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ASIA AND PACIFIC PLANT PROTECTION COMMISSION

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Country report

Cambodia

Cambodia Country Report
(29th APPPC Meeting from 07-11 September, 2014 Bali, Indonesia)

General Information

Cambodia is an agricultural country with about 80% of people living in rural areas and relying on the agriculture sector for supporting their livelihoods. The share of GDP contributed by the agricultural sector was estimated at 28.7% in 2014 compared with 25.5% from the industrial sector and 40.5% from the services sector. The agriculture sub-sectors are composed of crop production (59.4%), forestry (7%), fisheries (22.2%) and livestock (11.3%).

The Royal Government of Cambodia (RGC) promulgated and accelerated the implementation of the “Rectangular Strategy Phase III” and the National Strategic Development Plan (NSDP), 2014-2018. The RGC still regards agriculture as a priority sector and it is clearly defined that the enhancement of agricultural productivity, diversification and commercialization, land reform, sustainable natural resource management are crucial to contribute to economic growth and poverty reduction.

In order to implement the said policy and strategy, the Ministry of Agriculture, Forestry and Fisheries (MAFF) focuses on improving agricultural productivity, diversification and commercialization by accelerating the implementation of necessary measures, including the building and improving of infrastructure supporting to agricultural production, increasing of the provision of technical services to the farmers, the strengthening of the agricultural research and development capacity to increase crop yields and climate change adaptation, improving soil fertility, the strengthening the capacity of agricultural communities and the institutional capacity to promote agricultural development and trade facilitation. The overall agricultural policy goal is to increase the growth by 3-5% per annum through enhancing of agricultural productivity, diversification and commercialization with high consideration of sustainable forestry and fisheries resource management.

In recognition of the important role of NPPO contributing to the achievement of above goal when Cambodia became a WTO member, the RGC has restructured and strengthened the Plant Protection and SPS Department (PP-SPSD) of the General Directorate of Agriculture (GDA) in order to better implement assigned obligations and mandates. The establishment of PP-SPSD demonstrated the commitment of the RGC in strengthening the implementation of SPS/WTO measures by empowering this new department to be responsible for food safety aspect of plant products at farm level and all phyto-sanitary measures.

Plant Quarantine

With the accession of Cambodia to the WTO, the RGC has realized the critical role of phyto-sanitary measures as an integral part of the SPS agreement. Plant Quarantine became one of the offices under PP-SPSD/GDA that plays a key role in inspection and certification of plant products intending for export. After endorsement of Sub-Decree No 64 in mid-2001 the Cambodian plant quarantine activities were only undertaken at the central office level and no activities were carried out at the international entry/exit points due to the lack of qualified personnel. The RGC has reviewed Sub-Decree 64 and endorsed Sub-Decree No. 06 on 30 March 2004, empowering the Plant Quarantine Service to implement its duties at all International Airports (Phnom Penh, Siem Reap and Kang Keng) of the Kingdom of Cambodia.

For effective and smooth operation, MAFF has prepared a Sub-Decree on Regional Plant Quarantine Office which has now been agreed by all concerned institutions and submitted to the

Government for final approval. This new Sub-Decree will empower the Plant Quarantine Office to deploy the officers to work at the land and seaport check points of the country, where the supporting infrastructure and necessary facilities need to be established with well functions. The implementation of the works has still encountered many challenges which mainly include inadequate qualified personnel and facilities, especially in reference to pest surveillance, management of pest outbreaks and invasive species.

There have not been any pest-free area production sites established as of yet. The preparation of a list of regulated pests in accordance with ISPM 19 is still not drafted due to limited capacity of staff and financial support. The PRA has just started with the formulation of a PRA team consisting of 3 entomologists and 3 plant pathologists to work with support from FAO to provide on-the-job training. Only some ISPM tasks directly related to trade facilitation have been implemented so far.

There are projects supported by AusAID, NZAID, FAO, CABI, EU, JICA and World Bank for building capacity on laboratory works and plant quarantine services in the areas of human resource and infrastructure development. The latter includes the setup of PRA room and basic equipment for the establishment of a plant pest diagnosis laboratory. Recently, there is a project working on improved sanitary and phyto-sanitary handling in greater Mekong sub region trade to support pest surveillance on rice, corn, cassava, cashew nuts, soybean and fruit and vegetables. This project will be built upon strengthened diagnostic services to allow the verification of the taxonomic identity of pest specimens.

With regard to pest outbreaks the country still faces problems occasionally with Brown planthoppers (*Nilaparvatalugens*), Golden apple snails (*Pomacea canaliculata*), Army worm (*Spodoptera sp.*) in rice, Coconut beetle (*Brontispaalongissima*) in palm trees and Pink mealy bug (*Phenacoccus manihoti*) and whitching broom in cassava production. Occurrences of rice Blast (*Pyricularia oryzae*) and Bacterial leaf blight (*Xanthomonas oryzae*) have also observed in some provinces. Although many efforts have been made to manage these pests, the problems still persist.

Integrated Pest Management (IPM)

Cambodia has continued to implement many IPM activities with remarkable results in all major agriculture provinces under the effective supervision, management and coordination of the National IPM Program. The overall goal of the National IPM Program is to promote food security and safety and better market access for IPM produce. This is done through the promotion of Integrated Pest and Crop Management (IPM) among smallholder farmers as an integral part of government and CSO efforts for sustainable intensification of crop production systems. Through participation in season long Farmers Field Schools (FFS), farmers develop skills to increase productivity and profitability in an environmentally friendly and health safety manner. The IPM has been considered by MAFF as one of the country's key crop production strategies with the aim of making IPM the standard approach to crop management in Cambodia.

Key activities implemented include training of trainers courses on rice, vegetable, corn, water melon, rice-fish-vegetable, mung bean, cassava crop and fruit fly management; training of farmer trainers; farmer field schools on the above mentioned crops. The Program has also conducted many refresher courses for district and farmer trainers and trainings farmers on pesticide health hazards; technical farmer congresses and system of rice intensification. In addition the Program has carried out several study tours and exchange visits; workshops and meetings; field studies and experiments; establishment of farmer clubs; training on organic agriculture and chemical-free vegetable production.

FFS approaches have been adopted by many provincial governments and development partners, including NGOs and it has been integrated in the work and budget plans of local commune councils whose work programs are funded through decentralized donor-supported programs. This way, IPM training activities have become more demand-driven and can be scaled-up at districts levels. FFS alumni have formed groups and associations to continue working together with established trainer networks to provide services to local IPM projects and promoting IPM products via food safety projects. They have organized in chemical-free and organic production associations and made linkages for more effective marketing of IPM produce and better market access. Safe IPM produces, chemical-free and organic products have been supplied to supermarkets, restaurants, big hotels and casinos.

Introduction and promotion of biological control, e.g., parasitoids (*C. plutellae*, *Asecodes*), pathogens (*Trichoderma*) and predators (earwigs), have been included in IPM-FFS as to provide farmers with alternatives to chemical pesticides. The FFS approach has also been applied to training on plant genetic resource management, plant biodiversity and integrated farming systems have allowed farmers to expand learning about a range of agricultural activities, aimed at developing sustainable agricultural production systems throughout the country.

Many international and local organizations such as FAO, IFAD, ADB, World Bank, EU and other have been involved in supporting the implementation of IPM activities in Cambodia. In recognition of the importance and benefits of IPM the RGC has made some budget allocations annually to support the operation of the National IPM Program. In close collaboration with all involved organizations and development partners the National IPM Program has trained 956 trainers, 3,126 Farmer Trainers and more than 300,000 farmers through season-long FFSs. Moreover, the Program has also worked with school teachers and students and formed more than 900 farmer clubs involving more than 17,000 farmers.

The previous impact assessment studies have shown that farmers have reported reductions of 48% in spray events, 51% in dose, 50% in costs, 59% in WHO Class 1 pesticides and 47% in Environmental Impact Quotient field values. Farmers who have graduated from IPM farmer field school training have been able to increase rice yield/ha with approximately 25-30%. In addition, the investment costs for vegetable production and protection by IPM farmers have been reduced with 40-50% in comparison with non-IPM farmers.

Results from a recent study to compare the technical recommendation with farmer practice from 270 FFS in 3 seasons have confirmed that the technical recommendation plots produced higher yields (+ 1,342 kg/ha) with lower expenses (- 80 USD/ha) and higher net profits (+ 399 USD/ha) than those of farmer practice plots for all three seasons: early wet, wet and dry seasons.

It can be concluded that the implementation of IPM activities in Cambodia has resulted in more sustainable and cost-effective production, reduction of ecological disruption and environmental contamination, reduction of public health and toxic residues in food and improvement of livelihood, biodiversity and marketability of produces.

Pesticide Management

According to the law on the management of pesticides and fertilizers adopted in January 2012, MAFF was mandated to be a key responsible institution for the pesticide management. Pesticide management has been involved by various departments in MAFF namely: (1) the Department of Agriculture Legislation (DAL) acts as regulatory authority in charge of pesticide registration,

licensing, inspection, (2) PP- SPS Department plays a role as technical adviser in field evaluation of pesticides (chemical, biological), and (3) the National Agricultural Laboratory of the GDA works on analyzing pesticides quality.

With regard to the the implementation of the International Conventions Cambodia has signed and ratified the Stockholm Convention (POP), Montreal Protocol (Ozone Depletion Materials) and Basel conventions with full developed action plans for implementation of the first two conventions with focal points placed in the Ministry of Environment (MOE). DAL in MAFF is the focal point for the Rotterdam Convention which had been acceded by the Government since May 2013.

There are still many challenges on pesticide management remained unresolved such as insufficient enforcement of rules and regulations, uncontrolled importation, and broad availability of undesirable pesticides, misuse and over use, limited data on health and environmental effects and high pesticide residues in food. However, on a positive note, there has been a broad recognition on the improvement throughout the Government, NGO and private sector with regards to current pesticide issues and their negative implications for production, health, environment and trade.

MAFF has made strong efforts to reinforce pesticide management in Cambodia by issuing an order to all relevant units to strengthen pesticide management and quality control including across border trade, distribution, sale and use of agrochemicals in the country. MAFF has also enforced pesticide labeling regulations, including development of labels in local Khmer language in line with the FAO Code of Conduct on the Distribution and the Use of Pesticides. In addition, MAFF is reviewing and updating the pesticide list including banned, restricted and permitted products through Ministerial proclamation No. 484 MAFF dated on 26 November 2012. In the context of chemical management, the MOE is starting to introduce the GHS (Global Harmonization System) for pesticide labeling. JICA has provided assistance for staff capacity building and facilities for strengthening pesticide analysis laboratory.

Pesticide Risk Reduction Program activities under the support from FAO have been continuously carried out to address the issue of highly hazardous pesticides through capacity building for chemicals management in general. The initial step is to develop adequate regulatory framework including legal documents and functional mechanism for the control of pesticides and capacity building for staff members in national and provincial levels on pesticide management including training for retailers and inspectors, pesticide quality control and inspection, and registration and data base development. Meetings were organized by DAL to follow-up the exchange of information and experiences, and to discuss common issues/questions related to the establishment and operation of a functional licensing and inspection schemes for pesticide importers and sellers in compliance with legal obligations.

Food Safety

The food safety in Cambodia is cross mandatory responsibility by relevant ministries such as the Ministry of Health (MOH), MAFF, Ministry of Industry and Handicaps and Ministry of Commerce (MOC). However, each ministry still has limited capacity to implement the works related to surveillance of contamination (chemical, physical and biological) in food, food toxicity and food borne diseases.

As a member of ASEAN and WTO, Cambodia has prepared itself to participate in global and regional food safety networks such as the establishment of the Cambodian national codex committee, network for pesticides regulatory database, focal point of ASEAN plant health cooperation network, member of ASEAN food safety network, harmonization of Codex standards, phyto-sanitary, and maximum residue limits of pesticides, livestock and fisheries.

A number of sub-degrees were established to address food safety and good manufacturing practices (GMP) such as industry standard, food hygiene for human consumption, phyto-sanitary inspection, animal health and products derived from animal production inspection and agricultural materials standard. The Cambodia National Codex Committee (CNCC) was established by sub-degree with 8 members and the contact point is located in the Department of Export Inspection and Fraud Repression of the MOC. The important development is that the RGC is in the process of preparing Food Law and food safety is essential part of the law.

The MAFF is responsible for establishing and testing the maximum residue limits for pesticides based on the Prakas No. 002 MAFF on List of maximum residue limits of pesticide in fruit and vegetables dated on 03 January 2007. The ministry has a key role in management and control of safety and quality of agricultural products (raw materials) as they enter the food chain. Inspection of phyto-sanitary, agricultural chemical residue, animal health and sanitation, and agricultural material inputs are done by MAFF officers. Referring to food safety, high levels of pesticide residues are increasingly recognized as trade barriers and it is problematic for domestic consumer health. MAFF was mandated to be responsible for food safety issues from farm level to the final phase of primary processing and the MOC is responsible for food safety issues related to WTO-SPS and food safety at the border and in the market.

Good Agricultural Practice (GAP) standards and guidelines were developed in Khmer language based on ASEAN GAP and are annexed to the draft of the Ministerial Proclamation (Prakas) on System of Good Agricultural Practice for fresh fruit and vegetable. The PP-SPS Department is playing a key role as GAP Certification Body in cooperation with other specialized departments. The draft has been submitted for approval by the Minister of MAFF. Whereas organic agriculture is promoted by the Cambodian Government and the organic standards have been developed. However, the organic sector still remains underdeveloped and sustainable growth of this sector will depend on consumer preferences and importing country acceptance. A training curriculum on GAP is incorporated into FFS for producers' education and a system of control and certification will be developed. Farmers who completed FFS have formed as associations for chemical-free vegetable, organic rice and made link to the markets at local towns, markets at Phnom Penh capital and oversea markets. IPM products have been recognized as safe food commodity and some Provincial Departments of Agriculture have provided certifications as safe products.

The National Agricultural Laboratory has upgraded by supplying specialized equipment and apparatus (HPLC and GC) to be able to analyze MRL in the agricultural products for local consumption and for export. Staff capacity buildings through on-the-job training with support from international technical experts on equipment operation have conducted.