

Policy Document on the Promotion of Paddy Rice Production and Export of Milled Rice

I. Introduction

1. The Royal Government of Cambodia (RGC) has made a strong commitment to ensure further implementation of the *Rectangular Strategy-Phase II*, following a successful efforts to lead the Cambodian economy out of the most difficult time of recent global financial crisis and economic downturn. To this end, the RGC has embarked in earnest on promoting the development of the agriculture sector, with emphasis on a new pace and scale with the aim at further strengthening the foundation for economic growth, accelerating poverty reduction, as well as improving the living standards of the Cambodian people.

2. In realizing the vision of agriculture development, the RGC has adopted a three-pronged strategy — *productivity enhancement, diversification and agricultural commercialization* (from subsistence to commercial agriculture) — through implementing a package of interrelated measures: (1) infrastructure building and enhancement (roads, irrigations, energy/electricity and information and communication technologies (ICT); (2) improvement in the provision of extension services and agricultural inputs; (3) land management reform; (4) finance; (5) marketing; (6) farmer organization; and (7) institutional building and coordination. In the current context, agricultural commercialization has become more dynamic in lights of global economic changes due to increasing food demand and prices. This trend bears some implications on, and revives the impetus of, paddy rice and other crops production in Cambodia, which have the potential for further higher growth.

3. Cambodia has a big potential in paddy rice production in order to increase its milled rice export in the future. To guide its vision for the preparation of economic development policy, the RGC has an ambition to turn Cambodia into a major “**rice - white gold**” exporting country in the international market. Paddy rice production could reach 7.3 million tons in 2010-2011, after a remarkable rebound over the past decade. With an estimated domestic consumption of approximately 3.14 million tons of paddy rice, a provision for seeds and harvest loss, statistical data shows a surplus of 3.32 millions, which can be processed into milled rice for export. However, , the official statistics in 2009 recorded so far only 13,000 tons of milled rice or 20,000 tons of paddy rice export, although Cambodia has actually exported much more milled rice. This truly reflects Cambodia’s potential to increase the official export of milled rice, instead of informal export of unprocessed paddy rice, which results in the loss of considerable value added for the national economy. Moreover, as a result of increasing investments in the construction of irrigation systems, paddy rice farming, expansion and intensification of cultivated land, as well as the increasing paddy rice yield (caused by improved irrigation, seeds and fertilizers supply and growing techniques), the RGC expects that rice production will rebound further, allowing Cambodia to achieve a surplus of paddy rice, which will be processed into milled rice for export. In this regard, Cambodia must build a robust, high quality and reliable rice milling industry.

4. At the same time, Cambodia has a unique opportunity to expand its milled rice market niche in the global markets. The global milled rice trade is estimated to reach 31 million tons in 2010, in which Thailand and Vietnam will remain the biggest supplier of milled rice export, and Cambodia and Myanmar are expected to emerge as new leading milled rice-exporting countries in the near future. With the world now facing the challenges of population growth, climate change, and changing economic structure together with the

improved living standard of people in many developing countries, the consumption of rice is expected to rise, driving higher demand for milled rice in the global markets. Furthermore, not only there are not many milled rice-exporting countries, with most of them in Asia, especially Southeast Asia, there are more and more countries such as the Philippines, Malaysia and Indonesia which have become rice-importing countries. As such, this potential in global milled rice market will provide fresh opportunities for Cambodian farmers.

5. Realizing this opportunity, the RGC has introduced a series of measures, in cooperation with farmers, rice millers, traders and development partners, to address the many challenges ranging from the high cost of rice processing, transportation, export processing and clearance, to the creation of funds to support and develop agriculture, and the provision of additional fiscal incentives to this sector. Some of these measures were not consistent and systematic, and their implementation were neither sufficiently effective nor their results satisfactory. In this context, the RGC realizes the need to further refine the rice policy using the value chain approach. The RGC has chosen milled rice as a priority export item and will pay close attention to this policy, based on the following rationales of strategic importance:

First, the diversification of Cambodia's sources of growth through increasing paddy rice production and milled rice export could complement other sectoral growth, including garment. In the future, the rice sector could become an important pillar to sustain Cambodia's economic growth while the garment sector is facing stiffer competition.

Second, the rice sector could have a big potential comparable to that of the garment sector in terms of gross export value and value added generated throughout the supply chain including employment. If rice export could reach 3 million tons, the total export value would amount to USD 2.1 billion (approximately 20% of GDP) or equivalent to about USD 600 million (approximately 5% of GDP) in value added contribution to the national economy. Provided we can solve the issues related to rice export in the same way as we have done for the garment sector, we will be able to retain substantial value added in the country and the gains generated from the process could directly contribute to economic growth, i.e. in the form of employment for more than 70% of rural people, an income increase, and particularly a reduction of poverty and an improved living condition for farmers and most Cambodian people engaging in rural economic activities. The sector could provide additionally a mechanism for equitable redistribution of economic gains, and have spillover effects on broader economic activities, which could lead to a complete change in the image of Cambodia's rural economy.

Third, the promotion of milled rice export is the first step to catalyse the export of other agricultural products such as rubber and other crops. In the current context, we are mindful of the need to focus on this policy to address one issue at a time so as to ensure that set measures are effective and efficient and not to overstretch the capacity and financial resources of the various ministries and agencies responsible for its implementation. Though the RGC has greater ambition, we are of the view that working on too many products at the same time will overstretch our limited resources and capacity, which could lead ultimately to ineffectiveness and inefficiency. Parallely, the success of the implementation of rice export policy will send a strong political message, with the effect of encouraging and paving the way for the export promotion of other agricultural crops.

6. In this context, the RGC will lay out its vision and strategy encompassing concrete short term policy measures to be implemented immediately, and providing a medium to long term policy direction to promote milled rice export both in terms of quantity and branding of Cambodian milled rice in the global market and setting up institutional arrangements with

clear responsibilities assigned to ministries/institutions so as to ensure a rigorous implementation of this important policy.

II. Vision and Strategy for the Promotion of Paddy Rice Production and Export of Milled Rice

7. The vision of the RGC is to transform Cambodia into a “rice basket” and a major milled rice-exporting country in the global market. In this regard, the RGC has set the year 2015 as the target year to: (1) achieve paddy rice surplus of more than 4 million tons and achieve milled rice export of at least 1 million ton; and (2) ensure the international recognition of Cambodian rice. In implementing this initiative, the RGC will adhere to the following key principles:

- Adopting market principles by encouraging competition to effectively increase export, while ensuring the protection of farmers’ interest is, increasing their income, reducing their poverty, and improving food security based on a stronger social safety net.
- Encouraging and supporting participation and organization of farmers to better protect their interests by creating an enabling environment for increased production and supply of high-quality rice, and raising farmers’ bargaining price power.
- Promoting the cooperation and partnership between the RGC and development partners, civil society and private sector such as rice producers, rice millers, traders and transporters in implementing the policy to promote rice production and export.
- Enhancing efficiency in coordination between ministries/agencies of the RGC in order to improve the effectiveness and efficiency of public service delivery related to rice production and export promotion.
- Promoting domestic capacity building to export rice directly from Cambodia by encouraging enterprises to engage directly in purchasing and processing rice in the country, and exporting it officially, while adhering to principles of fair, just and loyal competition and respecting Cambodia’s existing tax and other obligations.

8. The RGC will implement the strategy to promote paddy rice production and export based on two important approaches:

First, for the short and immediate term, promoting paddy rice production to meet market demand and promote export of milled rice by shifting from the informal export of paddy rice to a formal export of milled rice. These measures include: (1) additional investment and expansion of irrigation facilities, promoting the use of water, seed, fertilizers and appropriate technologies, and provision of micro credit to rice producers; (2) encouragement of private sector participation, inter alia, in: investment in paddy rice processing and export of milled rice; tackling especially the issue of credit shortages for purchase and processing paddy rice; trade finance through the recapitalization of state-owned financial institutions and the provision of incentives to commercial banks to increase agriculture loan portfolio, including the development of credit guarantee schemes and risk-sharing facility; and (3) coordination and fast tracking rice export through streamlining of export procedures, transport facilitation, and elimination of informal fees.

Second, for the medium and long term, to focus on enhancing competitiveness in rice export through the following: promotion of production technology; management of soil fertility; management of water, seeds and fertilizers; organization of farmer associations; quality rice processing; physical infrastructure including roads, railways, seaports, energy

sources; land use management; short- and long term credit; trade facilitation; and exploring market opportunities.

III. Market Situation and Other Challenges

9. In general, the developments in global milled rice market together with Cambodia's sound macroeconomic stability, an open investment climate and a liberal trade policy have created an overarching environment conducive to the supply chain and milled rice export. Nonetheless, Cambodia still faces a number of key challenges and obstacles in the supply chain, especially in the management of agricultural land, cultivation techniques and other inputs, the lack of infrastructure, finance and institution, to name a few. While some challenges can be easily addressed resulting in immediate outcomes, the others require more time and substantial investment. (See detailed analysis in Appendix 1).

3.1. Regional and Global Milled Rice Market Situation

10. The global milled rice trade in 2010 is estimated at around 31.3 million tons, compared to 29.7 million tons in 2009. However, the import demand of medium and low-quality milled rice has been on the increase in Asia, due to the compounding effects of unfavorable weather conditions in the Philippines, crop failures and subsidy reduction on fertilizers in Indonesia, and the requirement by some countries in the region to fill their reserve stock. It is estimated that milled rice trade in Asia may reach 14.5 million tons in 2010, while the milled rice price may increase and fluctuate. Overall, the regional and global milled rice trade has high growth potential for the medium and long term, despite some downside risks stemming from price fluctuations as a result of changing economic and political landscape throughout the globe. The potential for increasing milled rice trade could be attributed to factors such as population and economic growth, the effects of globalization that imply changes in lifestyle and taste in rice consumption. Still, much of the global milled rice markets are protected and highly subsidized due to its political sensitivity and traditions, which consider paddy rice growing as being important in the context of their national religion and food security. Nevertheless, such developments provide an good opportunity for Cambodia's milled rice export into the global markets.

3.2. Challenges

A. Issues affecting paddy rice production

11. The surplus of paddy rice for export remains limited. If Cambodia wishes to export milled rice from 3 to 4 million tons per year, we have to produce paddy rice at least 10 to 11 million tons. This requires us to address a number of challenges constraining productivity such as land management, irrigation system, research and extension services, intensification, and organization of farmers, to mention a few.

B. Issues affecting rice processing and trade

12. The paddy rice prices that Cambodian farmers receive is 35%-40% lower than the prices that Thai and Vietnamese farmers have enjoyed. This low price could be perceived as a main element of export competitiveness but it is diluted by the time milled rice reaches the ports due to informal fees, high transport and processing costs. In fact, exporting unprocessed rice is a significant loss of value added for the economy. If the processing could be retained in the country, Cambodia could generate a lot of gains in terms of broken rice, husk and bran that could spin off other economic activities such as cooking oil production, aquaculture and animal husbandry in addition to other related benefits arising from job creation and income

generation. With additional investment in modern rice milling facilities, Cambodia could produce more high-quality milled rice for the growing international markets and gain international recognition for its milled rice standard. In this context, the RGC still faces a number of critical impediments which need to be addressed in order to improve the value added in Cambodia's rice value chain, i.e. high cost of energy and transport, high cost of and difficult access to credit.

C. Issues affecting milled rice export facilitation

13. The major obstacle to the promotion of Cambodian milled rice export is export facilitation, which so far has not been smooth and consistent, whether we refer to the hard system including transport infrastructure, seaports, warehouses or the soft system including trade facilitation, support institutions, quality standards, Sanitation and Phyto-sanitation Standard (SPS), etc. The crucial issues that need to be resolved include a weak institutional support, a rice quality not yet recognized internationally, and a limited seaport infrastructure.

D. Issues related to market opportunity

14. Milled rice is a protected market with complicated mechanisms responding to different terms and requirements specific to each importing country. Concurrently, milled rice export is a new endeavor for Cambodia, which has limited experience and knowledge, and requires time and resources to strengthen its ability to access those markets.

IV. Policy Measures

15. In order to achieve the vision of transforming Cambodia into a "rice basket" and a major milled rice exporting country in the world, the RGC has launched a «*Policy on paddy rice production and promotion of milled rice export*» on top of other measures adopted so far so as to ensure the implementation of low hanging policy measures (for implementation in 2010 and 2011) and paving the way for the implementation of medium and long term measures to ensure sustainability and progress in processing and exporting Cambodian milled rice. The success of this policy will also act as a lead catalyst to the export promotion of other products in general. The earlier-mentioned medium and long term measures constitute a common policy framework to guide future implementation.

4.1. Measures related to paddy rice production

A. Quick-win measures

- *Increase paddy rice productivity by using high yield seed and modern farming techniques*: The practical measures include:
 - Facilitating import procedures for rice seeds, fertilizers and agriculture inputs and machinery and continuing to provide tax incentives for the import of materials and equipments.
 - Provide incentives to local seed producers and distributors through the following: (1) a determination by the Ministry of Agriculture, Forestry, and Fishery (MAFF) of a number of prioritized rice varieties to be promoted and disseminated by the end of 2010; a preparation of a legal framework and mechanisms by MAFF to promote seed production and distribution by the end of 2010; (2) additional strengthening and expansion of the capacity of the Cambodia Agriculture Research and Development Institute (CARDI), the Agricultural Experimentation Station, the Agricultural Development

Center and the Center for Seed Production, Research and Technical Training.

- MAFF must review the framework for agriculture extension, including projects financed jointly by development partners and the RGC in order to lay out necessary measures to ensure consistency and efficiency of this service delivery.
- **Continue to expand irrigation:** The Ministry of Water Resources and Meteorology (MOWRAM) must improve the efficiency of water management on existing water resources and strengthen technical capacity for designing and selecting investment projects, especially through experiences sharing from neighboring countries with similar geography and weather conditions. The practical measures included:
 - Maximizing the use of existing water resources in the system. In the future, attention should be focused on economic efficiency and sustainability of the projects; Investing in small-scale irrigation network to benefit from existing or future large scale irrigation facilities.
 - Encouraging NGOs and charitable people to participate in building small-scale irrigation canals.
 - Strengthening institutional capacity of MOWRAM in the maintenance and management of water user communities.
- **Continue to build and maintain rural roads:** the Ministry of Rural Development (MRD) and other relevant ministries must pay more attention to the construction and maintenance of rural roads to connect rice production areas to markets.
- **Promote micro-credit for agriculture:** the Ministry of Economy and Finance (MEF) and National Bank of Cambodia (NBC) must review measures to facilitate and encourage commercial banks and other finance institutions to extend more credits to farmers.

B. Medium to longer term measures

- **Improve productivity and crop intensification:**
 - **Enhance water management, which is a key to crop productivity and intensification:** MOWRAM and MAFF must develop a *Plan for Water Resource Management* for the next 10-20 years including concrete measures, with focus on investment in irrigation system and water management as top priorities of the RGC.
 - Increase investment to rehabilitate agricultural development stations and centers, agricultural farms to support research and development, and technology transfer to support agriculture production.
 - Expand agriculture extension services at commune level.
- **Promote implementation of “the National Policy on Rural Electrification”:** the Ministry of Industry Mine and Energy (MIME) must implement the existing “National Policy on Rural Electrification” and design a new project as soon as possible to facilitate electricity transmission and distribution to rural areas for pumping water to rice fields.
- **Promote and establish Farmer Organization:**

- MAFF and relevant agencies must prepare plan to support the establishment of Farmer Organizations (i.e. Association, Community and Farmer Federation) and strengthen ownership of farmer organizations in coordination, production, and needs and issues identification
 - MAFF must strengthen capacity of farmers and agriculture communities to secure and utilize effectively loans from financial institutions.
- **Promote and encourage the implementation of policy on sustainable use of agriculture land :**
 - The Ministry of Land Management, Urban Planning and Construction (MLMUPC) must give priorities to delivering land titles in the potential rice production areas to ensure land tenure security , reduce disputes and encourage investment in land. The titles can be used as collaterals for receiving loan for seeds, fertilizers and other investment needs.
 - MLMUPC must cooperate with MAFF and agencies concerned to classify land use zone and widely disseminate this information to farmers.
 - MAFF must cooperate with MLMUPC to draft a Law on Agriculture Land Utilization and Management aiming at ensuring sustainable and efficient use of agricultural land.
 - The Ministry of Planning/the National Institute of Statistic (NIS), MAFF and relevant institutions must conduct national agriculture census once every 10 years. Based on the census results, MAFF must develop a Land Use Map.
 - MAFF must draft a Law on Agriculture Community and a Sub-Decree on Contract Farming.

4.2. Measures on paddy rice collection and processing

A. Quick-win measures

- **Encourage participation of the private sector in paddy rice processing and milled rice export** by: continuing the implementation of the Investment Law, the Law on Amendment to the Law on Financial Management 2009 and related regulations; and by improving the existing legal and regulatory framework for investment, when necessary;
- **Continue financing for paddy rice collection:** MEF and NBC must prepare and introduce some necessary financial mechanisms to make it easier for the communities, rice millers and exporters to access loans, including from commercial banks and credit facilities that are guaranteed by the government. The policy measures include the following:
 - Recapitalizing the Rural Development Bank (RDB) with an additional amount of 7 million USD (from 13 million USD to reach 20 million USD) by the end of 2010 or, at the latest, in early 2011.
 - Doubling the capital of the Agriculture Development and Support Fund (ADSF) from 18 million USD to 36 million USD, at the latest, in 2011.
 - Developing a Credit Guarantee Scheme to guarantee loans from commercial banks to companies and paddy collectors at the latest in 2011.
 - Cooperating with development partners to set up a Risk Sharing Facility, at the latest in 2011. Its objective is to encourage commercial banks to extend

loans to agriculture processing activities and small and medium enterprises (SMEs) in general.

- **Provide support and strengthen the Rice Miller Association:** the RGC will provide special treatment to the Rice Miller Association (RMA) in the same way that it has supported the Garment Manufacturer Association in Cambodia (GMAC) in the garment sector and it recognizes the important role of the RMA for market access and protection of farmers' benefits and improving rice processing capacity to increase value added for milled rice export.

B. Medium to longer term measures

- **Create new financial instruments and leverage mechanism for financing:** MEF and NBC must develop new financing instruments while rigorously enforce the Law on Secured Transactions and Law on Financial Leasing so as to diversify the collateral types and the scope of financial operations (i.e. operating lease, finance lease, warehouse receipt system and centralized credit information) to reduce fear and risks from commercial banks and micro finances.
- Establish and strengthen farmer organization to develop the "Open Paddy Market" through activities such as contract farming, weighting, drying and paddy-based collateralized loans for members, provisions of high quality seeds and fertilizers for market driven rice production.
- **Consider the establishment of the *Agriculture Development Bank (ADB)* to support and promote agriculture production and processing.**
- **Reduce electricity price and extend coverage areas:** MIME should speed up the diversification of power sources in order to lower the costs and expand the coverage to rural areas. The Electricity Authority of Cambodia (EAC) should take measures to ensure effective and rigorous enforcement of existing laws and regulations to make sure that the supply of power is based on economic efficiency and best practices, and at an appropriate tariff. Moreover, MIME/Electricité du Cambodge (EDC) should further improve its management.

4.3. Measures on Logistics

A. Quick-win measures

- **Enhance trade facilitation, reduce informal fees and eliminate illegal check points:** MEF/General Department of Customs and Excise (GDCE), MAFF and MoC/General Department of CAMCONTROL and relevant agencies shall: develop a specific strategy to identify and streamline export processing procedures including inspection, documentation requirements, fees and time required to process export applications; define clear and publicly transparent division of responsibilities among export regulating ministries/agencies; consider milled rice export as a top priority in order to reduce to a minimum informal payments and time required to export by extending "special treatment" similar to the garment sector.
- **Implement a single-stop service for export processing:** MEF/GDCE, MAFF and MoC/ CAMCONTROL and relevant agencies shall set up a Single Stop Service for export processing and issuing certificates for SPS, fumigation, grading and quality, quantity and weight, and customs declaration.
- **Address grading and quality standards in compliance with internationally-recognized standards:** MAFF, MoC and MIME shall create an independent certifying body or encourage well-known international independent certifying institutions to issue certificates on grading and quality as required by importing

countries. MIME through the Cambodia Standard Institute (CSI) shall cooperate with MoC and MAFF to define grading and standards of Cambodian milled rice and collaborate with the private sector to enforce those standards in the milled rice market, as well as to seek technical capacity to achieve the required standards.

- **Encourage the construction of Phnom Penh Port and bonded warehouse:** In order to diversify and identify potential rice export markets, taking into account the geographic locations of rice production, transport modalities and export destinations, the RGC will promote the use of Phnom Penh Port as an exit point, using feeder ships to load and transfer shipments into mother ships in a third country including Preah Sihanoukville Port. Moreover, the RGC will encourage the construction of bonded warehouses in Cambodia to facilitate transportation and distribution.

B. Medium to Longer-term Measures

- **Formulate strategic and legal framework with a special focus on sanitary and phyto-sanitary standards:**
 - Develop new legislations and regulations which are lacking and amend the existing legal framework and regulations.
 - Draft a Law on Sanitary and Phyto-Sanitary Standards and related sub-decrees and prakas, enforcement as well as capacity strengthening of relevant officials.
 - **Establish and strengthen a sound sanitary and phyto-sanitary certification system:** To improve food security in Cambodia and promote rice export, MIME, MAFF, MoC and the Ministry of Health (MoH) shall define a common sanitary and phyto-sanitary strategy with clear division of responsibilities. The ministries in charge shall strengthen human resource capacity and technical capability of existing laboratories to conduct tests and inspection, as well as enforce sanitary and phyto-sanitary measures. MAFF, MIME and MOC shall study the grading and quality requirements of different rice markets to propose options to address the issue of sanitation and phyto-sanitation certification, including the possibility of establishing an independent institution with participation from private sector.
 - Strengthen the capacity and infrastructure for SPS inspection at MAFF and other concerned ministries/agencies through establishment of referral laboratories which are equipped with the state-of-the-art technology, establish a branch network of laboratories in different provinces of Cambodia and at border check points, and build capacity of concerned staff to facilitate quick inspection and issue SPS certificates which are internationally recognized.
- **Invest in necessary infrastructure to reduce the costs of export:** The Ministry of Public Works and Transport (MPWT) and other concerned ministries/agencies shall prepare plan of actions to reduce infrastructure-related costs of export including costs related to transportation, port handling, storage, port operations and other service charges by assessing the possibility of investing in infrastructure, transportation and port handling facility. Investment perspectives shall be discussed in dialogue and cooperation with bilateral and multilateral partners and/or the private sector to seek additional funds to complement the existing RGC's investment fund.
- **Speed up the rehabilitation and operationalization of the railway system (Poipet-Phnom Penh and Phnom Penh-Preah Sihanouk Province):** Shipping rice and other goods would be cheaper using the railway system, as it reduces informal fees and time. MPWT especially the Concession Management Committee

for the Restructuring of Royal Railway Cambodia (CMC) shall accelerate the rehabilitation and development work by collaborating with the concessionaire to enable the earliest start of the railways operation.

- **Consider the establishment of *the Export-Import Bank (Exim Bank)* to support the export of rice and other produces.**
- **Consider the establishment of *the Cambodia Development Bank (CDB)* to support the development of other physical infrastructure in order to boost economic growth and improve competitiveness of the Cambodian economy.**

4.4. Measures related to Marketing

A. Quick-win measures

- **Explore export opportunities in regional and global markets:** MoC shall carry out a comprehensive study on Cambodia's potential markets for milled rice, and disseminate the results to wider stakeholders. In the meantime, MoC shall lead delegations, consisting of representatives from concerned ministries/agencies and rice export companies, to negotiate the sale to the Philippines, explore opportunities to export milled rice to Malaysia, Indonesia, Brunei, and other potential importing countries in Europe.
- **Establish a *Rice Market Intelligence Unit*:** MoC, MAFF and the private sector shall collaborate and consider options for establishing a *Rice Market Intelligence Unit*, which includes the current MAFF and MOC's mechanisms, or a joint government-private sector arrangement or a separate private sector mechanism, in order to establish a body to provide information and analysis on regional and global rice markets.
- **Develop arrangements for information sharing with stakeholders in domestic market:** Concerned ministries/agencies shall disseminate market information, and use the information to prepare a monitoring toolkit covering the process of production, processing, export and trade. This will facilitate and support rice millers and farmer organizations with extension services and contract farming as well as the introduction of proactive and timely response measures.

B. Medium to longer-term measures

- **Prepare a Strategic Penetration Plan and Cambodia's position to compete in regional and global markets:** Cambodia should clearly define its strategic objectives to position itself in the international markets. MoC shall lead this task by exploring new markets and disseminating market information to rice producers and exporters including capacity building. Moreover, MoC in cooperation with the Ministry of Foreign Affairs and International Cooperation (MFAIC) shall carry out negotiations of bilateral agreements with potential rice importing countries. In this spirit, the RGC will further commit to realizing the initiative of establishing *the Association of Rice Exporting Countries (AREC)*.

V. Risk Management

15. The RGC is well aware of the risks that could impair or undermine the effectiveness of these measures during implementation. Thus, this document will suggest safeguard measures and guidance to deal with the anticipated risks.

First, paddy rice production is largely subject to weather conditions and climate change as well as the unpredictability of Mekong River's water level in the dry season. Investment in irrigation system remains limited, and the stock of water, distribution and irrigation are also subject to the climate factor. Therefore, unpredictable change in climate could directly impact paddy rice production in Cambodia. Knowledge about the types, features, scale and frequency of the calamities can help us to prepare ourselves to better cope with the eventual catastrophes, and the attention should be given to implement mitigation and adaptation strategy to reduce adverse impact and adapt to climate change.

Second, higher oil prices will have direct affect on production, processing, and transportation of rice. As a result, Cambodia's competitiveness could be undermined since Cambodia's energy sector depends on imported petroleum. Thus, focus should be on managing investments in the energy sector and the efficiency of EDC operations. In the future, Cambodia will diversify its energy sources to reduce the cost of energy and heavy reliance on petroleum products. In the context of high oil prices, the RGC will take necessary actions, such as those implemented, to reduce the direct impacts on farmers and rice processing industry.

Third, the milled rice market is highly protected. Policy changes in milled rice-importing countries could have direct impact on the demand for import and prices. The RGC will strengthen its diplomacy to foster good relations with milled rice-importing countries aiming to reduce the risk.

Fourth, the opening up of the milled rice markets to promote export would cause an increase in domestic prices, and the traditional mechanism of food stocking will become weak threatening national food security. Speculation in the milled rice market, through stockpiling to manipulate prices, can affect the living conditions of farmers and food security. In this regard, assessment of domestic and international market situation is very crucial for planning production, import of inputs and export including the regulation of prices. The RGC will be vigilant and take necessary actions to safeguard national food security and maintain price stability.

Fifth, the gains from this policy may not be shared directly with farmers; the benefit could be captured by middlemen, exporters and suppliers of agricultural inputs. The RGC adopts a market principle with fair and just competition ensuring participation by all concerned parties. Since farmers have limited capacity, the RGC will try its best to help train them and ensure their concerns being addressed in a participatory approach.

Sixth, paddy rice development areas can have high use of chemical fertilizers and pesticides and destruction of forest and flooded forest to expand cultivation land could affect the ecological system. Thus, the RGC will pay high attention and take appropriate actions preserve the ecosystem and strike a balance between development and environmental conservation, aiming at ensuring sustainable development.

Seventh, implementation could be difficult and complicated due to ineffective coordination and unclear responsibility among implementing ministries/agencies. To address this risk, the RGC will try to improve the coordination process with clear-cut division of responsibilities including measures to monitor and sanction any wrongdoings that may occur.

VI. Institutional Mechanism to Implement Policy on the Promotion of Paddy Rice Production and the Export of Milled Rice

16. To ensure effectiveness and efficiency in implementing this policy, the RGC decides to set out the following coordination and monitoring mechanism:

- The Committee on Economic and Financial Policies shall be responsible for monitoring, evaluation and coordination at the policy level to ensure the consistency and efficiency of this policy measures with other economic policies.
- The Agricultural Produce Export Promotion Committee led by MAFF, and MoC are in charge of overall coordination and serve as a secretariat to the Prime Minister in implementing the Policy on the Promotion of Paddy Rice Production and the Export of Milled Rice.
- MEF and NBC shall be responsible for addressing issues related to the establishment of financial institutions as well as issues related to financing, according to the spirit of this policy document.
- Concerned ministries/institutions shall implement their functions in accordance to their assigned responsibility stipulated in the above policy measures and institutional arrangements, and shall report the progress and propose modified or additional measures to the Prime Minister for decision and guidance as required.

VII. Conclusion

17. Though the current global milled rice market is highly protected, Cambodia is blessed with opportunity to export milled rice in the future thanks to the increase in domestic paddy rice production and the potential in the world milled rice trade. So far, the performance of agriculture is outstanding especially in terms of productivity improvement and diversification, due to steadfast efforts of the RGC and all stakeholders including the participation of farmers.

18. In fact, high growth in agricultural sector will benefit most Cambodian people who are farmers with their living standard improved. Thus, the RGC is committed to promoting paddy rice production and removing all constraints to milled rice export from Cambodia. Indeed, the success of this policy will depend on actual implementation; and the task is complex and hard to achieve, yet it really requires cooperation, coordination and strong commitment especially by way of improving the leadership and management of all concerned ministries/agencies and stakeholders.

19. The RGC is strongly convinced that all ministries/agencies of the RGC and other stakeholders, including the private sector and development partners, and particularly Cambodian farmers across the country, will join hands in pursuing this mission to bring about development, progress, and prosperity to the Kingdom of Cambodia.

Annex I: Regional/Global Milled Rice Market and Challenges

I. Regional and Global Milled Rice Market

1. In spite of turbulences, the volume of international milled rice trade is estimated to reach 31.3 million tons in 2010, a slight increase from 29.7 million tons in 2009. Demand for low and medium grade milled rice in Asia will grow this year as the Philippines faces severe weather conditions, Indonesian government cut down subsidies on fertilizers and Asian governments bump up their rice reserves. Milled rice trade volume may reach 14.5 million tons in Asia. Demand in Africa is projected to decrease while Latin America may see a slight increase, especially in Brazil. The price is predicted to be high and volatile.

2. In general, most milled rice producing countries also import milled rice. Two factors explain the trade volume increase of milled rice, namely the production changes caused by climate change and/or changes in economic structure, and supply shortage caused by population and economic growth. China and Indonesia are big milled rice producers in Asia but they also import milled rice as their population and economic growth have driven the demand up. India is currently a major producer and exporter of milled rice, although changes in production structure driven by high growth, increase in households' wealth and population boom might transform this country into a milled rice importer.

3. Some countries, especially European countries, do not produce milled rice but changes in preference/taste can also create demand for milled rice, estimated annually at one million tons. Milled rice could be also exported to the Middle East countries such as Iran, Iraq, Saudi Arabia and so forth. As the oil price trend continue to rise, demand for milled rice in these oil-dominated economies increases accordingly. Africa, whose accelerated growth is driven with international donors support, represents also a significant share of global milled rice demand. In sum, as long as growth continue, the global demand for milled rice is expected to rise, particularly in Asia, which drives the global growth.

4. Southeast Asian countries, in particular Thailand, Vietnam and Myanmar are the largest milled rice exporters. The US ranks third in the global milled rice exporters, followed by Pakistan and India. With the surplus of 3.5 million tons of paddy rice (equivalent to 2 million tons of milled rice), Cambodia can be among the top five milled rice exporters in the world. Moreover, as Cambodia's milled rice export represents less than 10% of the global market share, its emerging presence will not affect the global price. More importantly, as Thailand and Vietnam have very limited room for production expansion and are unable to cope with rising global demand, Cambodia can grab this opportunity to fill the global demand-supply gap.

5. However, factors ranging from high political sensitivity, the need to preserve traditional paddy rice cultivation method and assurance of national food security have made global milled rice market heavily protected and subsidized. The volume of global milled rice trade is way below the actual demand. Tariff, quota and special treatment measures have been used in the global milled rice market. Taiwan provides access through tariff quotas amounting to 8% of their consumption. Columbia, Costa Rica, Indonesia, Morocco, Thailand and Venezuela use both tariff and quota measures. China opened a large tariff quota up to 4 million metric tons a year at a 1 % duty rate.

6. In some ASEAN countries such as Indonesia, Malaysia, the Philippines, Vietnam and Cambodia, milled rice is categorized as a highly sensitive product. Indonesia has bound an MFN rate for rice at Rp. 430/kilo; Malaysia exempts all tariffs but license must be acquired

prior to import; Thailand has a bound rate at Bath3.00/kilo and a CEPT applied rate at 5% (Common Effective Preferential Tariff); and Vietnam maintains MFN bound rates at 40% or 50% (for parboiled rice) with its 2004 CEPT rate applied at 15%, reducing to 5% for 2005. Cambodia did not include milled rice in the list of tariff exemption under “ Early Harvest Program” with China.

II Challenges

II.1. Paddy Rice Production

5. Paddy rice surplus is still limited. Should Cambodia want to export 3 to 4 million tons of milled rice, Cambodia must boost its paddy rice production to at least 10 to 11 million tons per year. To attain this objective, the following issues must be addressed:

A. Low productivity - the paddy rice yield is relatively low compared to the neighboring countries with similar weather and soil condition. In 2006, the average yield in Cambodia was 2.6 tons/hectare while Thailand, Laos and Vietnam achieved 2.8 tons, 3.5 tons and 4.9 tons respectively. As the room for expansion of rice field is very limited, especially for late-maturing paddy rice, we must improve productivity on the existing cultivated areas, i.e. through intensification approach. Quick and simple measures cannot ensure high yield for the long term, therefore we must focus on reform and investment, both from the public and private sector.

B. Land issue - In general, we have observed the following issues: lands are generally underutilized; crops do not suit the soil conditions; and arable areas are used either for other purposes or left unused. We can improve the efficiency of land utilization by creating zoning for agriculture, industry, tourism, residential areas, and sanctuary. Crop mapping can also boost rice production as investors can rely on the information to make informed decision. Moreover, only around 10% of farmers have land titles. Aside from legal assurance of ownership, land titles can be used as collateral to borrow fund from micro-finance institutions. Land titling will also motivate farmers to invest more on their lands.

C. Rice intensification - Most Cambodian farmers cultivate paddy rice once per year in rainy seasons, while farmers in Vietnam’s delta region cultivate 3.5 times. With limited possibility for paddy rice field expansion, boosting production could only be done through an increase of rice cultivation frequency per year. To achieve this target, the Government will encourage more investment in irrigation systems to support the expansion of early-maturing paddy rice field. Water management is the key to productivity improvement as Cambodia is prone to drought and flood. We will learn from the Vietnam’s delta region and promote the use of economically efficient water management methods that are appropriate for Cambodia.

D. Farmer organizations - In the past, support for the agriculture sector was largely based on supply side, and little attention was given to the demand and the role of farmers. Most farmers are good listeners and hard workers but they lack adequate technical knowledge, technologies and financial resources. Inexperienced in dealing with the markets, the farmers’ needs are complicated and multi-faceted, ranging from capacity building to transfer of technologies, production inputs, credit to market access. Assistance provided to individual farmer is costly and inefficient in the areas of credit, production inputs and market information. Assistance provided to the community will be more systematic, cost-effective and more efficient. For example, farmers can cope with drought much better if they jointly own water pumping machines or irrigation systems within a farmer community framework.

II.2. Paddy Rice Processing and Trade in Milled Rice

6. The price of Cambodian paddy rice is 30% to 40% cheaper than its neighbors, Thailand and Vietnam. This low profit margin is a competitive advantage but the effects of unofficial fees, high transportation costs combined with high processing costs reduce its significance. Exporting paddy rice is a lost proposition. If processed domestically, some by-products such as broken rice, husk and bran can be used as important inputs for aquaculture and animal feed, which could generate extra income for farmers. With eadditional investment in modern rice mill facilities, Cambodia could increase its production of quality milled rice for the growing international market and boost the reputation and international recognition of Cambodian milled rice standards. To that effect , the Royal Government needs to address the following issues to increase domestic value-added:

A. High electricity price - electricity represents 25% of the total processing costs, reducing substantially Cambodia's competitive advantage and the situation could be worse taking into account the high and volatile oil price. High energy price is an obstacle to the expansion of the irrigation systems. In the low land Mekong plains, petroleum products are used to generated energy to pump water into irrigation canals. High energy prices limit the ability of farmers to plant two paddy crops a year and to increase yields. For instance, urban dwellers pay 18 - 20 cents per kWh, compared to the rural dwellers who are forced to pay up to 30 - 90 cents. In Vietnam the rate is at 10 cents. Unreliable supply and high electricity price force rice millers to use their own diesel generators, which cost them only 12.60 dollars or 2.2% per ton of rice, compared to 23.38 dollars or 4.1% per ton if electricity is used instead.

B. High transportation cost - poor transport infrastructures such as roads, railways, warehouses, and handling equipment increase rice price. To transport one ton of rice on 100-km road, Cambodian farmers must spend 15 dollars, compared to only 4 dollars and 7.5 dollars in Thailand and Vietnam respectively. Moreover, the inadequate number of handling equipment and port-nearby warehouses represents a major challenge for rice export especially during rainy season.

C. Lack of access to and high cost of credit - Lack of access to, and high cost of, credit decrease domestic value-added and hinder milled rice export. Limited access to credit, both for working capital and investment outlays, represents an obstacle for rice millers to stockpile paddy rice and modernize their processing machineries. However, given Cambodia's sound and vibrant banking system where a large amount of credit lines are available, the capital and financing costs is not expected to be a problem. The concerns relate more to bank intermediaries who do not clearly appreciate the risks and expected returns from agriculture investments, as the majority of bankers are still of the view that agriculture is a high risk and low return sector. Moreover, lack of borrowers' financial information and records render the tasks of bankers more difficult to assess their status and repayment capacity.

II.3. Facilitation of Paddy Rice Export

7. Despite Cambodia's huge potential for expanding its paddy rice production, Cambodia is constrained by its small domestic markets. The export of milled rice could be considered both as an opportunity and a challenge, as our export facilitation system, both soft and hard components, remain inconsistent and fragmented. Hard components refer to transport infrastructures, ports, rural roads, warehouses and so forth. Soft components include trade

facilitation, institutional support, quality standards, sanitary and phyto-sanitary measures, and so forth. The following issues related to export need to be addressed:

A. Weak institutional support - Despite the Royal Government's effort to promote milled rice export, institutional support remains weak and fragmented, especially the coordination between government ministries and agencies, such as the Directorate General of Customs and Excise of the Ministry of Economy and Finance, the CAMCONTROL of the Ministry of Commerce, and the Committee for the Promotion of Agricultural Export of the Ministry of Agriculture, Forestry and Fishery. While each government body is tasked to inspect its respective export procedures, the private sector, i.e. the exporters, are confronted with their cumulative effects, i.e. dealing with duplication among these bodies, paying informal fees, spending a lot of time, while this unpredictability poses an important risk for them in terms of timely fulfilling their contractual obligations with their foreign partners. In general, both official and unofficial fees and the transport costs of rice from rice mills to ports are high, with unofficial fees representing as much as 50% of the total transport costs. Moreover, port charges and delays in customs clearance, combined with official and informal fees even drive up the cost. This situation prompts many exporters and traders to explore other cheaper options such as unofficial export of paddy rice through cross-border trade, which results in a diminution of domestic value-added to the national economy.

B. Lack of international recognition of quality and standards - Currently, quality and safety standards are not required for the domestic markets. However some export markets require strict standards, which is difficult to meet for many Cambodian rice millers. Additionally, Cambodian milled rice exporters face two main barriers that constitute the features of the international trade: (1) tighter sanitary and phytosanitary measures, and (2) the practice of "fair trade" by some multinational companies. Quality regulations and quality control measures of the RGC and the private sector have not been effectively enforced to ensure high quality standards of the agricultural products meet the demand of the international markets. Licensing and Cambodian quality standard testing responsibilities are scattered among MAFF, MIME and MoC's CAMCONTROL. However, actual good cooperation among these ministries has yet to take place to ensure the quality and safety of Cambodian agricultural products designed for export. For their part, rice millers need to improve their competitive advantage by improving their stockpiling and packaging technologies to ensure that export rice quality and classification meet the conditions of the buyers and the SPS requirements.

C. Limited port infrastructure – The lack of handling equipment in Sihanoukville Port is a constraint for the export of large quantity of milled rice. Only vessels with depth less than 8 to 8.5 meters can dock at the Sihanoukville Port, as the waterway is shallow and rocky. The maximum allowable load of vessels docking in the port is 10 thousand tons suitable only for shipment of milled rice to Southeast Asia or Africa. The Ho Chi Minh Port allows vessels with load capacity up to 30 thousand tons in docking station and 60 thousand tons in transfer zone.

II.4. Market

8. Milled rice market is heavily protected and import procedures vary from country to country. As Cambodia is a new player in milled rice market, it must face a steep learning curve and it needs to improve its export capacity to penetrate the international market.

Annex II: Policy Measures for Promotion of Paddy Rice Production and Milled Rice Export

Types of Measures	Issues to be addressed	Policy Measures	Responsible Institutions
Rice Production			
Quick-win Measures	<i>Increase productivity by using high yield seed and modern farming techniques</i>	<ul style="list-style-type: none"> - Facilitate import clearance procedures for rice seeds, fertilizers, agricultural inputs and machinery - Continue providing tax incentives to encourage imports of materials and equipment 	<ul style="list-style-type: none"> - Ministry of Economy and Finance (MEF) - Ministry of Agriculture, Forestry and Fisheries (MAFF)
		<ul style="list-style-type: none"> - Provide incentives to local seed producers and distributors 1. Determine the number of prioritized rice varieties to be promoted and disseminated by the end of 2010 2. Prepare legal framework and mechanism to promote seed production and distribution by the end of 2010 3. Strengthen and expand further the capacity of CARDI, the Agricultural Experiment Station, the Agricultural Development Center and the Center for Seed Production, Research and Technical Training. 4. Review the framework for agriculture extension 	<ul style="list-style-type: none"> - MAFF
	<i>Continue to expand irrigation</i>	<ul style="list-style-type: none"> - Make full use of existing water resources - Select economically viable investment projects - Invest in small scale irrigation system to get water from existing dams and major canals to farms 	<ul style="list-style-type: none"> - Ministry of Water Resources and Meteorology (MOWRAM)
	<ul style="list-style-type: none"> - Encourage NGOs and charitable persons to build small scale irrigation canals 	<ul style="list-style-type: none"> - MOWRAM - Relevant ministries and institutions 	

		- Strengthen institutional capacity for maintenance and management of water user community	- MOWRAM
	<i>Continue to build and maintain rural roads</i>	- Focus further on the construction and maintenance of rural roads connecting rice production areas to markets	- Ministry of Rural Development (MRD) - Relevant ministries and institutions
	<i>Promote micro-credit for agriculture</i>	- Review measures to facilitate and encourage commercial banks and other finance institutions to provide more credits to farmers	- MEF - National Bank of Cambodia (NBC)
Medium to Longer Term Measures	<i>Improve productivity and crop intensification</i>	- Prepare a long term for water resources management plan (10-20 years) with concrete measures - Determine government priority investments in irrigation and water management systems	- MOWRAM - MAFF
		- Increase investment in the rehabilitation of agricultural development stations and centers; agricultural farms to support research and development; and the transfer technology to support agriculture production.	- MOWRAM
		- Expand agriculture extension services at commune level	- MAFF - Relevant ministries and institutions
	<i>Promote implementation of the National Policy on Rural Electrification</i>	- Implement the National Policy on Rural Electrification - Design a new project as soon as possible to facilitate electricity transmission and distribution to rural areas for pumping water to irrigate agricultural crops	- MIME - Relevant ministries and institutions
	<i>Promote and establish farmer organizations</i>	- Prepare plan to support the establishment of farmer organizations - Strengthen ownership of farmer organizations in	- MAFF - Relevant ministries and institutions

		coordination, production, and needs and issues identification	
		- Strengthen capacity of farmers and agriculture communities to secure and utilize effectively loans from financial institutions	- MAFF - Relevant ministries and institutions
	<i>Promote and encourage the implementation of policy on sustainable use of agriculture land</i>	- Give high priority to delivering land titles in potential rice production areas	- Ministry of Land Management, Urban Planning and Construction (MLMUPC)
		- Prepare land use zoning and widely disseminate information to farmers	- MLMUPC - MAFF - Relevant ministries and institutions
		- Draft a Law on Agriculture Land Use and Management to ensure sustainable and efficient use of agricultural land	- MAFF - MLMUPC
		- Conduct national agriculture census every 10 years as a basis to develop a Land Use Map	- Ministry of Planning (MoP) /National Institute of Statistics (NIS) - MAFF - Relevant ministries and institutions
		- Draft a Law on Agriculture Community and a Sub-decree on Contract Farming	- MAFF
Paddy Rice Collection and Processing			
Quick-win Measures	<i>Encourage participation of the private sector in paddy rice processing and milled rice export</i>	- Continue the implementation of the Investment Law, the Law on Amendment to the Law on Financial Management 2009, and related regulations - Improve the legal framework for investment and other related regulations, if necessary	- Council for the Development of Cambodia (CDC) - MEF - Relevant ministries and institutions

	<i>Continue financing paddy rice collection</i>	- Recapitalize RDB with an additional 7 million by end 2010 or, at the latest, in early 2011	- MEF
		- Double the capital of ADSF from 18 million USD to 36 million USD, at the latest, in 2011	- MEF
		- Develop a Credit Guarantee Scheme to guarantee loans from commercial banks to companies and paddy rice collectors at the latest in 2011	- MEF - NBC
		- Set up Risk Sharing Facility to encourage commercial banks to extend loans to agriculture processing activities and small and medium enterprises (SMEs) in general, at the latest in 2011	- MEF
	<i>Provide support and strengthen the Rice Miller Association</i>	- Provide special treatment to the Rice Miller Association similar to the treatment provided to GMAC	- Government
Medium and Long Term Measures	<i>Create new financial instruments and leverage mechanism for financing</i>	- Develop new financing instruments - Strengthen the implementation of the Law on Secured Transactions and the Law in Financial Leasing - Establish centralized credit information to reduce fear and risks for commercial banks and micro finance institutions	- MEF - Ministry of Commerce (MoC) - NBC
		- Consider the establishment of the Agriculture Development Bank (ADB) to support and promote agriculture production and processing	- MEF - NBC
	<i>Develop “Open Paddy Rice Market”</i>	- Develop the “Open Paddy Rice Market” and related activities such as contract farming, weighting, drying, paddy-based collateralized loans for members, provisions of high quality seeds and fertilizers for market driven rice production	- MAFF - Relevant ministries and institutions
	<i>Reduce electricity price and extend coverage areas</i>	- Accelerate the diversification of rural energy sources to secure lower energy costs and expand rural areas coverage	- MIME

		- Take measures to ensure effective and rigorous enforcement of existing laws and regulations to ensure efficient energy supply, best practices, and an appropriate tariff	- Electricity Authority of Cambodia (EAC)
		- Improve further EDC management	- MIME /EDC
<i>Logistics System</i>			
Quick-win measures	<i>Enhance trade facilitation, reduce informal fees and eliminate illegal check points</i>	- Develop a specific strategy to identify and streamline export processing procedures including inspection, documentation requirements, fees and time required to process export applications - Define clear and publicly transparent division of responsibilities among export regulating ministries/agencies - Consider rice export as a top priority in order to reduce to a minimum informal payments and time required to export by extending “special treatment” similar to the garment sector	- MEF /General Department of Customs and Excise (GDCE) - MAFF - MoC/ General Department of Camcontrol (Camcontrol) - Relevant ministries, institutions and Authorities
	<i>Implement single-stop service for export processing</i>	- Set up a Single Stop Service for export processing and issuing certificates for SPS, fumigation, grading and quality, quantity and weight, and customs declaration	- MEF/GDCE - MoC/Camcontrol - MIME (Institute of Standardization) - Relevant ministries and institutions
	<i>Address grading and quality standards in compliance with internationally-recognized standards</i>	- Create an independent certifying body or encourage well-known international independent certifying institutions to issue grading and quality certificates as required by importing countries	- MIME (Institute of Standardization) - MAFF - MoC
		- Define grading and standards of Cambodian rice and collaborate with the private sector to enforce them - Build technical capacity to achieve the required	- MIME (Institute of Standardization) - MAFF - MoC

		standards	- Private Sector
	<i>Encourage the construction of Phnom Penh Port bonded warehouse</i>	<ul style="list-style-type: none"> - Strengthen the capacity and promote the use of Phnom Penh Port as an exit point - Encourage the construction of bonded warehouses in Cambodia to facilitate transport and distribution 	<ul style="list-style-type: none"> - Ministry of Public Works and Transportation (MPWT) - MEF
Medium to Longer-term Measures	<i>Formulate strategic and legal framework with a special focus on sanitary and phytosanitary (SPS) standards</i>	- Develop new needed legislations and regulations and amend the existing legal and regulatory framework	<ul style="list-style-type: none"> - Farmers' Products Export Promotion Committee - Relevant ministries and institutions
		<ul style="list-style-type: none"> - Draft a Law on SPS and related sub-decrees and prakas, and strengthen capacity of relevant officials - Establish and strengthen a sound SPS certification system - Strengthen the enforcement of laws and regulations - Develop a common SPS strategy with clear division of responsibilities - Strengthen human resource capacity and technical capability of existing laboratories to conduct tests and inspection, and enforce SPS measures 	<ul style="list-style-type: none"> - MAFF - MoC - Ministry of Health (MoH) - MIME
		- Strengthen the capacity and infrastructure for SPS inspection	<ul style="list-style-type: none"> - MAFF - Relevant ministries and institutions
	<i>Invest in necessary infrastructure to reduce the costs of export</i>	<ul style="list-style-type: none"> - Prepare plan of actions to reduce infrastructure-related costs for export - Engage bilateral and multilateral partners and/or the private sector to mobilize resources for investment projects 	<ul style="list-style-type: none"> - MPWT - Relevant ministries and institutions
		<ul style="list-style-type: none"> - Accelerate the rehabilitation and operationalization of the railway system (Poipet-Phnom Penh and Phnom Penh-Sihanoukville) - Accelerate the rehabilitation and development 	<ul style="list-style-type: none"> - MPWT - License Holder Companies

		work and earliest operation of the railways in collaboration with the concessionaire	
	<i>Facilitate financing for export</i>	- Consider the establishment of the Export-Import Bank (Exim Bank) to support the export of milled rice and other agriculture products	- MEF - NBC
	<i>Facilitate financing for infrastructure development</i>	- Consider the establishment of the Cambodia Development Bank (CDB) to support the development of other physical infrastructure necessary for economic growth and competitiveness of the Cambodian economy	- MEF - NBC
Marketing Measures			
Quick-win measures	<i>Explore export opportunities in regional and global markets</i>	- Comprehensive study on Cambodia's potential markets for rice - Disseminate widely the results to stakeholders - Lead trade delegations consisting of representatives of relevant ministries and milled rice exporting companies to negotiate the sale of milled rice to the Philippines - Explore opportunities to export milled rice to Malaysia, Indonesia, Brunei, and other potential importing countries in Europe	- MoC - Ministry of Foreign Affairs and International Cooperation (MFAIC) - Relevant entities
	<i>Establishing a Rice Market Intelligence Unit</i>	- Consider options for establishing a Rice Market Intelligence Unit to provide information and analysis on regional and global rice markets	- MoC - MAFF - Private Sector
	<i>Develop arrangements for information sharing with stakeholders in domestic market</i>	- Disseminate market information - Use the information to prepare a monitoring toolkit covering the process of production, processing, export and trade	- MoC - MAFF - MOWRAM - Ministry of Rural Development (MRD)

<p>Medium to longer-term measures</p>	<p><i>Prepare a Strategic Penetration Plan and Cambodia's position to compete in regional and global markets</i></p>	<ul style="list-style-type: none"> - Define strategic objectives to position Cambodia in the international markets - Lead this task by exploring new markets and disseminating market information to rice producers and exporters - Negotiate bilateral agreements with potential rice importing countries - Realizing the initiative of establishing the Association of Rice Exporting Countries (AREC) 	<ul style="list-style-type: none"> - MoC - MFAIC - Relevant ministries and institutions
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Appendix III: Projection of Cambodia Paddy Rice Production to 2015

Post-harvest assumption:

- Paddy to rice conversion ratio: 64%
- Seed and post-harvest loss: 13% of total production
- Per capita rice consumption: 143 kg
- Population growth rate: 1.5 %

Production assumption:

- **Cultivated area for wet season paddy rice:** Total arable land for wet season paddy rice is estimated to be 2.4 hectares in 2009, of which cultivated area (plowed and planted) and double cropping (twice per year round) represents 93.5% and 4% respectively. We assume that cultivated areas could be maintained around 93% and could reach 95% in 2015. As the cultivated areas are subject to weather conditions and farmers' responses, we assume that double-cropping area could increase gradually from 4.2% to 5% in 2015 thanks to an increase in investment in irrigation system.
- **Cultivated area for dry season paddy rice:** The cultivated areas for dry season paddy rice have expanded to 385,000 hectares in 2009. With additional investment in irrigation system, the land area for dry season rice could be further expanded to 480,000 hectares by 2015. The contraction in cultivated areas in 2010 is attributed to demolition of water reservoirs within the Tonle Sap area.
- **Increase in yields:** Historical data of the last ten years shows the yield of wet and dry season paddy rice grew annually at an average of 4.42% and 7.28% respectively. However, the growth rate of both yields is expected to diminish in the future with the assumption of a 3% annual increase for wet season paddy rice yield and reaching its peak at 3 tons per hectare, and a 7.28% annual increase for dry season paddy rice yield and reaching its peak at 5.5 tons per hectare.
- **Production loss:** A decade-long data shows an average annual loss of wet season paddy rice and dry season paddy rice at 10% and 5% respectively due to weather conditions and destruction by grass hoppers.

Projection of Paddy Rice Production in Cambodia 2010-2015

	2008	2009	2010	2011	2012	2013	2014	2015
Cultivated areas of wet season paddy rice (Million Hectare)	2.26	2.33	2.34	2.35	2.36	2.37	2.38	2.39
<i>-Average yield (Ton/Hectare)</i>	2.54	2.62	2.70	2.78	2.86	2.95	3.04	3.04
Cultivated areas of dry season paddy rice (Million Hectare)	0.36	0.39	0.38	0.38	0.41	0.42	0.45	0.48
<i>-Average yield (Ton/Hectare)</i>	4.03	4.13	4.43	4.75	5.10	5.47	5.50	5.55
Production loss (Million Metric Ton)	0.01	0.12	0.72	0.75	0.78	0.81	0.85	0.86
Total production (Million Metric Ton)	7.18	7.59	7.30	7.62	8.09	8.44	8.85	9.08
Seed and Post-harvest loss (Million Metric Ton)	0.93	1.00	0.95	0.99	1.05	1.10	1.15	1.18
Population (Million)	13.78	13.84	14.05	14.26	14.47	14.69	14.91	15.13
Domestic consumption (Million Metric Ton)	3.08	3.09	3.14	3.19	3.23	3.28	3.33	3.38
Paddy rice for export (Million Metric Ton)	3.16	3.51	3.32	3.44	3.80	4.06	4.37	4.51
Milled rice for export (Million Metric Ton)	2.03	2.25	2.06	2.20	2.43	2.60	2.80	2.89

Annex IV: Ten Largest Milled Rice Importers and Exporters

<i>N°</i>	<i>Largest Producers (Million Metric Tons)</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
1	China (Import)	193.4	197.2	200.4
2	India	148.8	131.3	151.0
3	Indonesia (Import)	60.3	64.3	64.9
4	Vietnam	38.7	38.9	38.8
5	Myanmar	30.5	31.0	32.0
6	Thailand	31.7	29.8	31.6
7	The Philippines (Import)	17.1	16.0	17.4
8	Brazil (Import)	12.1	12.6	11.5
9	Japan (Import)	11.0	10.6	10.7
10	Pakistan	10.4	10.0	10.1
The World's Total		686.1	679.9	710.4

<i>N°</i>	<i>Largest Importer (Million Metric Tons)</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
1	The Philippines	2.3	1.8	2.5
2	Nigeria	2.0	1.8	1.8
3	Iran	1.0	1.4	1.2
4	Iraq	0.8	1.1	1.2
5	Europe	1.3	1.0	1.1
6	Saudi Arabia	1.0	1.0	0.9
7	Malaysia	1.0	0.9	0.9
8	Ivory Coast	0.9	0.9	0.9
9	Senegal	0.9	0.9	0.8
10	South Africa	0.8	0.9	1.0
The World's Total		30.1	29.7	31.3

<i>N°</i>	<i>Largest Exporter (Million Metric Tons)</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>
1	Thailand	10.0	8.5	8.8
2	Vietnam	4.7	6.0	6.0
3	United States	3.3	3.0	3.3
4	Pakistan	2.8	2.9	3.4
5	India	3.5	2.5	2.2
6	Myanmar	0.2	1.1	1.3
7	Uruguay	0.8	0.8	0.7
8	Egypt	0.5	0.5	0.6
9	Argentina	0.3	0.5	0.5
10	Guyana	0.2	0.3	0.3
World		30.1	29.7	31.3

Source: Rice Market Monitor Volume XIII, Issue 1, April 2009, The Food and Agriculture Organization (FAO)