

Background Paper

Cambodia

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TABLE OF CONTENTS

GENERAL INFORMATION 3

AGRICULTURAL SECTOR IN CAMBODIA 3

FOOD SECURITY SITUATION 4

EXISTING GOVERNMENT POLICY 4

IMPACTS OF CLIMATE CHANGE 4

FOOD INSECURE PROVINCES 5

MAJOR CONSTRAINTS 5

SRI ADAPTATION IN CAMBODIA 5

THE MEKONG SRI PROJECT 7

TARGET PROVINCES 8

MAIN ACTIVITIES PROPOSED 8

BACKGROUND PAPER

GENERAL INFORMATION

Cambodia is one of the ten nations of Southeast Asia and part of mainland Southeast Asia. It is bordered on the north by Laos and Thailand, on the west by Thailand, and on the east by Vietnam. It has a coastline on the Gulf of Thailand of 443 kilometers (275 miles). The Mekong River flows directly through the country from north to south, eventually flowing into the Mekong Delta of Vietnam. Cambodia's largest city and capital, Phnom Penh, is on the Mekong River. Cambodia is divided into 24 provinces and one capital (Phnom Penh).

Cambodia's geographic area is 181,035 square kilometers and the population is 14.8 million. The current population growth rate is a relatively high at 2.25 percent. Approximately 90 percent of the population is Khmer and Khmer is the official language. Buddhism is the dominant religious group, claiming 95 percent of the population.

Like most of Southeast Asia, Cambodia is warm to hot year round and the climate is dominated by the annual monsoon cycle with its alternating wet (May-Oct) and dry seasons (Nov-Apr). The monsoon cycle is driven by cyclic air pressure that changes over central Asia.

AGRICULTURAL SECTOR IN CAMBODIA

The Royal Government of Cambodia considers agriculture development as a priority given its contribution to the country's economic growth, national productivity and employment and the promotion of living standards of about 80% of the country's population who live in the rural areas. The progress of the agriculture sector is not just a core driver of economic growth, but also promotes the living standards of the people and contributes to food security. The promotion of paddy promotion and milled rice exports not only increase economic growth but also make the cracking-dry rice fields become lush green in all seasons as well as allow rural youths to have jobs and upgrade their living standards.

The latest report from MAFF places the rice cultivation area at 2.97 million hectares, with an average yield of 3.17 tons per hectare, resulting in total production of paddy rice at 8.78 million metric tons. The paddy surplus for 2011-12 is about 4.34 million metric tons. Total yields increased around 10.47% in 2012 compared to 2011 due to increase in the planting area, development of irrigation, improvement of farming techniques and management, new advanced technology and high yielding varieties. Other agricultural sub-sectors such as horticulture, industrial crops, livestock and aquaculture have also increased remarkably. In general, although impacts from natural phenomenon were experienced, the agricultural production was good.

FOOD SECURITY SITUATION

Poverty has been reduced from 47 percent in 1993 to 28 percent in 2010. However, a third of Cambodians still live below the national poverty line (2,473 riel or US\$0.61). Eighty percent of the population is rural and of the total poor, 92 percent live in rural areas. The inequality levels have risen dramatically. As a recent trend, inequality has increased not only between rural and urban areas, but also within rural areas. Twelve percent of households, or 1.7 million individuals, were food insecure and most of these households were affected by increases in food prices. Cambodia is among the 36 countries with the highest burden of child under-nutrition and one of the 33 "alarming" countries for levels of hunger and under nutrition.

EXISTING GOVERNMENT POLICY

The key existing policy related to SRI is the Policy Paper on "*The Promotion of Paddy Production and Rice Export*" that was promulgated on 17th August 2010 by the Royal Government of Cambodia (RGC). The vision is to transform Cambodia into a "Rice Basket" and a major rice exporting country in the global markets through the increase of rice productivity, improved quality and commercialization. The RGC has set the year 2015 as the target year to achieve paddy surplus of more than 4 million tons and achieve milled rice export of at least 1 million ton. To achieve the set target, the RGC has set up long, medium and short term strategies to improve productivity through the promotion of the use of qualified, high yielding and marketable seeds/varieties; improve cultivation practices and increase the number of cropping seasons. Strategies have also been designed to enhance processing capacity and quality, logistics and expand market opportunities in the regional and international markets. All concerned stakeholders have developed an "Action Program" for efficient and effective implementation of the policy roadmap.

IMPACTS OF CLIMATE CHANGE

Cambodia's environment is increasingly under pressure from both rapid economic development and climate change. The main potential impacts of climate change in Cambodia are on agriculture and allied sectors. Climate change is therefore a tangible and current threat already affecting the livelihoods of the resource poor rural households. Poor water-use efficiency (drought and flood) is a key priority for action with regard to adaptation to climate variability and climate change in the rice-based system. Despite a significant research effort in Cambodia during the past years or so, there appears to have been little adoption of the results in the areas of varietal improvement, direct seeding, double-cropping, crop diversification, reduced tillage or land leveling. Adoption of these practices would reduce vulnerability to climate variability and climate change in the rice-based system.

To respond to climate change, the RGC set up a National Adaptation Program of Action to Climate Change (NAPA) in 2006 with the main objective to develop human resources and institutions, conduct researches, apply appropriate technology, and mobilize funds. This needs to be done particularly in the sectors that are the backbones of the national economy, such as agriculture, water resources, fisheries, forestry, energy and physical infrastructure. In

2011, floods affected 1.5 million people and destroyed at least 9.4 percent of crops, further raising the profile of climate change and disaster risk reduction on the national development agenda. Work is being done to increase communities' preparedness and resilience. In addition, there are many programs and projects have been developed and implemented by Governments and development partners.

FOOD INSECURE PROVINCES

ADB reports that some provinces are often affected by drought and flood and are considered as food insecure. These include Kampong Speu, Takeo, Prey Veng, Svay Rieng, Kampong Thom, Siem Reap, Oddar Meanchey, Banteay Meanchey, Kampong Cham and Prah Vihear. Some food facility projects, e.g. the ADB-funded Emergency Food Assistance Project (EFAP), have been established to help farmers' access good quality seeds and other agricultural inputs.

MAJOR CONSTRAINTS

Progress has been seen in agricultural development, but Cambodia has still not made the best use of the sector's potential. The primary constraint to productivity lies in the limitations of irrigation. Cambodian agriculture is still anchored to fragile subsistence rain-fed systems, centered on paddy rice production. Access to irrigation systems varies geographically. In some northeast provinces, there are virtually no irrigated areas.

Low productivity is also caused by poor management of natural resources; lack of modern technology; skill shortages and weak human capital; poor access to modern agricultural inputs such as seeds and fertilizers; poor supporting physical infrastructure (roads, markets). There are also limited access to agricultural extension services and financial capital; limited agricultural production land and insecure land titling; poorly performing small and medium enterprise (SME) activities related to agriculture. In addition, Cambodia is particularly vulnerable to the effects of climate change, such as rising temperatures and increased/decreased annual rainfall, erosion, inundation and salinization as well as more risks of pest infestations. The effects of these factors are likely to be more intense for those who depend solely on agriculture for their livelihood.

SRI ADAPTATION IN CAMBODIA

The System of Rice Intensification (SRI) is a low-input methodology, which can be flexibly applied based on the enabling factors and farm conditions. In order to widely disseminate and promote SRI adoption and application, the SRI Secretariat was established in January 2005 by the Ministry of Agriculture, Forestry and Fisheries (MAFF) with technical support from CEDAC, and financial support from various development partners such as GTZ, FAO, HEKS and Oxfam.

MAFF has provided strong support for the development, promotion and implementation of SRI. In early 2006, SRI was integrated into the National Strategic Development Plan (NSDP) and policy frameworks to reduce food insecurity and poverty of rural households. With strong support from MAFF, in close cooperation with relevant development partners and active involvement of PDAs, by 2012 approximately 149,657 farmers have applied SRI on an

area of about 100,720 ha. The average yield was about 3.94t/ha which is higher than the national average rice yield in wet season which is only around 3.17t/ha.

Despite the success, many challenges to SRI promotion remain, such as:

- Lack of animal manure and other farm resources for compost/fertilizer;
- Shortage of farm labor to meet intensive requirement for weeding;
- SRI is only applied on small portions of the field;
- Difficult to practice alternate flooding and drying of the field;
- Most farmers still lack confidence on applying and adapting SRI;
- Different understanding and interpretation of SRI concepts among stakeholders;
- Lack of monitoring and evaluation system.

By the end of 2009, MAFF recommended to expand the promotion and implementation of SRI nationwide by strengthening the management, execution and coordination mechanism for activities, improving technical aspects via research and training activities and increasing financial support. The following tasks were designated:

- The Department of Rice Crop (DRC) as the lead agency for overall supervision and management, provides technical advice and monitoring and evaluation of SRI implementation via the National SRI Secretariat.
- The National SRI Secretariat plays key roles as national executive body for developing SRI implementation strategy, approach and guidelines, coordinating with all concerned stakeholders to push for SRI implementation and promotion, and producing technical documents related to SRI and disseminating these to all relevant stakeholders and farmers.
- The Department of Agricultural Extension promotes the publications of technical documents and draws best practices, and uses different means to broadly disseminate these to farmers.
- The Cambodian Agricultural Research and Development Institute (CARDI) and Agricultural Schools and Universities to do more researches on SRI components to provide best technical recommendations and practical options to farmers.
- Provincial Departments of Agriculture to expand the promotion and implementation of SRI in close cooperation with development partners.
- MAFF also requested all development partners to broaden their technical and financial support for expansion of SRI activities throughout the country because SRI is the way forward for enhancing rice productivity and profitability in Cambodia.

In order to improve the management, development, implementation and promotion of SRI in Cambodia and to achieve the national objective to improve rice production and productivity in a sustainable manner, the SRI Secretariat needs to be re-designed. The new vision for the SRI Secretariat is to play a leadership role in setting strategic priorities for investment in research and extension; provide technical advice and support to government bodies, development partners, NGOs, and act as a hub for information about SRI and other best practices throughout the country irrespective of funding sources and implementing organizations.

The Department of Rice Crop, GDA in collaboration with Oxfam America has worked to strengthen the National SRI Secretariat in Cambodia with the purpose to refine and test this vision and develop a plan for the SRI Secretariat to deliver its mandates effectively. Through long discussions with involved stakeholders, the vision and mission of SRI Secretariat were developed and agreed as follows:

- **Vision:** Promoting sustainable rice production and productivity through application of the System of Rice Intensification (SRI) in ecologically sound and economically efficient way with consideration of climate change mitigation and adaptation leading to rural livelihood improvement and national economy development in Cambodia.

- **Mission:**
 - To prepare policies and define priorities for the implementation of the SRI promotion at national level;
 - To ensure coordination between all the institutions involved with SRI;
 - To encourage the implementation of research work in order to provide adapted recommendations to the different situations;
 - To manage the Monitoring and Evaluation system, ensure compatible M&E tools are used by the different stakeholders and compile information at the national level.

- **Organizational structure:** The organization structure and Terms of Reference of the SRI Secretariat have been prepared and is ready for submission for MAFF approval.

- **Training and promotion materials:** Training and promotion materials on SRI such as technical books, leaflets and posters have been published and distributed to all SRI promoters and relevant stakeholders.

- **M&E system:** The M&E system has been developed and tested for use in monitoring the progress of SRI application in the country.

THE MEKONG SRI PROJECT

The overall development goal of the project is to *“enhance rainfed smallholder farmers’ capacity confronting climate change sustainably by applying SRI through Participatory Action Research in order to improve food security, income and occupational health status”*.

The immediate objectives of the project are:

1. To increase the capacity of the SRI Secretariat to function well as a coordination body to promote SRI application;
2. To identify appropriate techniques through participatory action researches at research institutes, academic institutions and farmer level;
3. To strengthen the capacity of human resources at national, provincial, district and farmers level to promote SRI;

TARGET PROVINCES

Three target provinces will be selected for starting up the Mekong SRI Project, namely: Prey Veng, Takeo and Kampong Speu.

MAIN ACTIVITIES PROPOSED

1. Obj 1: To increase the capacity of the SRI Secretariat to function well as a coordination body to promote SRI application.
 - Organize SRI network meeting;
 - Gather all relevant information on SRI from stakeholders and make them available for distribution;
 - Provide technical backstopping visits to strengthen SRI application;
 - Set up M&E system to identify and promote SRI application;
 - Coordinate with public institutions, NGOs and private sector for SRI promotion and application.

2. Obj. 2: To identify appropriate techniques through participatory action researches at research institutes, academic institutions and farmer level.
 - Carry out baseline survey;
 - Identify critical SRI practices that require the conduct of more researches;
 - Conduct participatory appraisal;
 - Conduct participatory action researches on farms and at stations;
 - Conduct conference/seminar for experience sharing between national and international stakeholders;
 - Document all findings from the PAR.

3. Obj. 3: To strengthen the capacity of human resources at national, provincial, district and farmers level to promote SRI application;
 - Conduct inception and planning workshop;
 - Conduct mini-TOT at target provinces;
 - Conduct Farmer Field School (FFS) and Student Field School;
 - Set up on-farm demonstration in FFS;
 - Organize study visits;
 - Organize post-FFS activities;
 - Develop extension materials;
 - Conduct annual workshop;
 - Organize SRI farmers' forum and competition to share best knowledge and practices among model farmers.