefulness of current technical information in practice and the unmet needs of farmers for new or improved technology. DNADCA will ensure that technical information provided to extension is appropriate for Timorese conditions and that the information is validated by local evidence. The key to maintaining the technical competence of the EO's and to achieving strong relationships between extension and research is to ensure that both extension and research work together in the field on problems of mutual interest. This demands that the EO's become closely involved with all applied and adaptive research activities taking place in their sucos. The risk that the EO's can become the 'technicians' of researchers does exist, but is offset by the advantages of improved technical competence and better personal linkages between research and extension.

Strategy:

Technical support and capacity building will be provided at 5 levels -

- i) to help solve acute, emergency problems (insect plagues, disease outbreaks)
- ii) to help solve chronic productivity problems - of increasing difficulty
- iii) to help farmers identify and evaluate new production opportunities and systems
- iv) to help farmers to address management, marketing and supply-chain issues

Extension requires ready access to external information from research and technical specialists, and new applied research may even be needed to find solutions. The traditional strategy to provide technical support has been to designate Subject Matter Specialists (SMS) in the various disciplines, with a role to conduct technical training and provide technical backstopping to extension. This is a proven and sustainable solution provided that the SMS themselves are up-to-date with international developments in their field, and that the field extension officers have ready access to the SMS. This approach inevitably demands that the SMS themselves must be actively involved in adaptive research and participatory technology development in order to maintain their personal competence in their speciality, and that this involvement must form part of their job description and training. To be effective, the SMS must have sufficient time and resources to act as a resource person and link between extension and up-to-date international knowledge in each subject. The field research programs of the SMS, and other researchers, should be implemented in close partnership with the local extension staff as part of the annual action plan for the District/suco.

Particular attention is needed to ensure that EO's have sound training and technical support in basic agricultural economics, marketing and farm business management, in addition to their technical and extension expertise. This will inevitably require that extension works closely with a range of private sector actors along supply chains.

DNADCA will work with MAF and the Directorates to implement the following strategy -

- i) prepare and implement an annual capacity building action plan for the Directorate, covering all levels - the extension staff, supervisors, coordinators and managers; the plan then needs to be funded, resource persons/institutions identified and implemented as a core component of the Directorate's budget on an ongoing, annual basis;

- ii) commission a national forum to identify, assess, document and update sound, locally proven agricultural practices that can be extended to farmers with confidence; practices without a sound evidence base will not be extended until they are locally validated;
- iii) the Information Division of DNADCA to seek out, access, assemble, translate where necessary, edit, reproduce and distribute up-to-date technical information to the EOs. CD-ROMs or DVDs make efficient media for distribution when EOs and their Supervisors have occasional access to computers;
- iv) in conjunction with (ii) and MAF, convene annual reviews of national research results and determine national priorities for research and development based on the feed back of farmers' unmet needs from extension and analysis of emerging problems and opportunities; extension must contribute actively in these reviews;
- v) the adaptive research program of MAF and other agencies in the sucos will be implemented jointly between the researcher(s) responsible and the local extension officers as part of the District annual plan; to the extent possible, the EOs should join with the researchers in all aspects of field work in the sucos, including site selection, farmer participation in implementation of the experimental protocols, observations, data collection and results for extension; in this way the EOs become highly familiar with the details of the research to a depth that cannot be achieved through other training methods; likewise, EOs who wish to conduct trials in farmers' fields should always consult with their SMS on procedures during the design phase.
- vi) MAF should urgently commission a functional review/analysis of national research capacity, then develop and begin implementation of a capacity building plan to address the needs identified across al Directorates; the review to include agricultural economics and related fields;
- vii) negotiate with donors for the design, funding and delivery of pre-service and early in-service training programs for the EOs and coordinators; provide training and resource materials for EOs in the sound agricultural practices identified from (ii) above;
- viii) identify, with senior MAF management, key resource persons for each of the main discipline areas and reach formal agreement over their role as 'SMS' or Advisors. These SMS may be within MAF or externally among donors, UNTL or NGOs. Where the designated MAF officers are not already operating at good international standard with active research programs and linkages, a program is required to rapidly update their knowledge base, reference sets and professional linkages;
- ix) work with MAF towards achieving reliable internet access and power supply in the District offices; Sub-Districts also require access to computing and power, possibly through battery/inverter technology;

Policy Issue 2. Attaining and Maintaining Proficiency in Extension Methods

Policy Issue:

In addition to technical knowledge and support, extension also needs to build and maintain skills in working with effectively farmers. EOs require practical skills in many topics including communication, adult learning, adoption theory and practice, group and participatory methods,

planning and organising, adaptive research and M&E. These skills cannot be learned through classroom training alone and must be acquired and honed through a period of supervised practice in the field, under experienced guidance and mentoring. Few suitable Timorese mentors currently exist so that the lack of local expertise will take some time to overcome

Policy Response:

The farmer-centred, problem solving, participative approach is fully consistent with adult learning principles and is quite distinct from the traditional technology transfer model of extension. There is very limited expertise within MAF in these modern approaches to extension, for either training or mentoring purposes. In order to fill this gap and build local expertise, MAF will need to partner strategically with those MAF/donors' and NGO projects that have strong extension expertise and experience under Timorese conditions.

Strategy:

It is vital to develop an introductory training program for extension officers and their supervisors that will build the necessary expertise as quickly as possible, plus a systematic, ongoing capacity building program for all staff. Ideally, this needs to be an integral part of a new DNADCA capacity building action plan.

- i) Several MAF/Donor and NGO projects possess strong skills in extension, aided by their recent experiences in the field in Timor Leste. A number of these also have good Bahasa or Tetum language skills, and several have Timorese staff who have been well-trained in these methods. These donors stand ready to assist DNADCA with the design, funding and delivery of appropriate training programs for the EOs and coordinators.
- ii) MAF has begun negotiations with Indonesia to provide some mentors, but their availability and suitability are still uncertain. Many Timorese extensionists and farmers are familiar with the older Indonesian extension system that was supply-driven and heavily top-down; this prior learning may interfere with the adoption of newer decentralised, participatory approaches to extension that have been adopted in Indonesia and are now being introduced in Timor Leste. Therefore trainers or mentors from Indonesia should be recruited selectively on the basis of their individual suitability and practical experience with the newer Indonesian extension system.
- iii) As an alternative strategy, DNADCA might negotiate with MAF and donors for the engagement of a small number of experienced Bahasa or Tetum speaking expatriates to provide mentoring and training support nationally across 4-5 Districts, each for a period of up to 2 years. This would help to ensure consistent standards and good quality support until such time as this role can be taken over by emerging local talent.
- iv) Three Agricultural Secondary Schools are being developed under MAF with multi-donor assistance. These focus on the application of technology, building problem-solving skills and experiential learning in agriculture, and have developed close links with surrounding farming communities. The schools have access to expatriate advisers and provide a valuable training resource and long-term resource/partner for MAF extension. The transfer of the three Agricultural Schools out of MAF³⁰ would almost certainly return the schools to a traditional curriculum structure, pedagogic/competency based teaching methods and trade courses. The value of the schools in problem-based agricultural education would then be lost to MAF's extension service, and access for training would be controlled externally to MAF. MAF should therefore ensure that control of the three Agricultural Schools remains with MAF as an important complement to the extension service.

³⁰ The Ministry of Education could potentially take over these schools.

Policy Issue 3. Achieving Scale, Coverage and Equity

Policy Issue:

Timor Leste has some 75% of its population in upland areas, many of which are mountainous and remote, with difficult access. Under the Indonesian system, some 700 field extension workers operated across the 13 Districts, 65 Sub Districts and 442 sucos delivering a range of mostly centrally-planned services, which included technical advice, demonstrations, inputs and market support. Since independence the Ministry has been unable to provide extension services to all sucos due to staff, budget and policy constraints. Coverage by NGOs has been uneven in both spread and quality, while donors have a limited focus and resources but are willing partners for MAF. Private sector technical and extension services have not yet developed even in those few commercial commodities with market access, with the possible exception of the Village Livestock Workers.

Equitable access to services by all sections of each community presents a universal challenge for extension, and is often compromised by the demands of various interest groups upon the limited time and resources of the EO. These demands may arise from the priority of government programs or from the '*capture of benefits by elites*' effect where the demand from more commercial interests can lead to the neglect of some needy groups - such as the very poor, subsistence farmers, women farmers and youth.

Policy response:

MAF policy is to have one Extension Officer for every suco, which should provide equitable physical coverage across all geographic areas for the first time since independence. The EOs have been mostly recruited from, and located in, their own sucos thus ensuring cultural knowledge and local language skills while minimising the amount of travel needed to access all aldeias. EOs will be publicly funded and will be expected to work in close cooperation with other actors (donor programs, NGOs, civil society, private sector) to achieve coverage and equity in service delivery. It is important that disadvantaged groups, whether due to their remoteness, wealth, resource endowment, gender, age or disability are not systematically or accidentally overlooked or excluded from government extension programs.

Strategy:

Even with one EO per suco, coverage will still be difficult across all community groups; the planned 400+ new extension positions will still not provide the depth of coverage achieved by the Indonesian system with its 700 (approx) extensionists. This will be compensated in part by the closer cultural fit of the new EOs who will be more familiar than outsiders with the farming systems, language and cultural features of their sucos.

The equitable delivery of extension services to all interest groups in the suco presents a major challenge that cannot be fully met by the lone suco extensionist unaided. Equitable coverage will require cooperation from all development partners in order to complement and supplement MAF's limited capacity. DNADCA strategy to maximise equity and coverage is as follows –

- i) Extension officers will work with groups of farmers or 'interest groups' or 'cluster groups' to maximise coverage; these will include special groups to address women's food and agricultural interests.
- ii) EOs are required to work in close cooperation with other actors (donor programs, NGOs, civil society), who may already have active programs in the suco.
- iii) Cooperation between EOs, interest groups, NGOs, donor programs and civil society will be focused around the formulation and implementation of various, bottom-up action plans, with each party contributing their expertise to develop an integrated

- community-driven action plan rather than a number of disparate uncoordinated activities in the one suco (see also Policies #4 and 5).
- iv) EO's will require very sound training in group and participative methods.
- v) Specific training will be provided in working with women's groups and the disadvantaged.
- vi) Development of gender and equity expertise within the extension team in each Sub-district, with a target minimum of one female EO per Sub District.
- vii) There will be at least one SMS designated for Gender and Equity support.
- viii) Transport will be provided for those EO's working in the more remote/dispersed sucos (motor cycles, mountain bikes, horses, etc.).
- ix) Training in conflict management to help extension to cope with potential conflicts within their suco, such as in regard to the distribution of inputs or program priorities.

There are a number of challenges posed by geographic and professional isolation in managing the extension service and ensuring equitable coverage. Isolated EO's increase administration, supervision and training costs, and isolated staff may tend to pursue their own interests, especially if management is weak, remote and neglectful. It can also be difficult to retain good staff in isolated localities, often leading to a turnover of new, less experienced officers in these communities. Even in more densely populated areas, the suco-based EO's can become isolated from colleagues and hence from opportunities to share experiences and expertise.

DNADCA strategy to address these issues will be to promote the formation of teams at sub-district level to improve teamwork and simplify administration. EO's will live and work in their sucos but spend scheduled time per month at the sub-district office for planning, reporting, information access and training. This will also allow the emergence of some technical specialisation and sharing across EO's, build morale and increase the efficiency of supervision, training and administration

It will be vital that DNADCA does not neglect or inadvertently discriminate against officers who are working in isolated areas, where the agricultural and marketing problems are often more difficult with less opportunities for rapid progress than in more favoured locations. Under sound management, isolated work-stations can offer promising EO's an opportunity to exercise initiative, prove their capabilities and provide recognition and promotion. Conversely, neglect of these staff by management can quickly lead to morale and performance problems. Therefore fair and objective methods for performance assessment and promotion of extension staff will need to be devised and practiced.

Policy Issue 4. Achieving Balance in Extension Programs and Priorities

Policy Issues:

The achievement of balance between extension activities that respond to farmers' needs and also meet the priorities of Government presents a difficult challenge. However, public extension programs always have to achieve a compromise between top-down and bottom-up priorities, as the national or broader interest may sometimes over-ride the priority of local extension programs. Public extension also plays a key role in providing Government with concise, accurate and timely reports on issues such as food security pest/disease outbreaks, environmental matters and natural disasters, and with valid data on socioeconomic conditions in the sucos for monitoring and evaluation purposes and to inform Government planning processes.

Local experience shows that extension activities that do not address farmers' immediate needs are usually adopted and maintained only as long as external incentives are provided. Therefore, the top-down planning of extension programs has proved to be a high-risk, unsustainable strategy, especially if supported by unconditional or free inputs, which also act against the stated objectives

of building self-reliance and reducing dependency habits. Nevertheless, public extension will always be required to participate to some extent in the delivery of government programs, particularly in cases affecting the public good or where market failures are occurring; examples include quarantine, public health, environmental/conservation and quality assurance issues. Public extension is therefore forced to compromise between responding to farmers' priorities and meeting its obligations to Government.

A closely related problem arises from an overload of extension with non-core activities. Widespread international experience has shown that the servicing of non-core activities reduces the effectiveness of extension and, in extreme cases, there can be no time left over for planned extension work. The original design of the Training and Visit system strictly limited non-extension work because overload with non-extension duties had become recognised as a major cause of failure in national extension systems.

Non-extension duties often originate from the demands of external agencies, such as for the conduct of new surveys, the collection of general statistics or the delivery of inputs. These demands arise because the extension officer is usually the sole government representative working at community level, and can come to be viewed as a 'general government agent'. The extension officer in the field can find it impossible to resist the demands for these activities, which may come from higher authorities external to MAF, and may come direct to District staff from senior government or donor sources. A failure of management to protect extension officers from the imposition of undue external demands can lead to the disruption of planned extension programs and severe morale problems in the field

While some involvement in non-extension duties is unavoidable for civil servants, the policy challenge is to put in place procedures that both limit these demands to essential activities and to develop processes that ensure clear lines of communication and prior approval for all externally-imposed activities.

Policy Response

Government's over-riding policy objectives are to improve national food production and farmers' incomes, and to build greater self-reliance and organising skills in farming communities. Extension will therefore have to implement both government programs and those based on bottom-up planning, and these functions need to be reconciled so that extension programming becomes based on a balance between farmers' immediate wants and the broader objectives that are set by Government, where these may differ. Hence the Extension Officers and their managers will have to balance their obligation to deliver nationally mandated government programs, such as the national program to improve rice production, while still responding to the expressed needs of the farming communities. Unless carefully managed, these pressures risk leading to the neglect of the needs of some groups, such as subsistence farmers in the uplands.

The policy vehicle for achieving this balance is the annual planning and budget allocation process, where the priorities from the 'bottom' can be harmonised with those coming from the 'top'. Harmonisation of top-down and bottom-up proposals will best be achieved through dialogue between National Directorates and District staff, at District level, as an integral part of the Annual Planning and Budgeting process.

Harmonisation will be promoted if the senior planners of national programs become better-informed about the real issues and constraints that are affecting farmers and limiting their productivity. This can be achieved if the extension planning activities at the suco level ensure that their (bottom-up) proposals are carefully documented and quantified and that they accurately reflect the farmers' problems, needs and constraints rather than their more superficial wants. Traditional feedback from extension to research on research priorities is usually based mainly on descriptive,

qualitative information from community consultations and surveys. This type of problem identification and definition often lacks quantification and can be unconvincing to trained researchers, leading to differences of opinion between extension and research over priorities, causing poor communication and weak linkage between extension and research. Working with farmers to elicit accurate listings of issues and constraints and their quantification requires skill and experience, especially with problem definition techniques. These extension skills will have to be developed, and an accurate baseline survey will provide a practical entry point. Note that the collection of data for baseline surveys and the ongoing monitoring of key indicators are an integral part of EO duties.

Proposals from the field that are well prepared and documented are also more likely to have influence on national policies and priorities when senior planners develop confidence in the validity and rigour of the process. That is, there should be a gradual coming-together of views as to priorities and programs, which will be reinforced if farmer leaders are also supporting the same proposals through the political process.

Processes will also need to be developed to develop and prioritise more complex proposals that involve biological, market or economic potential and new methods of resource use, in addition to activities that seek the solution to problems in existing farming systems. This will require the strengthening of MAF's research capacity (see Policy 1(v) above).

In the medium term, it is expected that the evolving decentralisation thrust of government will place greater demands on the bottom-up planning process, and also bring greater opportunities for the community voice to be heard at higher levels of government. MAF's extension planning systems might provide an example of how to make this process work effectively. The same holds true for the forthcoming rural development strategy of the government.

MAF's policy is that all donor and NGO programs involving MAF resources be adjusted to be fully compatible with MAF's procedures, and it is essential that ALL donor projects and other ministries comply with MAF's requirements in this regard (see also Coordination of Programs below).

Strategy:

Achieving balance in the programming and prioritisation of extension and adaptive research activities presents a very difficult problem for middle managers. Coping strategies include -

- i) External demands on extension are easier to manage if the EO has a well-developed, clear and approved Work Plan. This then allows managers to make judgements about the opportunity 'cost' of disrupting this Plan with new unplanned activities. Such a plan offers some defence to the proposed disruption through the question "*why was your work not planned in advance and included in the Annual Plan and Budget?*" MAF will therefore formulate and promulgate a clear policy statement **of the protocols to be followed by all parties** who wish to use the services of the EOs in the sucos. The protocols for the approval for the use of MAF resources in the field must then be adhered to by all external agencies, including donors and NGOs. This also requires that all work by Directorates and/or Donors that need assistance from EOs be planned well in advance and included in the proponent Directorate's AAP, along with necessary budget and resources.
- ii) The policy requires that all external requests for assistance from extension be coursed through the Minister's office as a matter of courtesy and protocol. The Minister's office should then seek the advice of the Directorate (DNACDA) as to the priority of the request, its conformity with existing extension plans and priorities, and the availability of resources (taking into account the extra resources that should be provided by the proponent). It is essential that Administration staff must not make decisions on external requests for

extension assistance without prior reference to the Director of DNADCA. The DNADCA should consult the District Director in this process before approving, rejecting or setting conditions on the application and advising the Minister's office and Administration. These clear lines of communication and protocol will assist MAF to manage all but the highest-level demands on the time of the EOs. Successful attempts to short-cut this process will quickly render it valueless and expose the extension system to serious management problems in the field.

- iii) MAF insists, as a matter of policy, that EOs will spend at least 50% of their time on planned extension and adaptive research programs in the sucos, in line with the approved Annual Action Plan and Budget. However, there will always be sufficient flexibility in programming to allow extension to respond to emergencies and other random events. As a matter of policy, non-extension activities will be kept to an absolute minimum through MAF's formal annual planning processes, and not be allowed in interfere with extension plans that have been approved and are already being implemented.
- iv) Monitoring systems will ensure that programs that are not effective in meeting the objectives will not be maintained.

Policy Issue 5. Coordination of Extension Services

Policy Issue:

MAF is still developing as an institution, and the new DNADCA and extension system now need to become rapidly integrated with the existing structure and functions of MAF. The coordination of extension is therefore closely related to Policy 4 (above). The sharp increase in numbers of field based staff and potential capacity for MAF to work effectively at suco level, nation wide, presents many management challenges that have to be resolved. The Ministry's extension activities have previously been fragmented across the various Directorates, and the previous administrative arrangements at District level have been unclear and ineffective. With the new system there is, for the first time, the potential for coordinated delivery of services at the community level. The coordination of extension with the other field programs of the National Directorates and donors, and the harmonization of MAF's programs at the District level and below are priority issues. Government policies continue to move towards decentralization and MAF is one of the first Ministries to strongly decentralize bringing new challenges for extension, which will likely be the only ministry with national suco-level representation.

Policy Response:

Harmonization of all MAF programs at District level and below is essential, so that MAF has one clear program across Directorates; this is important in order to have consistency in MAF's work with the sucos and external agencies. The MAF program also needs to be clearly promulgated and understood at all levels, especially by the sucos. Donor and NGO programs must also be fully integrated with, and support, the mainstream MAF program and not pursue separate agendas. The MAF program in the sucos will therefore be a combination of national (top-down) and local (bottom-up) initiatives and priorities, to be delivered in partnership and coordination with the programs of donors, NGOs, and the private sector. The overall content and balance of the District, Sub-District and suco programs will be determined at the District level.

Strategy:

MAF's strategy for improved coordination has been developed through extensive consultation across MAF, including workshops with the National Directorates during November–December 2008. The consensus view on how best to coordinate MAF's activities follows:

- i) The District administration system itself is still evolving, with the critical positions of District Director of Agriculture (DDA) yet to be filled and the responsibilities of the DDAs relative to the National Directorates remains to be determined. The legal basis for decentralization is still under development, and budget and procurement procedures will largely determine the degree of authority enjoyed by the District administrations.
- ii) Participants from all National Directorates at the December 2008 workshop were unanimous as to the key role to be played by the District Director of Agriculture as the focal point for harmonization of all MAF programs in the field.
- iii) The key to coordination across MAF programs lays with the annual planning and budgeting process; MAF will now need to ensure that an annual District Development Plan (DDP) and budget becomes the focus for all MAF activities in the Districts, Sub-districts and sucos.
- iv) Extension officers will work with their sucos to prepare Group Definitive Plans (PDG) and resourcing plans (PDNG) for submission through their supervisors to the District.
- v) The District Development Plan will need to be prepared in close consultation between the District Director of Agriculture, the Senior Extension Coordinators, the National Directorates and other local authorities. This assumes that the EOs will bring forward realistic, prioritized proposals from their sucos through the Sub-Districts.
- vi) All donor and NGO programs that work in the sucos must be harmonized with MAF's overall program, and must be fully integrated where they require MAF resources or overlap with MAF programs. NGOs, CSOs, the private sector and donors should be invited to contribute to the DDP on an *ex-officio* basis; their involvement is critical as their programs need to be integrated with the DDP.
- vii) The District planning process is also the forum for bringing together the programs and priorities from the 'top' and 'bottom'. District plans will need to balance and reconcile the priority needs of the communities against those of MAF and Government. Ideally, these should be strongly complementary, but in practice some initial differences may be encountered.
- viii) The District Development Plan will need to follow standard MAF and Ministry of Finance timelines, procedures and formats. The content and quality of this plan is critical and will determine its success.
- ix) There will be many possible providers of services to the sucos, including those from the private sector. Coordination does NOT mean that the EOs will be actively/personally involved with or lead every activity in their suco – this is impractical. The EOs will need to work alongside other providers and specialists – forestry, fisheries, donors, NGOs, etc - but these inputs should form part of an agreed overall plan for the development of the suco/sub-district/district. It also does not mean that the EO will be the only authorized MAF officer to work with farmers in his/her suco. However, he/she should be aware of all agricultural development activities in the suco and help to facilitate the overall program. The EO will also need to become personally involved with priority adaptive research activities in the suco.
- x) In the longer term, as development proceeds, the community leadership will begin to drive the planning process and decide what services are needed and who should supply them. This process is being supported through the Agricultural Community Development Fund that is being administered by DNADCA.
- xi) There will be heavy administrative and coordination demands on the District Directors of Agriculture and the National Directorates, as there will be 13 Districts to consult during program development. It is likely that these 'transaction costs' will weigh heavily on the new system, and some modification may be required to streamline the process.
- xii) As decentralization proceeds over time, experience elsewhere warns that the District Administrators will need to take a balanced approach towards the sectors in allocating resources, especially when funds are tight. DAs have been known to favour the sectors in which they are personally qualified (health, education, infrastructure, etc) rather than

- agricultural extension and research. This has proved to be a serious problem for agricultural extension elsewhere in the region.
- xiii) Coordination is also important within DNADCA itself in the working linkage between the Agricultural Community Development Fund (CDF), Information and Extension divisions and to resolve the practical difficulties that will certainly arise during operations in the sucos.
 - xiv) Further development of this strategy will be required as experience accumulates. DNADCA in consultation with the other National Directorates should undertake a formal annual review of these procedures and protocols, and authorize adjustments as necessary. For example, the integration of Natural Resource Management responsibilities with the extension system poses a major challenge, which has not yet been addressed.
 - xv) The organizational structure of MAF and the Government's decentralization policies are still evolving, so that flexibility will be needed in adapting to new whole-of-government planning and budgeting policies, and to the proposed rural development strategy of Government.

Policy Issue 6. Administration of Extension

Policy Issue:

DNADCA is a new Directorate charged with the front-line delivery of programs, services and information to the nation's farmers. With few exceptions, its staff are relatively inexperienced in the practice and management of extension and adaptive research activities. MAF requires DNADCA to quickly build the competencies required to discharge its responsibilities and to become effective in working with farmers. This requires the development of new systems and processes within the Directorate and a parallel building of management capacity at senior and middle levels. The biggest challenge facing DNADCA is to ensure that field extension staff remain well-motivated, diligent and well supported in their work. The success of the extension system depends very largely on the personal enthusiasm, dedication and competence of the field staff, which must be sustained by DNADCA management.

Policy Response:

Implementation of the new extension system has run ahead of policy, strategy and operational planning due to the urgency of the food security issue. The initial structure of DNADCA provides for three divisions, under the Director, responsible for Agricultural Extension, Information Support and the Community Development Fund. At the District level, a Senior Extension Officer will oversee an Extension Coordinator based in each Sub-district, who will in turn oversee the Extension Officers based in each suco. Each District will continue to have a number of Technical Officers who have been under the various Dili-based national Directorates. The official relationships and command structure of the new institutional arrangements are yet to be determined. Urgent action in finalising the line of command and these functional relationships is now urgently required.

Strategy:

Detailed consultations were held with MAF in December 2008 on the functional aspects of the management structure, and a broad consensus was reached on a desirable operational relationship between DNADCA and the various other Directorates, and between the National Directorates and the District administration.

There was strong agreement that dual lines of command and 'matrix' structures are a threat to the efficient administration of District staff and should be avoided both in principle and practice. The line of command between the National Directorates, the District Administration, especially the District Director of Agriculture, the district staff previously directly under the National Directorates, and the extension staff at the Districts and below must be made clear and explicit. To this end, there was agreement in principle among the National Directorates that all district based

staff should have direct line responsibility to the District Director of Agriculture, who would be responsible for the coordination of all MAF programs at district level and below. Technical support to district, sub-district and suco level staff would then be provided through the National Directorates. Dual lines of reporting (only) would be maintained between all district-and-below staff to both the District Director and to their technical directorates. These indicative arrangements remain to be finalised with MAF. Implementation will require strong and consistent processes to reinforce the role of the District Director and to prevent the fragmentation of programs. A number of operational matters will also need to be determined in areas such as legal and regulatory jurisdiction.

DNADCA is under great pressure to develop a fully operational field extension service as soon as possible and has to move quickly on multiple fronts. These include –

- i) High-level liaison with MAF management to clarify and codify the working relationships between extension and the other National Directorates, especially at District level and below; early decisions on the multiple coordination issues under Policy Issue #5 are critical.
- ii) The structure and functions of the DNADCA itself needs to be finalised, especially the roles and responsibilities of its three divisions. A number of factors require clarification including the precise responsibilities of the suco and sub-district extension staff for the management and monitoring of CDF programs and for the management of inputs. These and other internal issues will be explored more fully by the proposed ‘functional analysis’ of extension³¹, which will help to better define roles and responsibilities as a basis for organisational structure and procedures.
- iii) DNADCA urgently requires a broad capacity development plan for all levels of the directorate, with the resources to implement the key areas immediately; all extension managers in DNADCA and District Directors urgently require training in the management of extension services (in addition to standard civil service administrative procedures, as at INAP).
- iv) Arrangements for the supervision and in-field mentoring of the EOs, are urgently required. There is a risk that delays in this area might lead new EOs to develop poor work habits and attitudes, or face problems in their early work with communities that they are unprepared to handle.
- v) DNADCA will seek a full-time adviser in extension management, with wide ranging responsibility to provide high-level policy, strategic and operational advice and on-the-job mentoring to the National Directorate. Specific assistance is required in developing and implementing a capacity building plan for the entire Directorate and in integrating the work of the new Information and CDF Divisions into the extension system.

Policy Issue 7. Accountability and Evaluation

Policy Issue:

Extension systems worldwide have been plagued by poor accountability and an inability to demonstrate effectiveness. Extension systems have tended to focus on the monitoring of processes, activities and inputs rather than on producing results and outcomes/impacts. However, the valid measurement of extension impacts is technically very difficult due largely to the challenges in accounting for the many parallel, non-extension factors that can affect farmers' behaviour and their decisions about production. However, publicly funded extension will inevitably come under increasing pressure to be accountable and to justify its existence relative to alternatives in the private sector and civil society.

³¹ The EU-RDP II Program has agreed to assist DNADCA to conduct a functional analysis of its operations, which is expected to lead to detailed operational planning, with a manual of procedures for extension.

Policy Response:

Rigorous evaluation methods that require high-level statistical or econometric skills are neither feasible nor appropriate at this time. However, MAF must establish a system that provides basic information about the effectiveness and efficiency of the extension service. This requires the collection of information on how much the extension service is costing and how much farmers are gaining from these services. Hence extension should emphasise extension messages and methods that give high monetary returns to farmers, along with a monitoring system that can track and document the improvements made. The key to successful monitoring is the establishment of sound baseline data on a set of key indicators that are clearly related to the Goals and Objectives of MAF and to those of its farmer clients (where these may differ).

The ongoing collection, analysis and interpretation of data on these key indicators will then provide evidence of progress, or otherwise, towards the objectives of MAF and the farmers it serves. This means that the farmers' goals must also be included and that farmers must be actively engaged in the monitoring and evaluation of extension outcomes and impact. In the absence of rigorous quantitative analysis, it is accepted that the informal evaluation of extension by farmer-clients provides the most valid evidence on the effectiveness of extension.

Strategy:

MAF now has a unique opportunity to obtain baseline data on all sucos at the very start of the extension system. There has been much recent experience with the practical difficulties in collecting this data in the field and these lessons will prove valuable in designing MAF's Monitoring and Evaluation (M&E) system³². If done well, this will provide the key for all subsequent M&E in MAF. However, the collection of data that cannot be analysed due to poorly designed questions, weak methodology or incompetent interviewers has been common in Timor Leste and to date most of this data has been of little or no value for agricultural M&E purposes.

Monitoring and reporting demands may easily overload the EOs if not well coordinated. MAF/DNACDA needs a single, comprehensive, minimal reporting system that meets the routine, legitimate needs of all users without duplication. The system must ensure timeliness and accuracy, and be targeted at the decision-making needs of management and towards measuring effectiveness and efficiency. Providing government with information on emergencies/natural disasters also needs efficient protocols and communication channels, with timeliness and direct channels being the essence.

- i) Staffing and training of the Monitoring and Evaluation (M&E) section of the Directorate of Policy and Planning (DPPS) needs to be completed urgently.
- ii) Responsibilities for the management of the baseline survey, ongoing M&E reporting and key performance indicators needs to be clarified by DPPS and DNACDA.
- iii) The baseline survey should meet all immediate requirements of MAF, especially the need for valid indicators on food security.
- iv) It is vital for the baseline survey to commence as soon as the protocols are finalised and the EOs trained in interview techniques and initial data handling. This will provide an important entry into the sucos and allow the EOs to quickly become familiar with the production systems and important issues in their sucos.
- v) There is a very strong risk that EOs will become over-burdened with survey work and data collection, especially by outside agencies or donors (Policy #4). EOs must not be burdened with multiple survey demands beyond that needed for the monitoring of a set of key indicators for extension purposes. All requests for additional assistance with data collection must be processed through the Minister and approved by the National Director, DNACDA and the District Director of Agriculture. All internal and external agencies

³² At the time of writing, MAF's M&E baseline survey instrument had been designed and was under field testing.

- (WFP/FAO/UN/Donors) must follow strict protocols, coursing through DNACDA, if they would like to have the EOs engage in additional, non-core information gathering.
- vi) There is the opportunity to involve farmer groups/communities in the set-up and monitoring of key productivity indicators. Extension officers should ensure that their farmer groups each participate in setting their own criteria and indicators of progress towards their objectives, and that these are periodically reviewed by the groups and reported.
- vii) Once collected, all survey data has to be collated, cross-checked, analysed, interpreted and reported. This is time-consuming, painstaking work where accuracy and diligence is vital. Responsibilities for each step of this process must be clarified, including leadership, coordination across Directorates and resourcing. All of these roles are currently inadequate and need to be greatly strengthened.