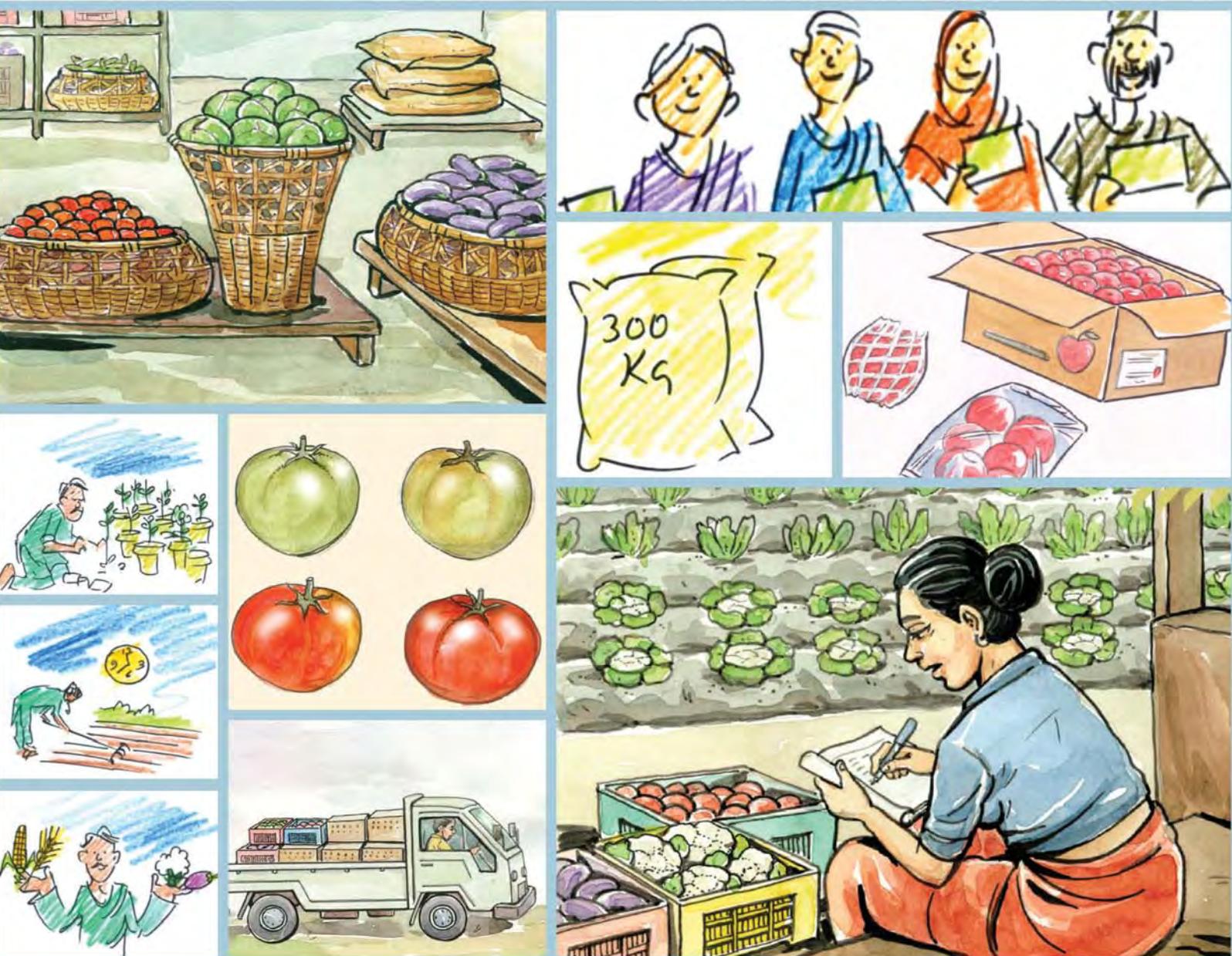


# PROCEEDINGS OF THE CONSULTATION WORKSHOP ON MARKET-ORIENTED AGRICULTURAL EXTENSION

11–13 May 2010, Bangkok, Thailand





# **Proceedings of the consultation workshop on market-oriented agricultural extension**

Bangkok, Thailand  
11–13 May 2010

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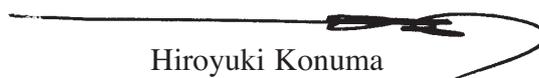
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## FOREWORD

The agricultural environment is changing with unprecedented speed and in very diverse ways as a result of market liberalization and globalization. The urban population in the region is increasing dramatically and this is accompanied by higher incomes and changing nutritional diets leading to greater demand for high-value products. In parallel there has been declining public investment in agricultural development, and in particular in extension services. The future for many small farmers is bleak unless they can adapt their farming systems to these changes. In order to survive and prosper farming needs to become competitive and profitable. Many of the constraints facing small farmers are related to a lack of adequate know-how and skills. Market-oriented agricultural advisory services can play an important role in helping small farmers to overcome these constraints, and are an essential component of the wider range of services that are needed to contribute to poverty alleviation. To retain viable livelihoods, small producers need to move from a focus on production for home consumption and occasional marketing of surpluses to production for the market. They have to be better able to respond to the ever increasing demands of the market.

In response to these changes, many countries in Asia are changing the content of their extension messages to farmers and their mode of delivery. Extension and advisory services are becoming more demand responsive and market-oriented and delivery has become more pluralistic. Efforts have been made to engage more rigorously with the private sector, farmer organizations and civil society.

FAO has been in the vanguard of this shift and has developed training and extension materials in marketing and farm business management as part of a human resources development programme aimed at linking farmers to markets. FAO has also designed and implemented field programmes and projects and provided programme managers and policy-makers with technical support and guidance. This workshop was initiated by FAO's Regional Office for Asia and the Pacific and the Rural Infrastructure and Agro-industries Division in Rome in collaboration with the Agricultural and Food Marketing Association for Asia and the Pacific (AFMA). The workshop brought together many participants from public sector extension services – directors of extension and market and agribusiness specialists involved in providing advisory services. The intention was to raise awareness of the issues facing extension services and identify ways to meet the changing conditions and the challenges that exist. The workshop also provided an opportunity to learn from country experiences how they are responding to these changes. Finally, it was forward-looking, identifying areas for follow-up collaboration. It is hoped that these proceedings will be of use to all those with an interest in developing marketing-oriented advisory services in the region.



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# 1 INTRODUCTION



*Mr Hazelman introduced the workshop*

The FAO Consultation Workshop on Market-Oriented Agricultural Extension was convened in Bangkok, Thailand from 11 to 13 May 2010 and was attended by 32 participants comprising the heads or deputy heads of agricultural extension agencies and senior experts in agricultural marketing, agribusiness development or farm management from the following participating countries: Bangladesh, Bhutan, China, India, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Viet Nam. The workshop aimed to raise awareness among government extension staff of marketing-related aspects

of extension and acquaint the participants with the capacity building publications on the topic developed by FAO. The participants also discussed possible action areas and drew up project proposals to be developed further, possibly with FAO support. The workshop also provided an opportunity for public sector extension managers to share their experiences and consider ways of addressing the most pressing challenges facing their departments.

## 1.1 Objectives of the workshop

The objectives of the workshop were:

- 1) to raise awareness among heads and deputy heads of agricultural extension agencies of the changes that are occurring in the organization of agricultural extension services and the messages that are being conveyed to farmers;
- 2) to raise awareness of the work that FAO has done in market-oriented extension and training in support of national extension agencies;
- 3) to share experiences among participants of the changes that have taken place in extension service provision as a result of greater market liberalization; and
- 4) to identify gaps and propose actions for possible FAO assistance.

The expected outputs of the workshop were:

1. a consultation report;
2. identification of gaps in market-oriented extension;
3. identification of additional training materials required; and
4. project profiles of possible follow-up activities.

## 2 MARKET-ORIENTED AGRICULTURAL EXTENSION

### 2.1 Market-oriented extension

Andrew Shepherd introduced the topic of market-oriented extension and said that agricultural marketing had changed in recent years as a result of the global boom in retail food marketing with quality and food standards, traceability, and safety becoming major issues. He stated that a more market-oriented approach to agriculture was needed to harness the benefits of these changes. The countries of the region face a major challenge of addressing these issues, and FAO could offer help to governments.



*Mr Shepherd setting the working context*

Setting the tone of the workshop, Mr Shepherd said that the farmers need to be prepared to make a commitment to the buyer in return for guaranteed purchases, but making such a commitment often conflicted with more traditional social obligations, which can cause problems. Failure to supply agro-processors or exporters can mean a lost market, including local supermarkets. He added that farmers also needed to act like business people by better understanding their costs and knowing whether they were making a profit or not. They need to schedule their inputs and plan their production and its delivery so that produce was available when the buyer wanted it, unlike in the past when they would sell products when they were ready for harvest.

In emphasizing the need for farmers to work together, Mr Shepherd said that individual farmers selling small quantities of one product do not interest big supermarket chains and other buyers. They prefer to work with a leading farmer, a dedicated wholesaler or a farmer group or cooperative able to supply large quantities of several products. To do this successfully requires management and coordination skills, and farmers need to develop these. Farmers need to know more about post-harvest handling in contrast to the past when they would just sell to a trader and get no feedback about the condition of the fruit or vegetables when they arrived at the retail store. But now, with more sophisticated value chains, buyers can pinpoint the sources of problems and stop buying from farmers who do not comply with their requirements.

### 2.2 Market-oriented advisory services: Global trends, challenges and lessons learned

The plenary address on “Global trends, challenges and lessons learned” was made by David Kahan. He described the dynamics of change with respect to market liberalization and globalization, including: the freer flow of goods, services, capital and technology; enlarged markets ensuring increased competition; the integration of global agri-food markets via trade; and modernization of agriculture.



*Mr Kahan discussed trends and the dynamics of change with delegates*

Rural-urban migration has led to significant urbanization with people being absorbed by the non-agricultural sectors. Urban wage rates have risen resulting in an increasingly emerging middle class with more money available to consume higher value fresh and processed foods and at the same time expecting high safety and quality standards to be met. Staple crops, however,

are still a major source of agricultural value addition and are increasingly being differentiated into a range of products that meet the quality and delivery standards of consumers. There is a rapid increase of value addition opportunities relative to primary production. Diets of both urban and rural households are changing and increasingly include more animal products, such as fish, meat and dairy products, as well as fruits and vegetables. The availability of new technologies for production, post-harvest and transport has also changed demand by making possible the delivery of products in new forms. These changes offer market and employment opportunities for rural farm households. However, they also present challenges for farmers to adapt their farming systems to meet the new conditions of the market. Where there are more freely operating markets farmers are required to make more efficient use of scarce resources.

Mr Kahan noted that these changes have led to advisory services changing their role and focus. Extension is now pluralistic with a refocus on marketing, value addition, and enterprise skills development. Technology transfer is less relevant and farmers and other entrepreneurs have to innovate and respond to the market. Public services are being decentralized and private sector service providers are becoming more prevalent. Other changes taking place include decentralization, leading to a quest for demand-responsive services; a drive towards national food security; expansion of information and communication technologies (ICT); and the expanded role of the private sector. Mr Kahan emphasized that increasingly it is the markets and not the producers that drive agricultural development.

Farmers face greater opportunities, but they also face increased competition and risks, Mr Kahan added. However, with limited information on prices and buyers, limited negotiating and bargaining skills, lack of access to financial services, insufficient marketing and business support services, limited integration into competitive value chains, inadequate business management skills, and inadequate access to value adding technology, they were very vulnerable, particularly the small farmers.

The concept of market-oriented advisory services, Mr Kahan explained, covers a range of economic, social, technical and legal services that provide technical know-how about how to improve quality, quantity and timing of production, etc., information related to economics, business management and markets, know-how to enable value chain actors to meet market or value chain quality requirements, capacity development for strengthening producer and other value chain actor groups, and support to facilitate linkages among different actors along value chains.

It was further noted that advisory services by themselves, however, were not enough to get farm products from the farm to the consumer. These services need to be supplemented by a range of more “tangible” commercial services that included input supply, product development (Research and Development), quality management services, packing, product collection and transport, and veterinary services including artificial insemination. They also include services like facilities for collection, grading and packaging, providing insurance cover, logistics and transportation, finance, and ICT. The supply of market-oriented extension could be met through public extension service organizations, producer and commodity organizations, processing and trading enterprises, private service enterprises, input suppliers, village advisers, mixed public-private-civil society systems, and ICTs.

Mr Kahan elaborated on the functioning service relationship, which called for the interrelation of three aspects:

*Service clients* – demanding and receiving services – farmers, entrepreneurs, businesses etc. receiving services, either individually, as groups of enterprises (e.g. farmers associations) or as a community of actors in a value chain.

*Service providers* – delivering the service products. These providers include private enterprises as well as public service agencies.

*Service arrangements* – the rules governing the relationship between service demand and supply, i.e. the form of organizing service delivery.

The changing context of service provision includes services for small farmers and other actors in the system (innovation and value chain systems). These include both public and private sector support services as providers and clients. Stand alone services were grossly inadequate and consideration of extension within a framework supported by research, education, finance and other institutions was needed. Market-oriented advice requires production and market information, technical assistance in business, marketing, organizational development and contracting supported by financial institutions, private sector dealers and traders and ICT. The broad range of services provided from a diverse range of service delivery mechanisms has the potential to commercialize farming and accelerate diversification into high value products that offer considerable potential for employment generation and productivity growth.

The important issues highlighted by Mr Kahan included: How to create a conducive and enabling environment that promotes a pluralistic approach to market-oriented services? How to make public sector extension cost effective? How to reach smallholder farmers effectively? How to get the private sector to invest and how to harmonize commercial and development objectives?

Mr Kahan said that for improved cost effectiveness of extension, it was necessary to have: a strategic focus with a wide range of sustainable services offered; improved public sector management performance; integration of the topics being discussed by the workshop into the day-to-day work of extension personnel; decentralization and promotion of farmer-led extension (producer group formation/lead farmer/para-extension workers) along with capacity development. Training programmes should be designed on the basis of client demand, content should match with the needs of the target groups, materials used should have adequate flexibility, which should be reinforced by the preparation of extension materials, the capacities of the trainers should also be built to carry out facilitation, it should be largely experiential, cost effective and aimed at maximizing the outreach of the programmes and supported by back-up services and mentoring.

Support for capacity building of producer organizations should also be done by organizing the demand and supply of services within a producer organization, forming second tier organizations and training and developing the staff to increase their capacities. ICTs of extension systems need strengthening, particularly in the areas of internet connectivity and/or mobile phones with a short message service (SMS), which may result in increased access (for both extension staff and farmers) to up-to-date technical and marketing information.

NGO linkages are needed because the private sector cannot always internalize the cost of training and supporting farmers, he said. But risks associated with the NGO sector could be that NGOs/public sector extension may get too involved in commercial activities, which could result in value capture, dependency and market distortions. In the expanding market economy of the twenty-first century, there is growing evidence that a paradigm shift is needed to improve the livelihoods of small-scale farm households, both in how extension programmes are organized and managed, as well as how programmes are conducted and services delivered. Mr Kahan posed some reflective questions to the participants before closing his presentation. He asked what should be the role of the public sector in supporting service provision, and what was the best way to provide public sector support without undermining markets and commercial viability? He further asked what has been the experience of the private sector providing market-oriented services to small farmers and what can be done to address some of the obstacles encountered and how might the public sector better cooperate with the private sector to provide market-oriented support services?

### 2.3 Re-orienting agricultural extension services to respond to global and regional trends



*Changes in extension organization*

Mr Hazelman gave a presentation on “Re-orienting the agricultural extension services to respond to global and regional trends”. He defined agricultural extension as the information and advisory services needed and demanded by farmers *and other actors* in agrifood systems and rural development. This included information on technologies, new research findings, markets, input and financial services, climate changes, business skills and market linkage development, linkages between farmer organizations and market actors, support to institutional development, facilitating access to supporting government programmes and mediating in conflicts over

access to natural resources. In addition, some common elements of agricultural extension still existed, particularly its role in education and communications. He noted that extension should be regarded as a process that occurs over time and requires different strategies targeting different categories of rural households and people – men and women, youth as well as farmers and rural entrepreneurs. He noted further that the overall purpose of agricultural extension was to focus on getting people to recognize their problems and to know-how to deal with and manage them effectively.

Mr Hazelman stressed that the market was increasingly driving agricultural development. The private sector is recognized as playing an increasingly important role in generating knowledge and innovation and providing rural clients with access to information, particularly through ICT. He pointed out that for agricultural development to occur in the twenty-first century, the role

of extension needed to be redefined. Countries had to recognize the need for pluralistic delivery systems that were not well formed, structured and organized and that a systems approach to extension had to be realized. Extension services were increasingly being privatized in order to ensure sustained delivery. Although it was widely agreed that learning from “best practices” was very beneficial, there were new challenges facing extension staff such as concerns over climate change, natural resource management, biotechnology and food security that had to be addressed. Additionally, this required greater inclusion of underserved groups.

In addition to these issues there are other challenges facing extension services. These include lack of capacity of extension staff, limited recurrent budgets, weak linkages with research and education systems, inability to respond to the changed demands for extension. Most public extension systems tend still to be top-down in structure, inadequately funded and have done little to keep and upgrade their extension staff. It was also pointed out that the role, structure and function of extension and advisory systems are changing and evolving as the agricultural development process changes in each country. This depends, in turn, on the educational level of farmers, availability and use of proprietary technologies, increasing commercialization of the farm sector and overall world supply and demand for basic and high-value food products as a result of climate change and bioenergy requirements. During this development process, more and more of the cost of technical advisory services for commercial crop and livestock systems will be shifted to the farmers themselves (either directly or indirectly), especially to larger, commercial farmers. However, some programme areas, such as natural resource management, human nutrition, organizing producer and/or rural youth groups and most other types of non-formal education (e.g. farmer field schools) will remain largely public goods. Also, the task of educating the rural poor and improving their livelihoods so they can achieve household food security must be considered a public good and should be supported by public sector extension services.

A recommendation (made at FAO’s 28<sup>th</sup> Asia-Pacific Regional Conference, held in China in May 2004) to advise countries on the most effective agricultural extension approaches and delivery mechanisms, to support measures for strengthening the capacity of national agricultural extension services and to study and disseminate information about innovative practices was presented by Mr Hazelman. By presenting the recommendation at the workshop Mr Hazelman was reaffirming FAO’s role and its commitment with member countries in supporting and strengthening agricultural extension in the region.

Discussing the challenges and response from the FAO, Mr Hazelman said that there was need for structural reform of public sector extension services without relying on a single, grand model and at the same time a need to promote pluralism and retain public financial commitments and coordination. There was also a challenge in the form of increasing accountability and creating service provision markets which needs to be addressed. Human resource development and moving beyond time bound projects towards longer term programmes were other challenges that required a balance between investments in the supply of and demand for extension services. The focus had to shift from methodological issues or technological solutions towards institutional development. It also had to move from standard packages to tailor-made advice, and address gender, age and ethnic differences and the specific needs of these groups of farmers and entrepreneurs. He said that although there existed opportunities for effective extension, it required a sound agricultural policy and clarity on the role of extension as a facilitation process rather than simply a process of technology transfer. Producers should be considered as clients, sponsors and stakeholders rather than beneficiaries. Moreover, market demands are critical in

forging new relationships between farmers and private suppliers of goods and services. These changes also require public sector reforms in agricultural extension with an emphasis on decentralization so that extension services are likely to be more demand responsive. The use of ICT, education and training, especially of rural people, and staff up-grading were other areas where opportunities existed.

He concluded by noting that new demands, challenges and needs called for new solutions and strategies for extension, and that a “one-shoe-fits-all” approach would not work any longer. There was a greater need for sharing, learning and adapting among the different institutions involved in rural development and this was strongly advocated. Finally, he pointed out the urgent need for continued training and retraining of extension staff and farmers through planned capacity-building strategies involving development projects, universities, and donors to achieve the overall goal of empowering farmers.

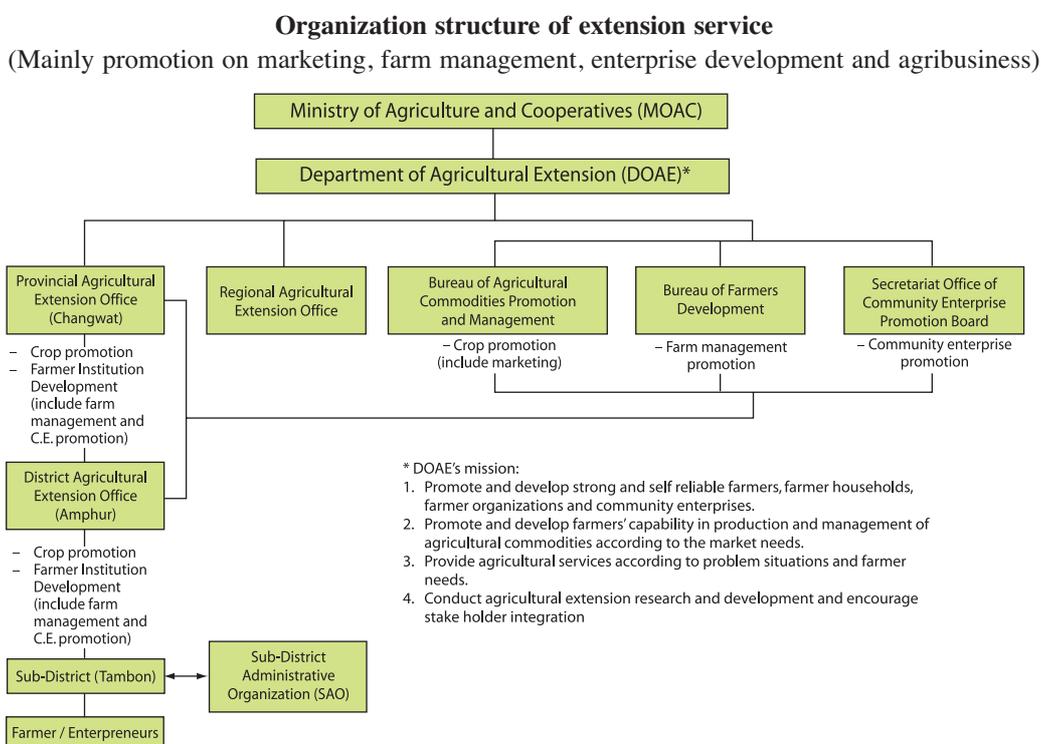
### 3 MARKET-ORIENTED EXTENSION – COUNTRY EXPERIENCES

#### 3.1 Country papers

Six papers on market-oriented extension were selected for presentation during the workshop and provided examples of developments from Southeast Asia, East Asia and South Asia. The countries selected were: Thailand, Philippines, China, India, Bangladesh and Sri Lanka. Summaries of these papers are presented here in order of presentations at the workshop. The summaries of the other country papers are given in Annex 4.

#### Thailand

The agricultural sector in Thailand can be characterized by small-scale and scattered production with a lack of storage capacity and market infrastructure. Consumer demands have changed rapidly and there is now a greater concern for quality and safety. Agricultural extension continues to be public sector led although private sector contract farming schemes have emerged with extension advice embedded in the commercial marketing of produce. The public sector extension service has adopted a strategy of promoting farmers’ groups as well as community enterprises. Food safety, quality improvement, value addition and enterprise development/ agribusiness are areas that have been given greater focus. The Department of Agricultural Extension also has a division for farm management extension but it is still predominantly



concerned with a farming systems approach for technology transfer. The concept of the One-Tambon-One-Product (OTOP) was introduced to locally produced products and services. The Secretariat Office of the Community Enterprise and Promotion Board (SCEB) has the main responsibility to coordinate with government offices and the private sector to promote and

develop community enterprises. The various government institutions include the Department of Agricultural Extension (DOAE) under the Ministry of Agriculture and Cooperatives (MOAC) responsible for promoting integrated farming systems, farmers' groups and organizations, community enterprises, food safety and quality, technology transfer in crop production and value-addition and contract farming as part of a national campaign. Responsibility for marketing and farm management lie with the Bureau of Agricultural Commodities Promotion and Management and the Bureau of Farm Development, respectively. At district level, the District Agricultural Extension Office is directly responsible for providing advisory services to communities, establishing community enterprises and developing agribusiness through farm advisers. The district bodies also have a role in promoting community enterprises and assisting them in registering.

Notwithstanding these public sector organizational innovations, there are number of technical areas of support that have been identified by government as a priority but have not as yet been adequately addressed. These are difficulties in developing entrepreneurship and marketing skills development among traditional farmers, lack of adequate community leadership, low levels of participation of community members, and challenges in ensuring sustainable community support, and the lack of a systematic approach to integrating the work of the various support organizations. FAO has recognized these deficiencies and is supporting the Department of Agricultural Extension to development capacities in enterprise development and reorienting work done by FAO on the farm business school and adapting it to community enterprises in Thailand. DOAE has also recognized the need to generate income for farmers and promote market-oriented products/enterprises as well as technology transfer within the farming system.

To promote and support market-oriented extension, the important issues that require assistance are training extension agencies and farmers, encouraging local organizations and farmers to be able to analyze and draw up their own farm production plans at community level with technical and information support from the extension agents, promoting small farmers to produce food for household consumption by adopting integrated farming so as to reduce marketing risks and the high cost of production arising from imported production inputs, promoting agricultural processing at household level to increase the value of the products and to support the establishment of local markets as places for purchasing and selling agricultural products in each locality.

## **Philippines**

The Philippines agricultural extension system is complicated by the numerous institutions which are actively involved in or have some responsibilities for agricultural extension. Apart from the Department of Agriculture (DA) and the Local Government Units (LGUs), the other extension agencies are the state universities and colleges (SUCs), the Department of Science and Technology (DOST), other attached agencies and bureaus of the DA, the Department of Agrarian Reform (DAR), the Cooperatives Development Authority (CDA), the Department of Environment and Natural Resources (DENR), non-government organizations (NGOs), other voluntary/people's organizations and private sector/companies. These extension networks have been fragmented further with the transfer of considerable agricultural extension activities from the DA to the LGUs under the Local Government Code (LGC: RA 7160, April 1993).

As a result, the DA no longer has the line responsibility and function for providing extension services to provinces, cities and municipalities. The DA has tasked the Agricultural Training



*Agricultural market in the Philippines*

Institute (ATI) and the Agribusiness and Marketing Assistance Service (AMAS) as lead agencies to address market-related issues and concerns. Extension service delivery remains fragmented and farmers, because of a lack of capital, cannot afford to buy appropriate post-harvest machinery. Low adoption of improved post-harvest facilities, absence of strong linkages between producers and markets can effectively limit the benefits that can be derived from new market opportunities. In addition, technical inefficiencies, leading to post-harvest losses, insufficient post-harvest training and extension activities related to other crops, and weak information systems have all caused problems and the failure of the majority of farmers' cooperatives.

Four programmes have been established to promote market access. These are largely market infrastructure based involving the establishment of *barangay* food depots, *bagsakan* centres – food depots, efforts to reduce transport costs, and the establishment of food lane transport routes. All these programmes aim at enhancing the efficiency of transportation logistics and the handling of agricultural produce. Other interventions involve promoting ICT to enhance extension delivery services. The DA has mandated the Agricultural Training Institute (ATI) to promote and develop electronic extension services covering e-learning (online learning for agricultural technologies and marketing), e-farming (online farm and business advice), and e-trading (online agriculture trading).

Notwithstanding these developments, extension service delivery remains fragmented, extension has been decentralized to the municipality level, the staffs at local government level are unqualified and often recruited to fulfil specialized functions for which they are inadequately qualified. Farmers also lack credit to purchase necessary machinery and equipment. Additionally, strong linkages between producers and the market are absent.

There is need for follow-up work to hasten the strategic shift proposed by government to market-oriented development. This requires upgrading of ICT infrastructure, developing capacities of staff, particularly at municipality level in farm management, agribusiness and marketing extension, together with strengthening the market infrastructure and promoting value-added technologies.

## **China**

As the People's Republic of China (PRC) started moving toward a more market-driven agricultural economy in 1979, it needed to reorganize and strengthen its extension system. It should be noted that China has the largest agricultural extension system in the world with over 1 million trained extension staff. These extension workers include about 175 000 in agricultural (economic) management. An additional one million farmer technicians (FTs) at the village level work half-time in providing advisory services to other farmers in their respective communities.



*Agricultural market in China*

Since the mid-1980s, China has undertaken market-oriented reforms concerning the distribution of agricultural products. Market chains from producers to wholesale markets to retail markets and on to consumers have been developed with government support. Public sector interventions occur at all levels in the chain from producers to consumers. The government continues to help to improve agricultural production and increase the supply of agricultural products. It also strengthens the distribution and marketing of agricultural products by transforming

its functions in accordance with the requirements of the market-oriented economy. Its priorities are the construction of agricultural product markets, the establishment of farmer cooperatives, industrialization of agricultural production and the training of rural produce brokers. There is a mismatch between the seasonal entry of agricultural products into the market and consumer demand, which is difficult to solve, as production areas have limited capacity to pre-cool, preserve, and store. A stable pricing system for major fresh agricultural products has not been established.

Key factors that facilitated the rapid transformation of the agricultural sector in China include: (1) rapid economic growth; (2) changing consumer food demand; (3) vocational agricultural training for rural young people; and (4) transformation of the agricultural extension system to better serve the needs of farmers as they diversify and intensify their farming systems. These same trends are occurring in other Asian countries as economic growth occurs; however, the participation of small-scale farmers (both men and women) in this process depends on specific policy and operational issues. Specifically, it is a question of whether the public agricultural extension system (and its staff) is prepared to organize small-scale farmers into producer groups so they can begin pursuing appropriate high-value horticultural crops, livestock, fisheries, and other enterprises that will help increase their farm household incomes.

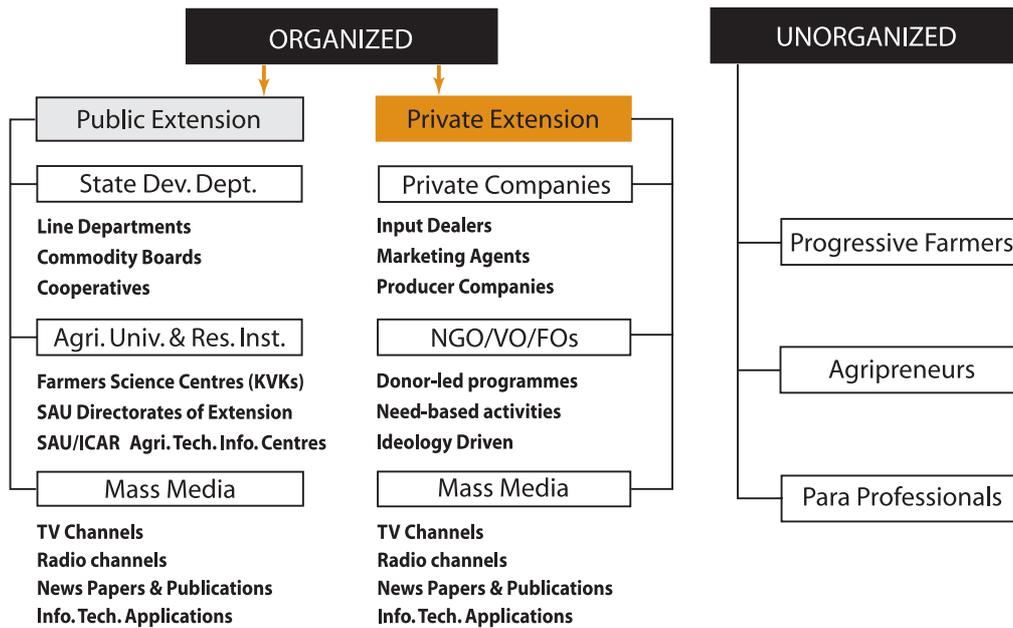
Market development activities have included the development of wholesale markets, a system of retail outlets — supermarket chains and agricultural product future markets — and controlling the quality and safety of agricultural products. Efforts have also been undertaken to strengthen business organization by a series of strategies: developing professional cooperatives for farmers; promoting the industrialization of agriculture; enhancing the capacity and skills of players in the agricultural market.

Support is needed to establish a risk management system for the agricultural products market. In addition, international exchange activities, such as conducting agricultural risks management symposiums or organizing scholars and managers to study abroad are needed. Through FAO assistance, a series of systems and tools for agricultural products market risk management suitable for China could be designed along with professional technology education programmes and short-term training for farmers.

## India

A market-oriented agricultural extension (MOAE) service approach is being promoted by various actors in India, including the state public system, the private sector and NGOs, although the depth and extent of change varies quite markedly between states. The focus of extension and marketing systems is changing rapidly in the light of globalization and market integration. The gradual attainment of food self-sufficiency, government promotion of crop diversification and commercialization has motivated farmers to produce location-specific, high-value commodities.

### Extension Service Providers in India



The public extension system in India started with a unified National Extension Service in the early 1960s, and then there was a shift to a specialized crop technology centred, contact-farmer centred “training-and-visit” (T&V) system during the 1970s and 1980s. It has now been transformed into a more participatory, diversified extension delivery system as a result of extension reforms. The Indian Council of Agricultural Research (ICAR), through its network of agricultural universities, also participates in extension service delivery.

In response to market demand, the private sector has also diversified to undertake a range of functions including value-addition, agriculture trade, extension advisory service etc. Many private sector companies, namely e-Choupal, Tata Kisan Kendra, Haryali Kisan Bazar etc. are involved in providing extension services to farmers. Such private sector investments could be accelerated with fiscal incentives. The AgriClinics and AgriBusiness Centres scheme, which was launched to disseminate information through unemployed agricultural graduates, aims to tap the expertise available and offer professional extension services to the farming community. This encourages the unemployed graduates in agriculture or allied areas to become self-employed by obtaining credit from banks and providing extension services to the farmers.

The Directorate of Marketing and Inspection (DMI) is the apex national agency implementing and monitoring the agricultural marketing extension programmes. DMI sponsors training programmes/consultancies/research studies in the area of market-led extension. DMI receives the support of national institutions like the National Institute of Agriculture Marketing (NIAM) and national and major state agriculture universities (SAUs).

Extension reforms in India reached a decisive stage with the formation of the Agricultural Technology Management Agency (ATMA) in all districts with a focus on reforming public sector extension and decentralized decision making at the village and block level. It is a broad-based system, which through the involvement of multi-agency extension service providers, enables NGOs, para-professionals and private companies to take part in the extension delivery process.

The pluralistic nature of the Indian extension system is reflected in private sector companies being involved in providing extension services to farmers as a part of their business strategy along with other agencies like government departments/agencies/commodity boards, SAUs and NGO/CSOs. Many of these initiatives are moving towards providing multiple services. The focus of extension and marketing systems is changing rapidly as a result of globalization and market integration. With the increases in education, incomes and urbanization, demand for high value fresh and processed products has increased. Some of the reforms introduced by the Government of India include the Agricultural Technology Management Agency (ATMA), which focuses on reforming public sector extension, and encourages decentralized decision making by farmers and farmers/commodity groups by involving them in the planning and execution of extension activities at the village and block level. Kisan Call Centres (KCC) is a telephone network which addresses queries in 22 local languages on all aspects of agriculture and allied subjects. Another initiative, Kisan Knowledge Management System offers a key-word/phrase-based instant search and agricultural graduates through AgriClinics and AgriBusiness Centres act as farm advisors for a fee.

With a view to supporting extension intervention by the private sector, project based funding with a clearly defined outlay-outcome matrix with a log frame approach should be promoted. It is evident that public extension by itself can no longer respond to the multifarious demands of the farming community. Public funding for sustaining the vast extension infrastructure is also under considerable strain. Therefore, public-private partnership needs to be promoted for sharing of resources and convergence. To promote private investment in agricultural extension, it is felt essential to provide fiscal incentives.

However, there is a need to enhance agricultural marketing infrastructure, clarify institutional mandates and create synergy among key stakeholders, and develop the capacity of national institutions and state departments of agriculture and marketing. FAO could help in capacity building of national institutions and state departments of agriculture and marketing, reform of institutional mandates, support for extension reform, and support for piloting market-oriented extension advisory services.

## **Bangladesh**

The Department of Agriculture Extension (DAE) is the main service provider of extension services in the country focusing on food security. The extension focus is largely on increasing the production and productivity of rice. Similar to other countries in the region, increasing urbanization and the emergence of a better-off middle class have resulted in a growing demand for high value crops and processed foods. Additionally, public sector extension services were established for livestock, forests, fisheries, jute, sugarcane, cottage industries and sericulture. Increasingly, NGOs are becoming more engaged in providing technical assistance, advisory services and microfinance.

Government policy has been promoting the growth and development of private sector agribusinesses to provide agricultural inputs and sell commodities and finished products. Supermarkets are procuring raw materials through contractual arrangements with suppliers and are entering into contractual arrangements with farmers to buy fresh produce directly from them. Seed companies are also producing seed under contract as part of seed multiplication systems. Some of these businesses, in addition to their commercial function, are involved in providing advice on agricultural technologies as well as marketing.

In addition to production, public sector institutions have assisted farmers to access markets through the formation of farmer marketing groups and are linking them to market outlets. These initiatives have tended to take place through donor funded support such as the World Bank's National Agricultural Technology Project (NATP).

Extension staff and farmers lack knowledge of marketing and market management and have no working experience of market-oriented extension work. Farmers often produce commodities in abundance, creating seasonal gluts and resulting in low prices. This is happening because of an absence of reliable information on market demand and prices, weak post-harvest handling leading to low quality produce and weak market infrastructure and logistic facilities culminating in limited market access.

A national agricultural extension policy framework has been developed covering the roles and responsibilities of all public sector institutions. The system as a whole needs to be reformed taking into account the structures, functions, clientele, staffing pattern and budgetary mechanisms. An FAO commissioned team of international and national experts could assist the DAE to perform the task in a medium term programme of system re-orientation.

The entire extension services system needs to be reoriented to include both production and market-oriented extension. Support is needed to develop the capacity of these institutions to refocus themselves to address the changes in agriculture more effectively. Interventions in the area of extension staff capacity building is vital as part of an overall restructuring of the institutional system. Finally, support is also required to forge a private-public partnerships to plan and develop market-oriented infrastructure.

## **Sri Lanka**

Agricultural extension in Sri Lanka is fragmented with advisory service delivery the responsibility of a multitude of organizations and government departments. There are different organizations operating in parallel based on crops or commodities and there is much duplication of effort. Today in Sri Lanka, agricultural extension education is provided on crops or commodities according to the requirement of the clients by the public and private sectors and NGOs. The Department of Agriculture (DOA) has been mandated to develop the food crop sector of the country. The Department of Agriculture, in an effort to promote commercial agriculture, set up in 1997 the Agricultural Enterprise Development and Information Service at central level to promote agro-enterprise development and farming as a business. Since 2006 the unit has been decentralized to the inter-provincial level with six agricultural enterprise development and market promotion units established. The mandate of the unit is to promote commercial farming of food crops-rice, field crops, fruit and vegetables. The government has also set up a system of agrarian service centres (ASCs) at divisional level as resource centres. Recently, the Department of Agriculture has introduced a system of cyber agricultural extension.

## Overview of Key Components of the Agricultural Extension System in Sri Lanka

Level	Responsible Government Institutes and Officers							
	Ministry of Agric. & Agrarian Development					MLD	MPI	Other
National	DOA-ETC 85(244)		DEA (251)	DAD	MASL 57	DAPH (HRD)	CCB, TSHA, RCD	Ministry of Science and Technology, Education, Fisheries etc.
Province	↓	PDOA 09(875)	↓	↓	↓	PDAPH 08-(720)	↓	
District	IP DD 06	DD	AD (14)	ACAD	↓	Vet. Surgeons	↓	Cashew Cooperation, Sugarcane Industry, Agricultural Universities, Vidata Centres
Segment	ADA	ADA	EO-SMS	↓	DRPM (Agric.)	VC -223	↓	
(Range)	AI	AI	EO- Range	DO	AO	Dispensaries	↓	
Village				ARDA 9600	FA			
Farmers, Community Based Organizations and Producer Organizations								

MLD – Ministry of Livestock Development, MPI – Ministry of Plantation Industries, DOA – Dept of Agriculture, ETC – Extension and Training Centre, IP DD – Inter-provincial Dept Director, ADA – Assistant Director of Agriculture, AI – Agriculture Instructor, PDOA – Provincial Department of Agriculture, DEA – Department of Export Agriculture, AD – Assistant Director, EO – Experimental Officer, SMS – Subject Matter Specialist, DAD – Department of Agrarian Development, ACAD – Asst. Commissioner Agrarian Development, DO – Divisional Officer, ARDA – Agricultural Research and Development Assistants, MASL – Mahaweli Authority, AO – Agric. Officer, FA – Field Assistant, DAPH – Department of Animal Production & Health, VC – Veterinary Centres, CCB – Coconut Cultivation Board, CDO – Coconut Development Officer, TSHA – Tea Small Holding Authority, RCD – Rubber Control Department, RDO – Rubber Development Officer

The private sector, although limited in coverage, provides commodity based extension services for more commercially oriented farmers. Most companies are dealers of agricultural inputs with service centres in major towns and provide such services to increase the market share for their inputs. Some of the companies/industries offer contract growing schemes to farmers to ensure that adequate and reliable supplies of raw material are available. Many of these schemes, however, have been affected by conflicts with buyers, resulting in lack of trust.

NGOs conduct isolated development programmes to assist the economically weaker groups of the society, especially in rural areas, but the support provided by both of these sectors has been spotty. With this myriad of advisory service providers, there is great diversity among organizations in terms of their organizational mandates, motivation for extension work, extension approaches used, forms of funding, capacity, target populations and beneficiaries reached and coverage, mobility, and effectiveness on the ground.

Dwindling financial allocations from the government and rapid increase in population have reduced public extension services and the challenges facing extension are too great to have to rely on the public sector alone. However, most of the private sector companies have not shown much interest in providing extension services and farmers are reluctant to pay for commercial advice. Private sector schemes tend to be opportunistic with limited coverage of smallholder farmers.

Support is required to build up the capacities of the extension organizations and supporting institutions, officers, existing and potential agro-entrepreneurs, farmer organizations, and individual farmers.

### **3.2 Group discussion on issues**

During the workshop the participants were divided into five groups, largely on the basis of geographical location in the region. The groups were given the task of identifying the most pressing issues/problems confronting their national agricultural extensions systems with respect to market-oriented extension services. The groups were as follows:

- Group I:** Bangladesh, Pakistan and Sri Lanka
- Group II:** Lao PDR, Myanmar and Thailand
- Group III:** Bhutan, India and Nepal
- Group IV:** Indonesia, Malaysia and Philippines
- Group V:** China, Mongolia and Viet Nam.

Following a plenary discussion, three broad categories of issues were identified: (1) capacity building; (2) policy support; and (3) institutional roles. The groups were then asked to list a set of critical issues under these broad headings. A panel discussion was held subsequently with representatives from each subregional group. The intention was to provide an opportunity for participants to ask questions that arose from the country presentations, as part of a lessons sharing process.

#### **Capacity building/training**

The discussions focused mainly on capacity building and the training needs of the participating countries. The group members were interested to know of ways that could be introduced to develop human resources in order to provide a broader range of MOAE services more effectively. Attention was given to the type of training programmes and extension services needed in their respective region or subregion. Concerns were also raised on the issue of cost recovery and payments for advisory services provided.

It also emerged during the discussions that there was a serious lack of knowledge and skills on market-led agricultural extension and that extension workers needed strong capacity-building support. The other areas identified as requiring priority assistance included the development of training programmes on futures markets, agri-insurance and risk management, and farmer capacity building for collective activities and, in particular, market access and quality management. The use of the mass media to expand the outreach of training and extension programmes was also highlighted as a priority.

It was further pointed out that in most countries in the region materials on MOAE could rarely be found within extension circles. Didactic materials for training in MOAE were also limited in availability. Moreover, the content is often treated conventionally and ill-suited to the needs of farmers. More innovative materials are required that address problems of literacy and numeracy. For the promotion of specific messages, participatory methods could be used together with innovative forms of communication. Another weakness discussed was the lack of materials for extension workers including pamphlets, brochures and simple information on aspects of farm management and marketing produced by specialist advisers. It was pointed out that an eclectic range of materials was needed for farmers, extension workers and senior decision-makers to provide extension support in a comprehensive manner. Materials also needed to be designed for specific categories of learners in particular country contexts.

Many extension offices also required essential hardware including visual aids, slide projectors, and training material production equipment (video cameras, voice recorders, software for video editing etc.) as well as computer software. Training materials production was recognized as requiring not only the equipment, but human capacity building and technical support. Adequate budgetary resources needed to be set aside to develop capacity and raise awareness of business opportunities for extension workers and farmers.

## Institutions

The groups divided institutional issues by sector, i.e. public, private and the NGO sector.



*Workshop session*

**Public sector:** The role played by the public sector extension service and the changes that have occurred within the public sector were discussed. Many participants felt that public sector extension services were not adapting quickly enough to the global changes in the agricultural sector and insufficient organizational changes had occurred. The participants were eager to learn from other country's experiences on ways that they responded to these challenges and how this could be applied to their own country conditions. It was also felt

that there was need for a paradigm shift away from a focus on farmers to include all stakeholders: farmers, intermediaries, commission agents and retailers. It was felt that there was also a serious shortage of quality services being provided by the public sector extension agencies and this needed urgent attention. This could be addressed by establishing local markets, linking farmers to them, promoting product specific farmers groups and ensuring cost effectiveness in extension service delivery. Additional budgetary support was needed to strengthen the public sector institutions and improve the outreach of extension services in MOAE. It was advised to avoid moving extension workers from their original posts to newly established positions as this risk disrupting the implementation of existing extension programmes.

**Private sector:** With a changing global environment, the role of the private sector has a renewed focus. The participants were particularly interested to learn about the success stories of private initiatives in the region. It was learned that many countries were not, however, able to harness adequate support from the private sector as few private sector providers are willing to invest in rural areas, particularly the more remote areas. Moreover, smallholder farmers are reluctant to pay for the services offered. The urgent need to bring the private sector into extension service delivery so that the public extension service could focus more on those clients willing to access public goods was pointed out. Discussions were also held on the development of producer groups and the need to provide extension advice to their members. Some countries pointed to field programmes in their countries aimed at broadening outreach by developing a cadre of para-extension workers and their possible integration within MOAE systems. This was considered an important issue, a gap that private extension workers could fill with some policy and funding support. There was also some discussion on the possible introduction of public-private-partnership models.

**NGO sector:** Discussions were also held on the role of NGOs. A general concern was whether NGOs had adequate capacity and outreach to conduct MOAE. Another concern was whether there were cost sharing models that could be used as benchmarks in their own regions.

## Information and communication technologies (ICT)

Although other sectors of the national economies are flourishing with the aid of information technology, agricultural extension is lagging behind. Considering the immense potential of ICT in extension delivery, efforts should be made to use it in the future. There is a need for Web/SMS/IVRS based MIS and extension support with intelligent planning for transferring timely information to the farmers. However, it is also felt that some private sector players may be using this medium to promote their own sales instead of providing correct and timely information to farmers.

## Policy and strategy

The discussion focused on the level of support needed at the policy level to implement MOAE activities. It was felt in general that not enough support was being given by policy-makers. They further asked how FAO could assist them in reforming and upgrading the extension system to incorporate MOAE activities.



*Brainstorming during the workshop session*

At the policy level there is a lot of scope for improvement as fewer initiatives have been made than desired for the smooth functioning of market-oriented agricultural extension. It was also felt that the focus of extension field staff must shift from food crops to cover a broader range of enterprises, as in the globalized market the demand for high value crops has surged and small and marginal farmers must be able to take advantage of this changed scenario. Many countries face strong gender biases in

their approach to extension, which must be adequately addressed. As rural credit plays a very important role in modern agriculture there is a need to strengthen rural credit and finance services and link them to extension support for inclusive growth.

## Enabling environment

The enabling conditions cover the macro-economic policy (fiscal and monetary controls) for private sector investment, the regulatory framework that supports MOAS, the legal framework that includes land property rights and commercial law, and basic infrastructure for service provision and delivery. As such, the enabling environment is part of the broader climate for private sector investment. Governments have a critical role in setting the enabling environment for private sector development, providing public goods for their citizens and in correcting and compensating for market failures.

The participants discussed some of the enabling environment issues that impact on the provision of private sector advisory services. It was noted that investments by private sector service providers are lacking as in many countries because of an insufficient enabling environment. It was felt that there should be a strong regulatory and facilitating framework for private sector participation in extension so that all sectors of the economy can participate in economic growth and ensure livelihood security for the most needy.

Various issues/problems confronting the national agricultural extension systems in the region were identified and listed. These were:

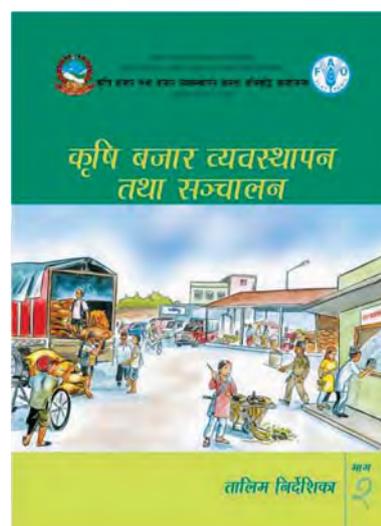
- the need to create an enabling environment for public-private partnerships in agricultural extension;
- weak policy support to extension;
- poor approach to training and capacity building;
- making public sector extension cost effective;
- poor outreach of public sector extension;
- ways to reach small and marginal farmers more effectively;
- commercial and development objectives within MOAE;
- defining private and public sector roles to promote service provisions;
- methods to provide support for supply or demand-side financing for extension;
- mitigating gender biases in extension;
- enhancing budgetary support to extension;
- promoting private sector investments in agricultural extension;
- making extension systems more efficient and market-oriented; and
- building the capacity of extension staff, NGOs and other stakeholder to undertake the responsibilities of public sector extension more efficiently.

## 4 TRAINING AND EXTENSION MATERIALS

### 4.1 FAO Capacity building in agricultural marketing

Andrew Shepherd described some of the training and extension materials produced by the Agricultural Marketing Group. He reviewed the major publications that included the following: a horticultural marketing guide and related videos; marketing extension guides; and contract farming and diversification booklets. The horticultural marketing guide and videos were designed with the aim of helping extension workers to understand how to assist farmers to market horticultural products with the emphasis on working with traders. The guide also provides basic post-harvest advice. Another marketing extension guide presented was on marketing costs. The guide aimed at creating a better understanding of all costs involved in marketing and covers the costs of preparation, handling, transport, losses, storage, processing as well as capital costs. Another guide *Understanding Marketing Information* was published as part of the same series. The book was designed to enable extension workers to advise farmers on how to interpret and use prices provided by market information services. It discusses why prices change, prices at different stages of the marketing chain, using market information to negotiate and to plan future production. Finally, Mr Shepherd referred to a guide that addressed the issue of how to conduct market research. This was prepared for small and medium agroprocessors and covered testing consumer attitudes to the products, assessing the size of the market, researching distribution channels for the products, promoting products, and calculating the feasibility of the business.

Mr Shepherd went on to describe the design and outputs of a recently completed FAO project in Nepal. Capacity building material developed included five training guides, namely: Market Planning (Guide 1), Market Management (Guide 2), Agricultural Marketing (Guide 3), Post-harvest Management (Guide 4) and Farm Management and Enterprise Development (Guide 5). He indicated that the project had also prepared extension materials for use by frontline extension officers which covered agricultural marketing, ways of linking farmers to markets, market information, group marketing, preparation of fruits and vegetables for market, preparation of a farm business plan, and rural market planning and management. The different types of training to build the capacity of the local staff were elaborated on: five training courses on market planning and management for district level and other officers; five training courses on agricultural marketing, farm management and enterprise development for district level officers as trainers; and training on agricultural marketing, farm management, and post-harvest management for field level staff in five development regions of Nepal. At the end of his presentation Mr Shepherd discussed the development and use of posters for building the capacity of the farmers.



*A training guide on Agricultural Market Management and Operation from Nepal*

## **4.2 Capacity building in market-oriented extension: Farm management**

David Kahan made a presentation on “Capacity building in market-oriented extension: Farm management”. He stated that expert consultation workshops had been held in Africa, Asia, the Pacific Islands, Latin America, and Central and Eastern Europe (CEE) in order to:

1. assess the needs and interests of farmers for farm management and marketing advice;
2. appraise extension decision makers’ views on options for improving the provision of farm management and marketing advice; and
3. make recommendations for their improved provision.

The major findings of these workshops were that farm business management is becoming increasingly important, there was a high demand for management training and advice, there was an acute shortage of adequately trained extension personnel and that the extension workers lacked skills in farm business management. The questions that the producers face are: What to produce? How much to produce? How to produce? Where to sell? What and how much resources are needed? Should they invest in machinery? If yes, then how much capital would be required? In addition to these, some other pertinent questions before the farmers are: From where can they buy good quality and cheap inputs? How can they increase their profits? How can the profits be sustained over a period of time?

Mr Kahan advised that the FAO has responded by providing strategic guidance to extension programme managers on advisory and training services, by developing remedial training programmes in farm business management for extension workers, by developing farm management/marketing extension guides, and by designing and developing field projects and programmes which could help the farmers and extension workers address the problems effectively.

Mr Kahan then described the *Farm Management Extension Guide* series, which was intended to assist extension workers in providing support to farmers in dealing with the new challenges that arise from market-oriented farming. He stressed that the purpose of these introductory guides was to provide an understanding of the changes that are taking place in farming and the broad range of responsibilities that extension workers are expected to cover. He explained that the guide *Economics for market-oriented farming* was designed to enable extension workers to understand principles of farm economics and their relevance to market-oriented farming. The guide deals with basic economic concepts such as factors of production, costs of production, opportunity cost, farm profit, and cash flow among others. A second guide, on managing risk in farming, is intended to highlight the risks facing farmers and the ways in which the risks can be dealt with. It has been designed to enable extension workers to advise farmers on how to manage risks better.

## **4.3 Review of FAO materials and identification of gaps**

The participants divided into groups, based on their location in the region and were requested to review and assess the FAO training and extension materials distributed to them in terms of their relevance and usefulness and to suggest areas of improvement. Although the range of subjects covered was appreciated by the participants, suggestions for additional materials were given.

How the FAO materials could help countries to develop their own human resources was discussed. Some consideration was also given to how the materials would be ultimately used in participants' respective regional/country contexts. Finally, the participants were requested to identify the interventions needed to build the capacity of the extension system in their respective country clusters and to identify the type of services/training programmes needed to address weaknesses.



*Reviewing FAO's farm management extension materials*

The observations and comments from the group discussions are summarized below:

**Bangladesh, Pakistan and Sri Lanka:** The training materials on marketing extension were recognized as being of good quality and useful in providing support to field-level extension workers. However, before they could be effectively used in the subregion, they needed to be localized. The group suggested that public-private sector collaboration is needed to deal with sustainability issues effectively. Other relevant topics on which FAO should consider producing materials include information on climate change, crop forecasting, branding, crop insurance, management of food buffer stocks, ICT tools and toolkits. Special training programmes for newly recruited extension staff were identified as particularly useful as well as providing extension workers and farmers with guides on developing effective linkages between farmers and markets.

**Lao PDR, Myanmar and Thailand:** Additional training materials were identified in the area of agro-industrial supply chain development, climate change, forming and strengthening farmer groups, value chain finance, and market-oriented agricultural extension. Training materials were also needed for developing the capacity of secondary producer associations.

**Bhutan, India and Nepal:** FAO publications were considered as being good quality overall, but it was felt that the drawings should be in colour to have greater impact. The material on technical and market feasibility and partial budgeting was useful for extension workers; the market-related publications should also cover export markets and the exportability of local agro-products. Publications on farm business schools were of very good quality and useful. The proposed additional publications included material on backward and forward linkages, network development for MIS for agro-markets, manuals which are compliant with WTO norms, manuals on contract farming, and marketing manuals on livestock and forest products.

**Indonesia, Malaysia and Philippines:** All the publications presented were appreciated, but the group suggested some new areas such as supply chain management of agro-products, post-harvest handling of commercial crops for commercial producers and manuals dealing with various aspects of agricultural marketing such as grading, packaging, labeling, processing and auctioning.

**China, Mongolia and Viet Nam:** The group found FAO material to be of very high quality and useful overall but new areas where publications were needed included rural finance and agricultural insurance, branding and equity development, quality control skill development,

group formation, information management, future markets, access to credit, contract farming and community management of natural disasters.

A complete list of the additional materials requested is as follows:

- product branding
- consumer preferences and quality standards
- food safety and hygiene
- ICT in agriculture
- crop insurance
- linkages between farmers and markets
- public-private partnership development
- farmer group formation
- guidance in conducting training of trainers programmes
- advisory manual for extension workers on rural finance
- motivating extension officers
- farmer business schools
- export development for horticultural products
- livestock marketing
- dairy product marketing
- supply chain management
- rural agro-industries
- crop-specific post-harvest materials
- contract farming guide
- farm record keeping.

The participants were informed that FAO has already produced some of these materials and they were directed to the FAO capacity building portal for further information. Very few participants were aware of FAO's publications and they appeared to have difficulty finding the publications and downloading them. It was agreed that the workshop organizers would prepare a list of the FAO publications that covered some of these topics among others. This listing is given in **Annex 2**.

## 5 PROJECT PROFILES AND FOLLOW-UP ACTIVITIES

Participants were briefed on the guidelines for project formulation and were asked to prepare proposals for projects and other interventions, covering the broad topic of market-oriented extension. With the exception of Thailand, Lao PDR and Myanmar, who prepared a subregional project to address crossborder supply-chain issues relating to biofuel development, all countries prepared country level projects.

### 5.1 Project profiles summaries

The participating country teams were provided with a template in which they were asked to prepare project profiles for possible follow-up work with or without FAO technical assistance. The summary of the profiles discussed during the workshop are presented here:

**Bangladesh: Capacity building of agricultural extension workers in market-oriented services.** This project was designed to upgrade the skills of extension workers in market oriented advisory services and advise farmers on new income generating opportunities. This calls for an assessment of the competencies and capacity of frontline extension workers and the development of a strategy for their upgrading. The project includes activities such as: identification of gaps in capacity building; adaptation and translation of training materials for use by a core team of trainers; training of field level extension officers in enterprise development; development of a computer based data system; organization of awareness creation workshops on innovative approaches to agricultural extension and market-oriented farming; and the design of a monitoring and evaluation system.

**Bhutan: Reorienting the extension staff to market-led extension services.** This project also focuses on capacity development of the public sector extension service by training extension workers – subject matter specialists and front-line staff – in farm business management and marketing. The project requires the preparation/development of training manual/materials for improving their knowledge and skills to advise farmers in MOAE. The project is intended to support a shift in extension focus from technology transfer and production towards the market. All extension staff have traditionally been trained in crop production. Recently, however, the Ministry of Agriculture and Forestry has shifted its attention indicating the importance of marketing in addition to the traditional production-extension areas. The proposed project calls for the development of training manual/materials on aspects of MOAE, developing a training of trainers programme and providing policy level advice on restructuring and organizing the extension service. Farmers training would be conducted on a pilot basis and consultative workshops on policy and strategy reorientation would be organized to guide policy-makers in structural and functional changes.

**China: Developing the capacity of policy-makers and technical specialists in risk management.** The Chinese Government has stressed the importance of developing the rural areas and agro-industry. Much effort has been made to build the market system for farmers but major risks and challenges exist as a result of natural disasters and price fluctuations of agricultural products in domestic and international markets. There is a need to stabilize farmer incomes by establishing a holistic risk management system that includes the introduction of innovative agricultural insurance products, the promotion of contracting farming, and the

development of hedging of future markets. The project will aim at building the capacity of policy-makers, researchers, and professional cooperatives to optimize and manage the risks in agriculture in line with the national policy of increasing farmers' incomes and stabilizing agricultural production. It is proposed that this would be done through internationally recognized joint research, the preparation of a training programme on agricultural risk management, the organization of training workshops, and Web site development.

**India: Development of Web/Short Message Service (SMS)/Internet Video Recording (IVR)/Voice Recognition (VR)-based production and market-related information services for semi-literate and illiterate farmers.** India has made rapid advancements in developing functional literacy programmes for farm households in the rural areas. However, the problem of illiteracy is still significant. Many farmers that are illiterate have difficulty accessing production technologies and market information and are unlikely to become members of producer organizations. Although the literate and more commercially oriented farmers have improved access to information, illiterate or semi-literate farmers have been by-passed. The proposed project aims at providing these farmers with information on weather, input sources and use and market prices and channels. The information requirements would supplement the information already being provided through various ICT related initiatives and could be used by Kisan Call and Common Service Centres. The project has been designed to provide production and market information and to establish a mechanism for interactive SMS services provided in vernacular languages. Activities will include developing application software, identifying an IT consultant, selecting a mobile company, developing a platform to host the interactive SMS services and testing of SMS in vernacular languages. The project will also create back-end computerization (at block and district level), identify markets related to the crops/products produced by the farmers and linking them online to centralized databases to generate SMS/IVR/VR services. The project also requires the training of extension officers at block level to collect, analyze and disseminate tailor made information for farmer groups.

**Indonesia: Market-oriented agricultural cyber extension.** The extension service outreach is weak because of the lack of accessibility of farmers and extension workers to market-related information. A huge number of farmers are widely distributed within the country and there is a limited number of public sector extension workers. There is a need to develop information technologies to broaden coverage. Information facilities are widely available in the country but there is a dearth of market-related information. The proposed project aims at increasing the accessibility of extension workers to market-oriented information and extension materials. This will be achieved by developing a cyber extension system with market-oriented agricultural extension materials. The project design includes some hardware procurement at different levels of the system, technical assistance and training of extension staff.

**Lao PDR, Myanmar and Thailand: Capacity building of stakeholders for integration of a crossborder biofuel supply chain.** The proposal was designed to build on an earlier initiative undertaken by the three countries to cooperate in biofuel production under the Ayeyarwady-Chao Phraya-Mekong Economic Cooperation Strategy. The project, however, has not fully taken off because of a lack of understanding on the concept of supply chain management by the different actors in the chain including MOAS staff at all tiers. The proposed project would focus on developing the biofuel supply chain with the ultimate objective of increasing the volume of trade among the three countries. The project will lead to improved capacity and knowledge on crossborder issues and strategies for enhancing the competitive advantage of the biofuel supply chain among all stakeholders in the three countries. This will require capacity building

support of government extension workers in MOAE as well as other value chain stakeholders, studies on the competitiveness of the value chain products, and policy level workshops to sensitize policy-makers to potentials and constraints. The main activities of the project will be in-country training-cum-workshops for MOAE staff including chain actors, in each LMT country, to increase awareness and understanding of crossborder supply chain mechanisms and trade facilitation. Overseas study visits and workshops in LMT countries are also proposed to fully understand the comparative advantages and experiences of the different countries. A wrap-up seminar for policy-makers and chain actors is proposed to discuss and initiate plans for implementation and feedback. Assistance was requested to provide technical and financial support to develop and translate training materials and strengthen institutional mechanisms for the provision of agribusiness advisory services and training.

**Malaysia: Training of trainers to improve their knowledge and skills to advise farmers to be more market oriented.** Technology transfer has traditionally been the focus of agricultural extension in Malaysia. There is, however, a considerable demand for market information and support for agribusiness. It is increasingly recognized that market-oriented advisory services are important. A capacity building programme is proposed to develop



*Group presentations*

extension worker competencies in post-harvest handling, marketing and agribusiness development. The proposed project is designed to train a core team of trainers in both marketing and agribusiness and through them frontline extension workers and farmers. The output expected is that training manuals on MOAE will be developed for lowland and highland vegetables, workshops will be conducted for a core team of trainers on MOAE, and extension materials such as booklets posters and leaflets will be prepared on lowland and highland vegetables.

**Mongolia: Developing the capacity for agro-enterprise development in the agricultural extension system.** Given the size of Mongolia, its sparsely distributed rural population, and difficulties of access, the costs of direct face-to-face extension activities are high. For extension services to be both cost effective and have a broad impact, the development of ICT-based distance learning programmes would be most effective. The objective of the proposal is to



*Group discussion*

improve the skills of extension agents and farmers through the development of training programmes in various aspects of enterprise development and marketing. The project would help in building the capacity of extension service workers and lead farmers in these subject areas at central, provincial, district and village levels. The proposal also calls for establishing a cadre of agro-enterprise promoters and building their capacity to collect, compile, analyze and disseminate farm enterprise and marketing information. The promoters will also be

expected to facilitate linkages between farmer groups and market outlets and financial institutions. Extension centres will be set up in the provinces and equipped with ICT distant learning technologies and tools. Extension agents will be trained to use the ICT technologies. Some of the proposed outputs would include a training manual on market-oriented farm management, extension information for diffusion through TV and radio programmes, newspapers and magazines, and the collection and dissemination of agriculture-related information from Internet sources and other forms of mass media for farmers and herders.

**Nepal: Capacity building of commercial vegetable growers of highway corridors of Nepal.**

Owing to the high demand for vegetables in urban areas, small farmers are increasingly diversifying their farming system for high value produce. But farmers' holdings tend to be small – under 0.5 hectare – and farmers have limited knowledge of post-harvest handling and marketing. The proposed project is area specific, focusing on the Prithvi highway joining Kathmandu and Pokhara (the major vegetable consumption areas) and the Arniko highway linking the Kathmandu valley to the border with China. The limited post-harvest handling skills have resulted in high wastage and food losses. In addition, poor planning of production and lack of market information have resulted in farmers receiving low prices for their produce. The proposed project aims at reducing post-harvest losses and expanding the producer's share of the final consumer price. Major activities proposed include the preparation of critical messages by a panel of experts on post-harvest matters, agribusiness and agri-extension/communication. In addition, extension workers will be trained in these subject areas and improved extension methods in order to deliver these extension messages effectively to farmers.

**Pakistan: Development of a knowledge based information system using ICT.** The project is planned to make needs based information available and accessible to the farmers, train the extension agents on ICT, increase the productivity and income of the farmers, provide ICT facilities in rural areas and train farmers on marketing information available/provided. Expected output is capacity building of extension workers, improved farmers' incomes, value addition and instant information on market prices. IT will aim to provide literature to the farmers in their own languages and train extension agents and improve extension infrastructure. The main activities will be the training of the extension workers, establishment of Internet kiosks, networking with marketing and extension wings, establishment of a computer centre in each district to pass SMS messages on crop and market requirements, development of software, training manual and literature in local languages for the training, and training of the farmers groups before the advent of the crop.

**Philippines: Improving market access of small farmers through capacity building.** The objective of the project is to increase the capacity of small farmers, increase the profitability of their farm enterprises and increase access to markets and in doing so to enhance smallholders' incomes. The main outputs expected are: i) improved planning and management of farms by small farmers to enable them to increase their productivity; ii) provision of effective and efficient farm management and market-oriented extension services; and iii) selection of alternative market channels. The proposal focuses on a number of high value products, namely mango, vegetables, banana, onion and garlic, coffee, cocoa, cashew, fruit and small ruminants. The approach to be followed is training of a core team of trainers, training frontline extension workers (at municipality level), training of lead farmers in producer associations and training of farmers in farm business management. The marketing component involves the establishment of local markets at strategic locations and activities aimed at linking farmers to markets. The intention is to establish consolidated buying areas located in proximity to the areas of production to achieve economies of scale.

**Sri Lanka: Strengthened market linkages to address price uncertainties and to ensure better incomes for farmers in Sri Lanka.** The project has been designed to strengthen the capacity of extension workers and farmers – members of producer groups or organizations – in farm business management and marketing. Farmers are encouraged to organize themselves into producer groups to overcome the disadvantages of fragmented landholdings and their limited bargaining power when producing alone. Extension worker capacity needs to be enhanced to link producer groups to buyers and facilitate negotiations with buyers to ensure that they receive fair terms and conditions. The proposal has a number of objectives: i) building the capacity of extension workers in MOAS; ii) strengthening ICT facilities for market-oriented information dissemination; and iii) linking producers to markets. It is expected that with improved support, farmers will be more confident in linking to buyers, negotiating contracts with them and working with them over the long term. The project outputs will be well trained extension workers, the production of training manuals and extension materials on MOAE developed in the local languages, strengthened cyber extension units disseminating SMS texts to farmers. Supporting activities include identifying a core group of master trainers, developing a training curriculum and conducting training, organizing awareness workshops on MOAE for high level extension officers, identifying and selecting priority locations for training extension workers, preparing detailed training programmes, conducting a market survey and identifying potential buyers; and designing and installing a database both at central and provincial levels.



*Country project design*

**Viet Nam: Develop policy support and improve capacity building for non-governmental extension organizations.**

Public extension services by themselves cannot meet the wide range of demands that farmers have to compete in the new market economy. Viet Nam needs to make a fundamental change to its extension system, incorporating both private sector and NGO advisory service providers. The proposed project is designed to provide policy advice to heads of extension services and other

senior decision makers as well as develop the capacity of non-government organizations to provide effective and efficient extension services. The expected output includes: the formulation of policies on extension service provision to facilitate the active, dynamic and effective involvement of non-government agricultural extension organizations; the development and testing of different institutional models on extension service delivery of public-NGO collaboration; and iii) the development of the capacity of non-government agricultural extension organizations to increase productivity, manage farming as a business, and access domestic and export markets. Major activities include conducting a study evaluating the effectiveness of the public sector extension system, identifying gaps and potential areas of change. The outcome of the study will be a set of policy level recommendations regarding extension research and education. Other activities will involve identifying and testing different institutional models involving NGOs in advisory service delivery and the development of a capacity building programme that includes market-oriented advisory services for non-governmental agricultural extension workers.

## 5.2 FAO Technical Cooperation Programme (TCP)

A presentation was made on FAO's technical assistance programme. It was explained that FAO is not a donor agency but a specialized agency of the UN established to provide technical support to member countries. The participants were informed about the nature and purpose of a TCP, which involves relatively small grants from FAO's own budget through which access to FAO technical support could be provided. The TCP criteria of eligibility for funding, as established by FAO's governing body, are as follows:

*Criterion 1:* Eligibility-priority is given to the neediest countries.

*Criterion 2:* Aims and purpose-projects must contribute directly to FAO's strategic framework.

*Criterion 3:* Priority is given to projects that support national or regional priorities and are consistent with National Medium Term Priority Frameworks (NMTPF) and TCP priority-setting processes at the country level.

*Criterion 4:* Critical gaps: TCP assistance is directed at clearly defined critical technical gaps or problems which necessitate technical cooperation and is not budgetary.

*Criterion 5:* Sustainable impacts: Outcome and impacts should be sustainable and the project should have catalytic or multiplier effects.

*Criterion 6:* Scale and duration: Maximum project budget is US\$500 000, and maximum duration is 24 months.

*Criterion 7:* Government commitment: Governments or regional organizations should provide all necessary inputs, staff and institutional arrangements for effective implementation and follow-up.

*Criterion 8:* Capacity-building: TCP projects should help build national capacities and should ensure that the critical gaps and problems will either not appear again or can be resolved without external assistance.

*Criterion 9:* Gender-sensitivity: TCP projects must be gender-sensitive in identification, design and implementation. Projects should have a gender equality focus, be gender-mainstreamed, promote gender affirmative action, and should be gender neutral.

*Criterion 10:* Partnership and participation: Projects must contribute to new or strengthened partnerships and alliances including through co-financing.

It was mentioned that TCP prioritization at country level is set by ministries of agriculture and proposals must fall within the NMTPF framework. It was also mentioned that participants preparing country proposals should not limit themselves to FAO TCP support. Alternative sources of funding should be sought through multilateral or bilateral sources and in some countries even through Unilateral Trust Funds. The differences in funding mechanisms were elaborated on. It was further pointed out that FAO support should not be assumed in all situations and if available should be regarded as seed capital for the development of larger programmes funded by non-FAO sources.

## 6 SUMMARY AND CONCLUSIONS

### Country papers and discussions

#### *Capacity building*

The principle issue identified by participants impacting on the performance of their national agricultural extensions systems with respect to market-oriented agricultural extension was capacity development. In all countries represented, the extension managers recognized the shortages of adequately trained extension personnel. Extension workers were



*Discussion on capacity building*

viewed as having limited skills in market-related extension and in particular post-harvest handling, marketing and enterprise development. Capacity development programmes have not been adequately mainstreamed in traditional government extension services. Moreover, the skills and competencies of private and NGO advisory service providers with respect to market related subjects were recognized as weak. It was also observed that there was a lack of knowledge and information on market-oriented extension among farmers, farmer organizations and private agribusinesses. Field staff of both public and private sector advisory services in particular lack the practical experience and specialized expertise necessary to provide effective and credible marketing and business management advice. For MOAE to be effective, training is essential.

Capacity building programmes of extension workers at all levels were recognized as being urgently needed. Extension workers required skills development in post production technologies, market appraisal, value chain analysis and farm business management. The Chinese delegation, however, focused their attention and recommendations on developing the capacity of public sector staff in agricultural insurance. Additional areas of attention included providing knowledge and information for farmers, brokers and policy-makers on future markets for farmers. Farmers in turn needed information and skills development in the management of market-related risks.

The participants also highlighted that farmers required training on developing collective activities such as group marketing, input procurement and financial management as well as marketing and food safety and quality management. A final area of focus for future action is the need for capacity development through distance education programmes. All countries identified the need for specialized education, training and extension materials related to MOAE.

#### *Service provision and information*

The participants also highlighted the weaknesses in the provision of extension services, particularly within the public sector. The lack of specialized extension services for market-oriented extension called for a need to recruit and train a new cadre of extension workers. This was regarded as difficult given the lack of budget and the shortage of qualified staff. An option to overcome this constraint mentioned was to redeploy existing extension staff and find new

areas of concentration for them. This proposal was debated and rejected because of the exorbitant costs involved in retraining staff and redeploying staff.

Financing extension services was recognized as a major issue globally and most countries in the region found it difficult to support extension fully by their own means. The workshop participants felt that there was a need to find new ways to provide support through both supply and demand side financing.

The participants also recognized the importance of ensuring cost effectiveness in the provision of agricultural extension services, realizing that this required more effective public sector management as well as public-private sector collaboration. The role of the private sector in agricultural extension was seen to be gaining importance in the region on a day-to-day basis and needed to be integrated with the public sector system. With respect to the public sector, a call was made for extra-budgetary support to strengthen those institutions offering MOAE services and improve their outreach among farmers and other stakeholders. The need for a paradigm shift in extension from a traditional focus on farmers to include other stakeholders such as traders, commission agents, agro-industry and retailers was realized.

It was also recognized that the range of advisory services offered should be differentiated and targeted to the different stakeholders according to their socio-economic characteristics, farming system and gender. Among some of the poorer less commercial farmers, the type of extension advice would need to be broader than MOAE, for example providing these farmers with basic life skills.

It was also noted that the track record of several countries using traditional dissemination methods has not been satisfactory with the quality of information provided often poor and sometimes irrelevant. It was noted that with the advent of ICT, the risk was that a wider range of farmers might simply be provided with bad information more easily. It was recommended that ICT materials should be developed to supplement the hardware innovations rapidly taking place in Asia.

### *Enabling environment*

The lack of an enabling environment was identified as one of the most important issues confronting the national agricultural extension systems in the region. The regulatory and facilitating framework for private sector participation in MOAE was seen to be absent in most countries. In addition, the enabling environment was not seen to be conducive to promoting public-private partnerships and investments. This failure often compounded the problems faced by countries. In short, government support at policy level was seen to be necessary to increase the private sector investment in extension infrastructure. The country representatives left the workshop with a greater recognition of the need to develop an enabling environment for public-private collaboration in order to develop an integrated and systematic approach to advisory service provision at all levels and among a broader range of stakeholders. There was, however, still a lack of clarity in the roles to be played by the private and public sectors. For MOAE to be successful, the roles needed to be defined clearly so that conflicts between the two sectors could be avoided.

## **Capacity building material**

Although marketing was seen to be high on the agenda in most countries, little effort had been paid to developing training materials among farmers and adapting them to their literacy and numeracy competencies in specific country contexts. For example, in South Asia farmers tended to be more orally inclined and preferred symbols to words and numbers. This suggested the need to develop more generic materials for extension workers and to provide assistance in adapting materials locally and translating them. Moreover, service providers also needed programmes aimed at developing their communication skills.

The training and capacity building materials reviewed during the workshop were widely recognized as useful and of high quality. Suggestions for improvement were made as well as for the inclusion of other topics regarded as priority. The participants suggested how the training and extension materials could be used in their specific contexts. The participants noted a difference between service providers in South Asian and Southeast Asian and East Asian countries with respect to both English language skills and the competencies of farmers. Additionally, there were country differences relating to context as well as ways of learning that needed to be taken into account when preparing extension materials. All countries recommended that the materials needed to be localized before they could effectively use them.

Although participants indicated that they would like FAO to produce a wide range of products, they agreed that it was incumbent on them to adapt those products to their own situations and to produce training materials in local languages. They noted that existing FAO materials were clearly of more use to extension workers than to farmers. Some participants did consider that some FAO materials contained too much jargon for extension workers and needed to be simplified for use with farmers. Other group participants noted that some of the publications needed to be improved with coloured drawings in order to have a greater impact. The Sri Lanka and Indian delegations noted that the materials on market research, benchmarking and the training materials in farm business management were particularly useful for extension workers in their countries.

New areas where publications were needed included rural finance and agricultural insurance, branding and equity development, quality control skill development, group formations, information management, and future markets. As part of the market extension guide series it was proposed to include publications relating to export markets and the export of local agricultural products. The participants also listed the need for materials on topics related to climate change, crop forecasting, branding, crop insurance, management of grain reserves and ICT tools and toolkits. Capacity building materials were also needed in agro-industrial supply chain development, post-harvest handling of commercial crops, the establishment and development of producer groups and creating rural financial support systems.

## Project profiles

The project profiles covered various aspects of capacity building, value chain development, market infrastructure development and ICT. A listing of the proposals is given on a country by country basis below:

### *ICT*

- *India:* A project to address the information needs of illiterate farmers by sending extension messages by cell phone and using voice recognition technology so that farmers could indicate the information they required.
- *Indonesia:* A project entitled “market-oriented cyber extension”. This would be Web based and mobile phone based.
- *Mongolia:* An ICT project to improve both crop and livestock extension.
- *Pakistan:* A pilot project to develop agricultural extension through ICT by establishing pilot internet kiosks in the nine divisional headquarters of the Punjab and to develop an SMS to provide extension messages including market prices.

### *Human resources development*

- *Bangladesh:* An extension officer training of trainers project in farm business management and marketing.
- *Bhutan:* A project to reorient extension staff to adopt a market-led approach.
- *Malaysia:* A project to train highlands and lowlands vegetable farmers in post-harvest and marketing issues.

### *Market infrastructure and training*

- *Philippines:* A project to support an ongoing World Bank-funded project on agri-business development that emphasized hardware provision, such as ICT and market construction. The proposal stressed capacity building of extension staff in selected provinces.

### *Institutional development*

- *Viet Nam:* A project to examine the existing structure of extension services within the country, to include non-government service providers such as NGOs, in order to develop detailed proposals for restructuring.

### *Value chain development*

- *Lao PDR, Myanmar and Thailand:* A regional project aimed at capacity building of stakeholders for the integration of crossborder biofuel supply chains.
- *Nepal:* A “corridor” development proposal to promote market-oriented horticultural production along the main highways leading to Kathmandu.
- *Sri Lanka:* Strengthened market linkages to address price uncertainties and to ensure better incomes for farmers in Sri Lanka.

### *Risk management*

- *China:* A research project on farmer risk management.

## SUMMARIES OF PAPERS SUBMITTED BUT NOT PRESENTED

In addition to the selected presentations by six countries given above, the other participating countries also prepared country papers on the workshop theme. A brief summary of all the papers submitted for the workshop but not presented are given below:

### **Bhutan**

The Department of Agriculture Marketing and Cooperatives (DAMC), under the Ministry of Agriculture and Forests is responsible for providing agriculture marketing services. The department also helps to organize, in collaboration with the producer groups, and market farm produce in the capital mainly to promote the concept of group marketing. At the moment, lack of a proper road network is the main factor that affects the efficiency of the marketing system. Lack of a proper market place is the other factor discouraging farmers from producing the commodities in demand. Because of an inefficient communication system, the required market information such as the price of commodities and quantity of demand etc. is not conveyed on time. Unfavorable climatic conditions do not allow the farmers to produce commodities as per market demand. Technology transfer in the field of agriculture and allied marketing also suffers in the absence of market-led extension. Most of the farmers have small holdings and therefore small surpluses and have yet to learn and understand the benefits of farmers' associations or cooperatives for effective marketing of their produce. The majority of the farmers do not practice post-harvest activities like grading and packaging of the produce. Agriculture marketing is still in its infancy and requires considerable support both technically and financially. Human resource development is the other area that needs support. Extension staff need to be trained in the field of marketing and cooperatives. Therefore the Department of Agriculture Marketing and Cooperatives would like to ask FAO for generous support to develop agriculture marketing in Bhutan.

### **Cambodia**

Cambodia's agriculture is still predominantly a subsistence based rainfed system, focused on paddy rice production. Access to irrigation is inadequate. Extension methodologies and approaches apply and adopt participatory training and extension. The Farmer Field School (FFS) is the core tool for technology development and technology transfer followed by study plots, field demonstrations and field days to enhance farmer participation and to increase the capacity of farmers to test the new technologies. Government extension delivery systems focus at the district levels and provide a good environment for the private sector and other field extension services providers to participate in technology and information transfer and the provision of extension services. There are few extension technologies for farmers on marketing and agribusiness related solutions or the linking of farmers to other value chain actors. FAO support is needed to improve technology, enhance knowledge and information sharing systems, increase adoption and use of technology, build human capacity, create capacity building facilities, and develop extension materials for the overall development of agricultural extension services in Cambodia.

## **Indonesia**

The implementation of agricultural extension is carried out by the central and local governments in Indonesia. Agricultural extension activity is based on an extension programme prepared jointly between agricultural extension workers and farmers that aims to develop rural extension centres in every subdistrict and recruit agricultural extension workers from districts and subdistricts to establish agricultural extension institutions. However, not all provinces, districts and subdistricts have established agricultural extension institutions, and a lot of farmer group activities are still oriented towards production aspects, especially of food crops. To reap the benefits of MOAE, changing farmers' from subsistence-oriented traditional farmers to modern farmers with an agribusiness orientation is essential. This will require building the capacity of farmers and extension workers on marketing and agribusiness aspects and conducting entrepreneurship and agribusiness courses for farmers, farmer groups, and farmer group affiliation leaders on a regular basis with FAO support.

## **Lao PDR**

National Agriculture and Forestry Extension Service (NAFES) under the Ministry of Agriculture and Forestry (MAF) is mandated to manage the public extension and technical service by establishing production groups contributing to the development and growth of agriculture and the forestry sector in Lao PDR. The mandate is to promote investments in human resources development with the focus on a decentralized agricultural extension and bottom-up planning process, with significant focus on strengthening the capacities of district extension agents and lead farmers. Although MAF plays a leading role in agriculture and forestry extension, other organizations, foreign projects and the private sector can make an important contributions. For the promotion of agricultural commercialization, the Small Holder Development Project provides extension and training to increase production and marketing of diversified cash crops, livestock, and fisheries, to improve farmers' technical knowledge of integrated farming systems, and access to market information and inputs, and support the growth of value-added enterprises. FAO support would be needed to strengthen capacity building of the Agribusiness Advisory Service (ABAS), and strengthen market information systems.

## **Malaysia**

The Ministry of Agriculture and Agro-based Industry (MoA) is the main player in developing the sector. A market-oriented extension programme in Malaysia is being put into action by the Department of Agriculture (DOA) and the Federal Agricultural Marketing Authority (FAMA), especially with regards to farmers who are involved in the production of horticultural crops. The DOA focuses on the extension programme pertaining to farm management whereas FAMA covers the market-oriented programme involving post-harvest practices and marketing. DOA provides technical advice and guidance to both big commercial entrepreneurs as well as small traditional farmers. The focus of extension is on the transfer of technologies related to Good Agricultural Practices (GAP), Good Manufacturing Practices (GMP) and entrepreneurship. FAMA coordinates and monitors the marketing activities for those who are involved in the marketing of agricultural produce. Existing market-oriented extension systems encompass all marketing activities starting from the post-harvest stage right up to the point when the agricultural produce is being marketed. The changes and market-oriented extension programme approaches which have been implemented by FAMA have shown encouraging results and many of the participants/farmers who have undergone the market-oriented extension programme have been able to comprehend and conduct their agricultural practices based on market needs. Further FAO assistance for building the capacity of different stakeholders would be needed to upscale MOAE in the country.

## **Mongolia**

The National Agricultural Extension Centre (NAEC) was established in 1996 by the Mongolian Government on the recommendation of and with support from the Asian Development Bank. Since 1999, a network of agricultural extension centres has been established with agricultural extension centres in Ulaanbaatar city, 21 provinces and more than 170 *soums* (subprovinces). About 60 voluntary researchers work as part-time extension workers in different areas of the agriculture sector. NAEC established an agro-park where training, field days, planting and trial of new varieties are carried out. The NAEC is aiming to establish extension centres in over 50 percent of all *soums* and furthermore forming training and extension units and model farms at the *bag* (rural) level where demonstrations and field days for farmers will be carried out regularly.

## **Myanmar**

Under the Ministry of Agriculture and Irrigation (MOAI), the Myanmar Agriculture Service (MAS) is working to establish linkages between agricultural extension and research. MAS has over 17 000 staff located in 17 states and divisions all over the country transferring appropriate and adaptable agricultural technology to the farmers, multiplying and distributing quality seeds, classifying and recommending soil conservation techniques, collecting feedback from farmers and finding solutions in consultation with the Department of Agricultural Research (DAR). A government Agricultural Market Information Service was initiated in 1999 under the technical cooperation programme (TCP/MYA/8821) of FAO which was implemented by the Department of Agricultural Planning (DAP) in cooperation with Myanmar Agriculture Service (MAS). There is a need for further contribution from FAO's Technical Cooperation Programme in relation to MOAE. Furthermore, comprehensive strategies for relevant investment in research, legal and regulatory structures, financial services, rural education, infrastructure etc. which support market orientation are needed. Reforms in the MOAI are also required, together with mechanisms for cooperation and alignment with the ministries of finance, planning, infrastructure, trade and commerce, and education.

## **Nepal**

Agricultural marketing has received little attention in Nepal. Commercialization of the agriculture sector has increased substantial marketable surplus of commodities like vegetables, fruits, and cash crops within the country. The Agribusiness Promotion and Marketing Development Directorate (ABP&MDD) under the Ministry of Agriculture and Cooperatives (MOAC) is the major government institution responsible for carrying out various activities relating to agribusiness promotion and marketing. In the absence of an assured market, agricultural production and productivity have not been growing as expected. Although physical infrastructure has developed in recent times with support from the central government and donor agencies, institutional aspects such as software and human development are not growing at the same pace. The legal environment of agricultural marketing is weak and different market centres of the country are operating under different rules and regulations. Appropriate institutional arrangements for agricultural markets and their strengthening are vital for the proper development of these centres and for their positive contribution to agricultural commercialization. To reap the benefits of globalization and market-oriented production, support, especially from FAO, is needed to develop an Agricultural Marketing Information System (AMIS) and value chain process for Nepal farmers to enable them to increase their profits.

## **Pakistan**

Since 2001, Pakistan has moved all service delivery departments, including agriculture extension, from provincial to district government control and each district is managing its agricultural extension activities related to water management, fisheries, livestock, soil conservation, forestry, etc. under one manager called the Executive District Officer of Agriculture (EDO). The Farmer Field School and nucleus farmer approach are followed to promote learning-by-doing and farmer-to-farmer extension. The market committees established under the provisions of the Agricultural Produce Markets Act safeguard the interest of growers. Agriculture extension under the present set-up is striving hard to meet the burgeoning requirements of the farming community, however, the number of agriculture extension agents is insufficient. Moreover, because of diversification of agriculture, the extension agents find it difficult to satisfy the requirements of farmers. Private sector and agriculture extension is also helping the farmers in their awareness, selection and adoption of technologies. FAO can help the present agriculture extension system in the training of personnel, especially with regard to the latest tools of agriculture extension, modern techniques for the adoption of innovations, post-harvest management of vegetables and fruits, wheat crop management, management of transgenic technology, use of ICT in agriculture extension, agriculture management for rainfed areas, seed technology and seed management for the extension workers and new integrated pest management techniques.

## **Viet Nam**

In Viet Nam, the market-oriented extension system (MOAE) refers to two main agencies, namely the National Agriculture and Fishery Extension Centre (NAFEC), which is responsible for providing extension services, and the Policy Institute (PI) which is responsible for formulating policies for agricultural and rural development. Parallel with the public agricultural extension system, there are many organizations such as NGOs, companies, universities, research institutes involved in agricultural extension activities. Private agricultural extension activities are very diversified in terms of objectives, subject, approach, method and are often a component of a much broader project or programme. For each programme and project, there are field extensionists who record all ongoing activities then submit periodical reports to authorized agencies. Every six months, a team of experts, managers, researchers are formed to conduct a field survey, monitor activity in a particular locality to check the operation status, identify problems, and get feedback from farmers. The market-oriented extension system is a new development direction by means of which Viet Nam has strived to sustain its agricultural sector. One of the main strategies to improve MOAE is to enhance the effectiveness and involvement of the mass media. MOAE requires certain skills to operate effectively, especially capacity building for grassroots extensionists and key farmers. FAO could support Viet Nam in capacity building for extension workers and key farmers at grassroots level to promote market-oriented extension activities and also help improve the quality and quantity of information provided through the mass media for quick and effective transfer of relevant technologies.

## FAO PUBLICATIONS

HEADING	LINK
<b>Consumer preferences and quality standards</b>	
<i>Quality assurance for small-scale rural food industries</i>	<a href="http://www.fao.org/docrep">http://www.fao.org/docrep</a>
<b>Food safety and hygiene</b>	
<i>The organic business guide</i>	<a href="http://www.organicandfair.org/oftcc/Publications/Tools-and-Guides/Organic-Business-Guide-publications.php">http://www.organicandfair.org/oftcc/Publications/Tools-and-Guides/Organic-Business-Guide-publications.php</a>
<b>Crop insurance</b>	
Please visit the Rural Finance Learning Centre for various publications	<a href="http://www.ruralfinance.org">http://www.ruralfinance.org</a>
<b>Linkages between farmers and markets</b>	
<i>Approaches to linking producers to markets: Lessons from experiences to date</i>	<a href="http://www.fao.org/docrep">http://www.fao.org/docrep</a>
<b>PPP development</b>	
<i>Market-oriented agricultural infrastructure: Appraisal of public-private partnerships</i>	<a href="http://www.fao.org/ag/ags/subjects/en/ruralinfrastructure/publications.html">http://www.fao.org/ag/ags/subjects/en/ruralinfrastructure/publications.html</a>
<b>Farmer group formation</b>	
<i>The group promoter's resource book</i>	<a href="http://www.fao.org/capacitydevelopment/learning-resources/en/">http://www.fao.org/capacitydevelopment/learning-resources/en/</a>
<i>Group enterprise resource book</i>	<a href="http://www.fao.org/capacitydevelopment/learning-resources/en/">http://www.fao.org/capacitydevelopment/learning-resources/en/</a>
<i>The urban producer's resource book</i>	<a href="http://www.fao.org/capacitydevelopment/learning-resources/en/">http://www.fao.org/capacitydevelopment/learning-resources/en/</a>
<i>The groups savings resource book</i>	<a href="http://www.fao.org/capacitydevelopment/learning-resources/en/">http://www.fao.org/capacitydevelopment/learning-resources/en/</a>
<i>The intergroup resource book</i>	<a href="http://www.fao.org/capacitydevelopment/learning-resources/en/">http://www.fao.org/capacitydevelopment/learning-resources/en/</a>
<i>Group enterprise management</i>	<a href="http://www.fao.org/capacitydevelopment/learning-resources/en/">http://www.fao.org/capacitydevelopment/learning-resources/en/</a>
<b>Rural finance</b>	
<i>Simple bookkeeping and business management skills</i>	<a href="http://www.ruralfinance.org/servlet/CDSServlet">http://www.ruralfinance.org/servlet/CDSServlet</a>
<i>Explaining cash flow and savings</i>	<a href="http://www.ruralfinance.org/servlet/CDSServlet">http://www.ruralfinance.org/servlet/CDSServlet</a>
<i>Talking about money: Cash flow and income</i>	<a href="http://www.fao.org/ag/ags/subjects/en/ruralfinance">http://www.fao.org/ag/ags/subjects/en/ruralfinance</a>
See Rural Finance Learning Centre	<a href="http://www.ruralfinance.org">www.ruralfinance.org</a>

<b>Motivating extension officers</b>	
<i>CIAT market facilitator guide</i>	<a href="http://webapp.ciat.cgiar.org/africa/pdf/eri_guide2/contents.pdf">http://webapp.ciat.cgiar.org/africa/pdf/eri_guide2/contents.pdf</a>
<b>Farmer business schools</b>	
<i>Agri-entrepreneurship training</i>	<a href="http://www.ruralfinance.org">http://www.ruralfinance.org</a>
<b>Livestock and dairy</b>	
<i>Milk producers resource book</i>	<a href="http://www.fao.org/capacitydevelopment/learning-resources/en/">http://www.fao.org/capacitydevelopment/learning-resources/en/</a>
<i>Training guide for trainers of small-scale milk traders in Kenya</i>	<a href="http://www.ilri.org/Link/Publications/Publications/MilkHygieneGuide-Trader.pdf">http://www.ilri.org/Link/Publications/Publications/MilkHygieneGuide-Trader.pdf</a>
<i>A farm-to-table approach for emerging and developed dairy countries</i>	<a href="ftp://ftp.fao.org/docrep/fao/008/y6007e/y6007e00.pdf">ftp://ftp.fao.org/docrep/fao/008/y6007e/y6007e00.pdf</a>
<i>Employment generation through small-scale dairy marketing and processing. Experiences from Kenya, Bangladesh and Ghana.</i>	<a href="http://www.fao.org/ag/againfo/themes/documents/LPS/DAIRY/DAP/employ/index.htm">http://www.fao.org/ag/againfo/themes/documents/LPS/DAIRY/DAP/employ/index.htm</a>
<i>Strategies for market orientation of small scale milk producers and their organisations</i>	<a href="http://www.fao.org/docrep/x5661e/x5661e00.htm">http://www.fao.org/docrep/x5661e/x5661e00.htm</a>
<i>Good practices for the meat industry</i>	<a href="http://www.fao.org/docrep/007/y5454e/y5454e00.htm">http://www.fao.org/docrep/007/y5454e/y5454e00.htm</a>
<i>Milk testing and payment systems resource book</i>	<a href="ftp://ftp.fao.org/docrep/fao/012/i0980e/i0980e00.pdf">ftp://ftp.fao.org/docrep/fao/012/i0980e/i0980e00.pdf</a>
<i>Livestock Farmer Field Schools</i>	<a href="http://www.dfid-ahp.org.uk/index.php?section=3andsubsection=22">http://www.dfid-ahp.org.uk/index.php?section=3andsubsection=22</a>
<b>Supply chain management</b>	
<i>Agro-industrial supply chain management</i>	<a href="ftp://ftp.fao.org/docrep/fao/010/a1369e/a1369e00.pdf">ftp://ftp.fao.org/docrep/fao/010/a1369e/a1369e00.pdf</a>
<b>Rural agro-industries</b>	
<i>Business management for agro-processors</i>	<a href="http://www.fao.org/ag/ags/subjects/en/ruralfinance/pdf/AGSF_wd_07.pdf">http://www.fao.org/ag/ags/subjects/en/ruralfinance/pdf/AGSF_wd_07.pdf</a>
<i>Quality assurance for small-scale rural food industries</i>	<a href="http://www.fao.org/docrep/V5380E/V5380E00.htm">http://www.fao.org/docrep/V5380E/V5380E00.htm</a>
<b>Contract farming</b>	
<i>Contract farming: Partnerships for growth</i>	<a href="http://www.fao.org/DOCREP/004/Y0937E/Y0937E00.HTM">http://www.fao.org/DOCREP/004/Y0937E/Y0937E00.HTM</a>
See Contract Farming Resource Centre	<a href="http://www.fao.org/ag/ags/contract-farming/en/">http://www.fao.org/ag/ags/contract-farming/en/</a>
<b>Farm record keeping</b>	
<i>The farm as a commercial enterprise</i>	<a href="http://www.ruralfinance.org/servlet">http://www.ruralfinance.org/servlet</a>

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## PROGRAMME

<b>May 11<sup>th</sup> (Tuesday)</b>	
<b>Time</b>	<b>Programme</b>
08:30	Registration
09:00 – 10:00	<b>Opening ceremony:</b> <ul style="list-style-type: none"> <li>• Welcome remarks by Ms Juejan Tangtermthong, Executive Director, AFMA</li> <li>• Remarks: Andrew Shepherd, FAO, Rome</li> <li>• Official opening speech: Mr Hiroyuki Konuma, Assistant Director-General and Regional Representative, FAO Regional Office for Asia and the Pacific</li> <li>• Introduction to the workshop (objectives, outputs, methodology): Mr Malcolm Hazelman</li> <li>• Group photo</li> </ul>
10:00 – 10:30	Coffee break
10:30 – 11:30	<b>Market-oriented advisory services</b> <ul style="list-style-type: none"> <li>• National and global trends and market-oriented agricultural extension: David Kahan, FAO, Bangkok</li> <li>• Re-orienting extension services to respond to global trends: Malcolm Hazelman, FAO, Bangkok</li> </ul>
11:30 – 12:30	<b>Market-oriented extension: presentation and discussion of country experiences</b> <ul style="list-style-type: none"> <li>• Presentation #1: Thailand's experience: Ms Yupa Intrawech</li> <li>• Presentation #2: Philippines' experience: Mr Francisco Ramos</li> <li>• Presentation #3: China's experience: Mr Zhang Qiao</li> </ul>
12:30 – 13:30	Lunch Break
13:30 – 14:30	<ul style="list-style-type: none"> <li>• Presentation #4: India's experience, Speaker: Mr Sanjeev Gupta</li> <li>• Presentation #5: Bangladesh's experience, Speaker: Mr Md. Mahfooz-Ul-Alam</li> <li>• Presentation #6: Sri Lanka's experience, Speaker: Dayananda Abeysuriya</li> </ul>
14:30 – 15:30	<b>FAO Training and extension materials</b> <ul style="list-style-type: none"> <li>• FAO agricultural marketing extension materials: Andrew Shepherd, FAO, Rome</li> <li>• FAO's farm management extension materials: David Kahan, FAO, Bangkok</li> <li>• Presentation on FAO-Technical Programme Experience in Nepal</li> <li>• Discussion</li> </ul>
15:30 – 16:00	Coffee break
16:00 – 17:00	<b>Review of FAO materials and identifying gaps</b> Group work by country: review of materials
19:00 – 21:00	Welcome dinner at Roberto restaurant, 2 <sup>nd</sup> Floor

<b>May 12<sup>th</sup> (Wednesday)</b>	
<b>Time</b>	<b>Programme</b>
08:30 – 08:45	Summary of day 1 proceedings: Krishna M. Singh
08:45 – 10:00	Group work by country: review of materials and identify further needs
10:00 – 10:30	Coffee break
10:30 – 12:30	Feedback by country – identification of priority needs in market-oriented extension training.
12:30 – 13:30	Lunch break
13:30 – 13:45	<b>Preparation of proposals for follow-up action</b> Guidance in preparing project proposals
13:45 – 15:30	Identification of issues and breakdown of participants into groups to prepare project profiles and action plans
15:30 – 16:00	Coffee break
16:00 – 17:00	Working group preparation of project profiles

<b>May 13<sup>th</sup> (Thursday)</b>	
<b>Time</b>	<b>Programme</b>
08:30 – 08:45	Summary of day 2 proceedings: Krishna M. Singh
08:45 – 10:00	Finalization of presentations
10:00 – 10:30	Coffee break
10:30 – 12:30	Feedback presentations by subregion
12:30 – 13:30	Lunch
13:30 – 15:30	Break down into country groups and prepare project profiles Possible follow-up actions
15:30	Closing ceremony
15:30 – 16:00	Coffee break

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