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ELEMENTS FOR THE FORMULATION OF THE NEW RICE POLICY

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ABBREVIATIONS

ACI	Agrifood Consulting International
ASEAN	Association of Southeast Asian Nations
CDC	Council for Development of Cambodia
CRF	Cambodian Rice Federation
ELC	Economic Land Concessions
EU	European Union
MAFF	Ministry of Agriculture, Forestry, and Fisheries
MEF	Ministry of Economy and Finance
MIME	Ministry of Industry, Mines and Energy
MOC	Ministry of Commerce
MOL	Ministry of Labor
RGC	Royal Government of Cambodia
SLC	Social land Concessions
SPS	Sanitary and Phyto-Sanitary

1 INTRODUCTION

1. The Royal Government of Cambodia (RGC) developed a policy on “Paddy Rice Production and Promotion of Milled Rice Export”¹ in 2010, aiming to achieve a paddy rice production surplus of 4 million tons and milled rice exports of at least 1 million tons by 2015 by investing in irrigation facilities, encouraging private sector investment in paddy rice processing and export, and improving procedures for export and transport facilitation. The policy resulted in increased investment in the rice milling sector and exports of milled rice.

2. By 2015, the milling industry in Cambodia included a number of modern mills with capacity of processing over 2 million tons of milled rice. On one hand, the total exports of milled rice were only about 500,000 tons, clearly missing the 1-million-ton target of the 2010 policy. On the other hand, the rice sector achieved the target of a 4 million tons surplus of paddy production².

3. The recently completed Rice Policy 2010 review³ indicates that although Cambodia rice sector has been successful in generating rice supplies sufficient to meet the food requirements of the country and a surplus for export, the industry is still far from competitive internationally and has not been able to raise agricultural productivity and farmer’ income sustainably.

4. For Cambodia to realize its potential in the rice sector, the main challenge in the future is to become competitive, while continuing to meet the food security requirements of the nation and providing sufficient incentives to farmers and private enterprises to engage in the sector sustainably.

5. A new Rice Policy is then proposed to build upon the achievement of the previous Rice Policy 2010 and help Cambodia rice sector to become a leader in global rice trade and a reliable source of food security and farmers’ income.

6. This Report provides a draft formulation of the new Rice Policy. The report is organized into the following chapters:

Chapter 1	Introduction
Chapter 2	Principles towards a New Rice Policy
Chapter 3	Establish a Participatory Platform for Information Sharing and Monitoring of Policy
Chapter 4	A Shared Vision Based on High Quality Fragrant Rice and Increased Value
Chapter 5	Learning about Customers and Competitors
Chapter 6	Increase Productivity Through Well Funded Innovation Systems
Chapter 7	Enhanced Supply Chain Management of the Rice Milling Industry

1 In this text, the policy will be often referred to as the “Rice Policy 2010”.

2 See ANNEX 2 on Rice Sector Background.

3NIRAS 2016, Review of the Paddy Rice Production and Promotion of Milled Rice Export. Prepared by Francesco Goletti and Srey Chanthy for the Support to the Commercialization of Cambodian Rice Project, Agence Française de Développement (AFD), Grant agreements No CKH-1077-01-S and CKH-1077-02-T, September 2016. See ANNEX 3 for a Summary of the main conclusions of the review.

- Chapter 8 Improve the Rice Value Chain Infrastructure through Cost-Effective Investments
- Chapter 9 Develop a Harmonized Joint Master Plan and Ensure that it is Adequately Funded
- Chapter 10 Institutional Framework

2 PRINCIPLES TOWARD A NEW RICE POLICY

7. The Rice Policy 2010 has contributed to a general awareness of the sector and raised expectations regarding the key role that Cambodia can play in the global rice trade as a major supplier to rice of high quality. Even though there is a heightened sense of expectations about the key role that Cambodia could play in the global rice trade, there are also considerable concerns regarding the capacity of Cambodia to meet the challenge of becoming a reliable global supplier of rice. Combined with these concerns, there is also considerable diversity of opinion regarding the key strategies that should be pursued to realize a vision of Cambodia as a global rice supplier.

8. The Cambodian rice sector has been successful in generating rice supplies sufficient to meet the food requirements of the country and a surplus for export. The main challenge in the future is to become competitive internationally, while continuing to meet the food security requirements of the nation and providing sufficient incentives to farmers and private enterprises to engage in the sector in a sustainable way.

9. In the formulation of a new rice policy, three key principles should be considered: participation, transparency, competitiveness and sustainability.

10. **Participation** ensures that the key stakeholders in the rice industry (farmers, enterprises, and government) are involved in the formulation, monitoring, evaluation, and possible revisions of the policy.

11. **Transparency** ensure that information about policy implementation and rice industry is shared and accessible to rice stakeholders.

12. **Competitiveness** ensures a stable presence of Cambodia in the global rice trade.

13. **Sustainability** ensures that rice farmers use scarce natural resources (land and water) effectively and efficiently and learn to be resilient to climate change, and both rice farmers and rice enterprises (millers, traders, exporters, services providers) make reasonable profits.

14. The participation, competitiveness and sustainability principles of the new Rice Policy are articulated into a number of specific policy measures and processes that are described in the following sections.

3 ESTABLISH A PARTICIPATORY PLATFORM FOR INFORMATION SHARING AND MONITORING OF POLICY

15. In spite of rice being the most important agricultural sub-sector, information about the rice sector is fragmented, incomplete, often unreliable, not widely disseminated, and only sporadically analyzed and discussed rigorously. This limits the opportunity of evidence-based policy decisions and the over-reaction to news that are sometimes poorly verified. Currently, policy monitoring and value chain monitoring are done occasionally rather than regularly. This constrains the adoption of timely measures to address policy implementation bottlenecks.

16. The new rice policy should require the establishment of a formal platform to share information and monitor policy implementation. Such platform could be referred to as the **Rice Policy Platform (RPP)** consisting of representatives of the Government (MEF, MAFF, MOC), private sector and farmers.

17. The RPP will promote dialogue between private sector, farmers, government, civil society and development partners on issues related to rice policy implementation. Overall, the aim is to establish a culture of dialogue and information sharing rather than confrontation.

18. Members of the RPP include:

- Government Members from MEF (with SNEC as Secretariat), MAFF, MOWRAM, MPWT, MOC, RDB at the level of at least DG or Undersecretary of State,
- Private sector members from CRF, including rice millers, rice exporters, and commercial banks, and
- Farmers organizations including members from Federation of Cooperatives, largest Farmers' Organizations, and CRF.

19. The RPP will be chaired by MEF and will meet monthly. The RPP will receive a fund to finance its various activities (meetings, monitoring, publications, workshops, consulting services, data collection and analysis).

20. A **M&E unit** under the RPP will prepare regular reports and organize regular meetings including the industry representatives (farmers, millers, exporters, logistics agents).

21. The RPP will commission regular (semi-annual) **Independent Reviews and Evaluation of Policy Implementation** to provide unbiased assessment of the policy achievement, and also identify and compile lessons learned and best practices for wider dissemination among stakeholders.

22. The RPP will also establish a **Rice Observatory** to organize collection and sharing of information. The Observatory will try to remedy to the existing fragmentation of the current systems in collecting, analyzing, and disseminating information about production, technology, value chain key indicators, policy, and market intelligence.

23. Targeting the sustainability of the rice sector, the M&E system should regularly assess the share of profit for each group of actors, particularly farmers. Increased and sustainable export results from high volume of production, which in turn will depend on the willingness of farmers to produce more. This will happen only if rice production becomes an attractive investment for farmers; otherwise there will be a shift to more profitable activities. In addition, the aggregated profit of rice production should also be evaluated at the macroeconomic level to understand the overall gains for the sector and for Cambodia.

24. Since rice is produced by millions of small farms, the M&E system should monitor and evaluate different farm investment models in order to provide guidance to smallholder farmers regarding their decision on technology adoption and agricultural practices. Different farm typologies exist and each should be provided with a model for optimum use of land, inputs, labor, capital, and for the protection of the environment. Indeed, this could involve other crops and non-crops activities surrounding rice production to cope with risks and maximize the impact of the investment made by farmers and by the public sector.

Measures:

- Establish Rice Policy Platform (RPP) including Government, Private Sector, and Farmers for overall guidance and monitoring of the Rice Policy. The RPP members will meet monthly to assess rice policy progress and issues.
- Under the RPP, establish a Monitoring and Evaluation Unit for the Rice Policy
- Under the RPP, organize a regular (semi-annual) Independent Rice Policy Reviews of the Rice Policy.
- Under the RPP, establish a Rice Observatory responsible for consolidating all information about rice sector currently collected by different agencies, collect additional information about rice markets and value chain information, analyze the information, and ensure public access and distribution of the information to rice stakeholders.
- The RPP will ensure circulation and public discussion of the M&E reports and Independent Policy Reviews

4 DEVELOP A SHARED VISION BASED ON HIGH QUALITY FRAGRANT RICE AND INCREASED VALUE

25. Cambodia needs to set a clear vision for the rice sector. Besides being the major source of food security for the country, rice in Cambodia can have a key role in exports and rural development. The potential for the rice sector requires a shared vision among the key stakeholders (government, private sector, and farmers).

26. The vision promoted in the Rice Policy is one in which Cambodia becomes a leading exporter of fragrant rice. This vision is not in contradiction with the food security function of the rice sector. Cambodia has an abundant supply of rice of different varieties that are suitable and affordable for its own socioeconomically diverse population. MAFF and other ministries have worked for years to ensure food security. However, **the challenge of gaining competitiveness and recognition in global market requires a strategy founded on a clear vision of what is unique to Cambodia.** Cambodia should not compete on producing and exporting low quality rice since this is not her comparative advantage; instead, Cambodia should compete on quality fragrant rice in which Cambodia has a comparative advantage and could acquire a competitive advantage.

27. Stakeholders must share and agree on a long-term vision (up to 2030). Existing documents such as the draft Crop Master Plan of MAFF could serve as a basis for the discussion. **Cambodia could for instance aim to be one of the three leading exporters of fragrant rice in the global market.** This entails commitment to high quality rice export as the trademark of Cambodia in the global rice industry. The vision should be shared and inspiring all the key stakeholders involved in its formulation. The vision should also be articulated in such a way that it can be monitored, through indicators that are SMART⁴. Examples of indicators include the value of exports, the value added generated by the industry, the farm income per hectare.

28. The Rice Policy Platform (RPP) will convene representative of farmers, government, and private sector to formulate a shared vision for the rice sector encompassing what is unique to Cambodia, including a commitment to high quality aromatic rice.

Measures:

- Formulate a shared vision for the rice sector encompassing a commitment to high quality aromatic rice and adherence to the principles of participation, competitiveness, and sustainability.
- Formulate indicators to monitor progress towards the vision within a long term horizon (up to 2030).
- Disseminate the vision broadly and embed it into the marketing materials of key stakeholders.
- Ensure that the vision is incorporated into the research, extension, and production activities for the rice sector.

⁴ Specific, measurable, attainable, realistic, and timely.

5 GATHER MARKET INTELLIGENCE ABOUT CUSTOMERS AND COMPETITORS

29. In spite of Cambodia's rice production growth generating an exportable surplus, Cambodia's potential to become a reliable major exporter is limited by low competitiveness. This is the result of various factors (low productivity at the farm level, weak supply chain management, scarce innovation, poor logistics, lack of a brand, bottlenecks in the postharvest system, high energy cost, ...). The consequence of low competitiveness is the low market share of Cambodia in global rice exports.

30. Competitiveness requires strong knowledge of the consumers' preferences. Cambodia needs to gather information through Market Intelligence System (MIS) to improve business decision making. It consists of compiling and analyzing multiple sources of information to create a broad picture of the rice sector existing market, market opportunities, customers, and competition. The analysis of global and regional prices, past and future trends, and market segments is crucial to develop a market penetration strategy.

31. The findings and recommendations from the analysis must be disseminated to all stakeholders. The use of IT-based MIS can bring higher efficiency through cost reduction and improved access to information.

32. In addition to prices, Cambodia needs to continuously adjust its Branding and Marketing Strategies based on the lessons learned and market intelligence. The coordination across different entities from various institutions is required: organizations such as MAFF and MoC already have market information service and CRF is working on setting up marketing units; however, these systems need to be integrated to be of greater service to the rice industry in Cambodia.

33. The knowledge of customers and competitors can be improved through participation in regional and global trade fairs, exhibitions and events related to rice; and through frequent meetings with clients and competitors. Knowing the customers requires not only the direct meeting and contact, but also understanding their requirements, their constraints, their strengths and weaknesses so that a better service could be provided to them. Similarly, knowing competitors implies understanding their strengths and weaknesses, their time to fulfill orders, their post-sale services, their costs, their strategies, the market segments they serve, so that a superior service delivery could be pursued by Cambodian exporters.

Measures:

- Establish Rice Market Intelligence Unit at CRF integrated with Market Information Services already existing. The Unit will distribute regular market intelligence reports to the members of CRF.
- Conduct and attend trade fairs and exhibitions. Gather information about customers and competitors and disseminate to rice industry stakeholders.

6 INCREASE PRODUCTIVITY THROUGH ADEQUATELY FUNDED INNOVATION SYSTEMS

34. Cambodia needs to strengthen the research, extension, and education system to promote innovation at all stages of the value chain. The rice sector has grown in the past through a combination of land expansion and yield improvement. Land expansion should not be further pursued. Yield improvement is needed but is not sufficient to achieve increases in income of farmers and competitiveness. The most important improvement should be on total factor productivity growth that creates increasing income for farmers and other actors in the value chain. This requires public and private sector making a determined effort in innovating through more efficient practices at different levels: the farm, the rice mill, the warehouse, the logistic chain, finance instruments, information sharing, branding, etc. Innovation should be promoted with increased investment by the public and private sector and tax incentives. Enforcement of intellectual property rights (IPR) and public private partnerships should be promoted.

35. Cambodia needs to accelerate investment in research, extension and education (REE) systems. Currently, the key factors influencing innovation (research, extension, education) are grossly underfunded. Innovation occurs, but to a very limited extent. Innovation at all stages of the value chain requires the combination of policies, investments, and a culture that stimulates the creativity of stakeholders and the adoption of different ways of doing business. There is a need to promote innovation at all levels (farmers, processors, exporters, financiers, logistic agents, government).

36. At the production stage, the increase of TFP goes through better access to quality seeds, access to extension services, improved quality of inputs, higher productivity and quality of agricultural workers, improved access to water and more efficient irrigation systems. Medium-to-long term strategies should be focused on improving soil fertility and use of sustainable practices such as conservation agriculture; and higher investment in agriculture research and development. To get the change in TFP, the monitoring system must be able to measure the value of inputs and the value of outputs.

37. At the collection, postharvest and processing stage, increase of TFP requires the modernization of the supply chain i.e. better vertical coordination focused on collection of fragrant varieties; establishment of warehouse receipt system; reduction of postharvest losses through improved and more efficient drying and storage facilities; improved grading, standards, and certification of Cambodian rice; and the use of more efficient technologies and practices in rice processing.

38. At the institution level, the support to professional organizations such as the Cambodian Rice Federation and other farmers' associations and cooperatives must continue, with focus on the culture of good governance and innovation.

39. Innovation is a key to success and sustainability of the rice sector in Cambodia. Increase in the TFP results from the efficiency of innovation and will put Cambodia ahead of its competitors. One way to promote innovation is to set up special awards based on the

quality of innovation proposed by stakeholders. Every year, the Government with close collaboration with CARDI and CRF could announce open competition for innovation and thus reward the best innovation that can contribute to the performance of the rice sector in Cambodia. This could be at different levels: production, marketing, storage, processing, logistics and export. Similarly, there could be institutionalized agricultural fairs to award the highest performing farmers; for example, farmers who have achieved the highest yield of fragrant rice; the farmers who have adopted new fragrant rice varieties; farmers who have adopted new cultivation methods; farmers who have achieved the highest yield per unit of water use.

Measures:

- Increase investment in research organizations (both CARDI and private organizations) to a least 1% of Agricultural GDP
- Support funding and implementation of the draft Rice Crop Master Plan under MAFF.
- Monitor Rice Productivity and Rice Farmers Budgets
- Call for Competition for innovations in the rice value chains resulting in improvement in Rice Productivity (give very attractive monetary prize to the winner of the competition)
- Organize yearly Conference to share innovations in the rice supply chain
- Provide Tax incentives for private organizations who make investments in research and development in the rice sector
- Enforcement of IPR legislation
- Promotion of PPP arrangements in the rice sector

7 ENHANCED SUPPLY CHAIN MANAGEMENT OF THE RICE MILLING INDUSTRY

40. The key actors in the supply chain who are involved in supply chain management (SCM) are the millers, farmers, and traders. Millers in Cambodia generally rely on traditional methods of supply chain management, namely a multi-layer system of suppliers (collectors, small traders, larger traders, smaller mills) who cannot assure the quality, timeliness, and prices that are needed to meet international orders in a consistent and reliable fashion. Contract farming in rice sector is basically absent and the few successful cases in contract farming are only a marginal niche of the overall supply.

41. The new Rice Policy should support the building of a strong capacity of the private sector in supply chain management. In order to gain competitiveness, Cambodia's rice industry needs to acquire a brand as an exporter of high quality fragrant rice (e.g. Angkor Malis). But this requires the assurance that the appropriate production, procurement, drying, storage, processing, packaging, shipping, and finance needed to fulfill orders timely and consistently over time are all in place. Contract farming is not just an option; it is also a requirement for the effective management of the supply chain in quality aromatic rice. Capacity and systems for effective SCM need to be built and strengthened.

42. A well-designed and functioning SCM should:
- Ensure close and direct linkages between farmers and millers through the use of contracts and vertical integration
 - Design successful contracts based on uniqueness of products and stable relations with farmers and their organizations
 - Use ITC technology in supply chain management including Enterprise Resource Planning (ERP) to integrate procurement, inventories, orders, finance, marketing, and sales
 - Maximize capacity utilization of processing units and storage capacity
 - Reduce logistic costs through electronic processing of export documentation and multi-modal logistics (rail, road, waterways)
 - Build capacity of private sector in SCM and business processes
 - Optimize the time between orders and delivery

Measures:

- Establish a program to enhance supply chain management of rice millers and farmers
- Support formation of successful contracts between millers and farmer organizations
- Benchmark supply chain performance and monitor progress
- Gradually build internal stringent requirements within the CRF for exporters and millers engaged in export business to have an evidence-based system of SCM and ERP.

8 IMPROVE THE RICE VALUE CHAIN INFRASTRUCTURE THROUGH COST-EFFECTIVE INVESTMENTS

43. Value chain infrastructure includes irrigation and drainage systems, market places, warehouses, transport (roads, rails, waterways, ports), energy, and postharvest systems. A lot of investments have occurred in the past either by the public sector (e.g. irrigation, energy, and rural roads) or private sector (e.g. rice processing capacity). An analysis of many of these investments (both public and private) indicate that the actual benefit-cost ratio was low and inefficiencies in the design and implementation of infrastructure investments resulted in considerable waste or in benefits much lower than expected. Given the limited resources available for investment in infrastructure, these inefficiencies should be assessed, lessons learned should be shared widely, and new investments performance enhanced in the future.

44. Given the overwhelming share of irrigation in the rice sector investment by the public sector, it is important to ensure that ongoing and future investments are closely monitored and assessed to improve design, implementation, and maintenance and operations. As long as the benefit-cost ratio of irrigation systems continues to be low, a large amount of public resources continues to be used inefficiently and the modernization of the rice sector retards.

Measures:

- Conduct an assessment of selected investment in rice value chain infrastructure including rural roads, electrification, drying facilities, processing, research, extension, postharvest equipment, warehouses. Draw main lessons learned and circulate widely to ensure future investments benefit-cost ratio is higher.
- Conduct a detailed review of public expenditures in irrigation and drainage to identify lessons for the design and implementation of future investments.
- Design future investment in infrastructure for the rice sector in close consultation with private sector and farmers.
- Promote mechanisms for PPP in investment and responsible participation of farmers and private sector in O&M of rice value chain infrastructure.
- Identify and prioritize rice value chain infrastructure investment for achieving the goals of the Rice Policy.
- Identify Geographic Clusters for (fragrant) rice value chain investment
- Commit resources of public sector, private sector, and farmers to the prioritized investments.

9 DEVELOP A HARMONIZED JOINT MASTER PLAN AND ENSURE THAT IT IS ADEQUATELY FUNDED

45. The new rice policy must be translated into a harmonized action plan among different stakeholders. The key agencies that are involved in this joint master plan include MAFF, MOWRAM, MOC, MEF, MPWT, MRD, CRF.

46. The master plan must include:

- Realistic budgets with indication of commitment and sources of funding;
- Clearly specified priorities;
- Indicators and targets at different stage of implementation;
- Clearly defined roles and responsibilities of each actor;
- Identified critical conditions for success (e.g. enhanced resilience to climate change; shared participation of the government, private sector, and farmers; funding); and
- Results monitoring mechanism.

47. The master plan could also include recommendations to focus on specific geographical areas, with clear target of producing specific rice quality. If, for example, a specific province or area common to more than one province is found to have a comparative advantage in producing a specific rice variety, then the budget, services, logistics, and other inputs should be allocated to the province or the area to ensure the highest return. The existence of such critical mass of production within limited geographical areas will make post-production activities more cost-effective: lower cost of transportation, improve supply chain management, lower cost of transaction, etc; which in turn will attract investors to support the value chain.

48. A Coordination Committee under the Rice Policy Platform (RPP) will be in charge of preparing the Harmonized Master Plan.

Measures:

- Prepare Harmonized Master Plan for the Implementation of the Rice Policy
- Establish overall Coordination Committee for the preparation and implementation of the Harmonized Master Plan.
- Establish regional plans for developing geographic clusters around specific rice varieties and concentrate investment in irrigation, extension, mechanization, processing and logistics in these clusters.

10 INSTITUTIONAL FRAMEWORK

This section presents the responsibility matrix for the various measures proposed above.

RECOMMENDATION	Measure	Primary Responsibility	Coordinating Organizations
1. ESTABLISH A PARTICIPATORY PLATFORM FOR INFORMATION SHARING AND MONITORING OF POLICY	1. Establish Rice Policy Platform (RPP) including Government, Private Sector, and Farmers for overall guidance and monitoring of the Rice Policy	MEF	MAFF, CRF, MOC
	2. Under the RPP, establish a Monitoring and Evaluation Unit for the Rice Policy	RPP/M&E	
	3. Under the RPP, organize a regular (semi-annual) Independent Rice Policy Reviews of the Rice Policy.	RPP/Policy Review	
	4. Under the RPP, establish a Rice Observatory responsible for consolidating all information about rice sector currently collected by different agencies, collect additional information about rice markets and value chain information, analyze the information, and ensure public access and distribution of the information to rice stakeholders.	RPP/Rice Observatory	
	5. The RPP will ensure circulation and public discussion of the M&E reports and Independent Policy Reviews	RPP	
2. DEVELOP A SHARED VISION BASED ON HIGH QUALITY FRAGRANT RICE	6. Formulate a shared vision for the rice sector encompassing a commitment to high quality aromatic rice and adherence to the principles of participation, competitiveness, and sustainability.	RPP	
	7. Formulate indicators to monitor progress towards the vision within a long term horizon (up to 2030).	RPP/M&E	
	8. Disseminate the vision broadly and embed it into the marketing materials of key stakeholders.	RPP	
	9. Ensure that the vision is incorporated into the research, extension, and production activities for the rice sector.	RPP	CARDI, MAFF/GDA, MOC, MEF
3. GATHER MARKET INTELLIGENCE ABOUT CUSTOMERS AND COMPETITORS	10. Establish Rice Market Intelligence Unit integrated with Market Information Services already existing. The Unit will distribute regular market intelligence reports to the members of CRF.	RPP/Rice Market Intelligence Unit	MAFF, CRF, MOC
	11. Conduct and attend trade fairs and exhibitions. Share information about customers and competitors.	CRF	
4. INCREASE PRODUCTIVITY THROUGH WELL FUNDED INNOVATION SYSTEMS	12. Increase investment in research organizations (both CARDI and private organizations) to 1% of Agricultural GDP	MEF	MAFF
	13. Support funding and implementation of the draft Rice Crop Master Plan under MAFF.	MEF	MAFF
	14. Establish Monitoring unit for Total Factor Productivity and Rice Farmers Budgets	RPP/M&E	MAFF, MEF
	15. Call for Competition for innovations in the rice value chains resulting in improvement in TFP (give very attractive monetary price to the winner of the competition)	MEF	MAFF, MOC, MOWRAM, CRF
	16. Organize yearly Conference to share innovations in the rice supply chain	RPP	MAFF, MOC, MOWRAM, CRF
	17. Provide Tax incentives for private organizations who have made investments in research and development in the rice sector	MEF	MAFF, MOC
5. ENHANCED SUPPLY CHAIN MANAGEMENT OF THE RICE	18. Establish a program to enhance supply chain management of rice millers and farmers	MAFF	
	19. Support formation of successful contracts between millers and farmer organizations	MAFF	

RECOMMENDATION	Measure	Primary Responsibility	Coordinating Organizations
MILLING INDUSTRY	20. Benchmark supply chain performance and monitor progress	RPP/M&E	MAFF
	21. Gradually build internal stringent requirements within the CRF for exporters and millers engaged in export business to have an evidence-based system of SCM and ERP.	CRF	
6. IMPROVE THE RICE VALUE CHAIN INFRASTRUCTURE THROUGH COST-EFFECTIVE INVESTMENTS	22. Conduct an assessment of selected investment in rice value chain infrastructure including rural roads, electrification, processing, research, extension, postharvest equipment, warehouses. Draw main lessons learned and circulate widely to ensure future investments benefit-cost ratio is higher.	RPP	MEF, MAFF, MOWRAM, CRF, MOC
	23. Conduct a detailed review of public expenditures in irrigation and drainage to identify lessons for the design and implementation of future investments.	RPP	MOWRAM
	24. Design future investment in infrastructure for the rice sector in close consultation with private sector and farmers.	RPP	CRF, MAFF, MOWRAM, MRD, MOC
	25. Promote mechanisms for PPP in investment and responsible participation of farmers and private sector in O&M of rice value chain infrastructure.	RPP	CRF, MAFF, MOWRAM, MRD, MOC
	26. Identify and prioritize rice value chain infrastructure investment for achieving the goals of the Rice Policy.	RPP	CRF, MAFF, MOWRAM, MRD, MOC
	27. Commit resources of public sector, private sector, and farmers to the prioritized investments.	MEF	
7. DEVELOP A HARMONIZED JOINT MASTER PLAN AND ENSURE THAT IT IS ADEQUATELY FUNDED	28. Prepare Harmonized Master Plan for the Implementation of the Rice Policy	RPP	CRF, MAFF, MOWRAM, MRD, MOC, MOE, MPWT
	29. Establish overall Coordination Committee for the preparation and implementation of the Harmonized Master Plan.	RPP/ Coordination Committee	CRF, MAFF, MOWRAM, MRD, MOC, MOE, MPWT
	30. Establish regional plans for developing clusters around specific rice varieties.	RPP/ Coordination Committee	CRF, MAFF, MOWRAM, MRD, MOC, MOE, MPWT

ANNEX 1 BACKGROUND ON THE RICE SECTOR

49. In 2015, the agricultural sector contributed 28.7% of Cambodian GDP, estimated at USD 18.05 billion⁵. This is a decrease from the 34.6% share in 2011. However, in terms of change between these two years, the agricultural sector GDP increased by 17%, from USD 4.44 billion to USD 5.18 billion. Rice plays also a key role in employment and food security as it is mostly grown by smallholders. More than 2.9 million households are involved in rice production, with average farm size of 1.64 hectare; and about 45% of the farms are below 1 hectare⁶.

50. Total production has increased but at lower pace in the past five years compared to the 37% growth between 2005-2010 (from 5.98 million tons to 8.25 million tons). Between 2010 and 2014, the increase of the rice cultivated area slowed down; yet yield was increasing less than cultivated area. Growth of production still relies more on area expansion rather than on yield increase. In 2015, total rice production is similar to the 2014 figure (9.33 million tons vs. 9.32 million tons). Production suffered from drought in some areas. Overall, in the past three years, average rice yield stagnated around 3.1 tons per hectare in Cambodia.

51. Following the global economic crisis that began in 2008/2009, the Royal Government of Cambodia took a bold step in crafting the Policy Paper on the Promotion of Paddy Production and Rice Export. The policy was approved by the Council of Ministers in July 2010. The policy aimed to make more rice available for domestic consumers and earn foreign currencies through export, contributing to higher economic growth and poverty reduction.

52. The policy vision was to transform Cambodia into a rice basket and key milled rice exporting country in the global market. The policy envisioned that by 2015 (a) Cambodia would have a paddy production surplus of over 4.0 million tons and milled rice export of at least 1.0 million tons, and (b) Cambodian rice would have been internationally recognized.

53. The policy followed two approaches. The first, for the immediate and short term, promoted paddy rice production to meet market demand and export of milled rice by shifting from the informal export of paddy rice to a formal export of milled rice anchored on (1) continued investment in and expansion of irrigated areas; promoting the use of water, seeds, fertilizers and appropriate technologies; and providing credit to rice producers; (2) encouraging private sector investment in paddy rice processing and export of milled rice, especially by solving the issues of shortage of credit for buying and processing paddy rice as well as trade credit by recapitalizing state-owned financial institutions and by providing incentives to commercial banks to increase loan portfolio for agriculture, including the development of credit guarantee schemes and risk-sharing instruments; and (3) coordinating and fast-tracking rice export through improvement in procedures for export and transport facilitation, and elimination of informal fees.

⁵ \$US Current, Data from <http://data.worldbank.org/country/cambodia>, retrieved on August 11, 2016

⁶ 2013 Agricultural Census

54. The second approach, for the medium and long term, enhanced competitiveness in rice export through promotion of (1) production technology, management of soil fertility, management of water, use of seeds and fertilizers; (2) organization of farmer associations; (3) rice processing quality; (4) physical infrastructure, including roads, railways, seaports, energy; (5) improved land use and management; (6) short- and long-term credit as well as (7) trade facilitation and exploring market opportunities.

55. In order to realize the policy target and implement the two approaches the Policy included 73 policy measures:

Table 1 Policy Measures in Rice Policy 2010

Policy measures related to:	No of Measures
Production	27
Collection and Processing	15
Logistics	21
Marketing	10
Total	73

56. Specifically, the 2010 Rice policy targeted 5% increase in cultivated areas and 12% increase in total production between 2010 and 2015. Performance according to statistics from MAFF however show higher increase (9%) in cultivated area and lower increase on total production (8%). For dry season rice, the 2010 policy aimed at 4% increase in land with 4.5% increase in yield, thus resulting in 8.5% increase in total production. Data collected by MAFF show different patterns: 4.2% increase in land; only 1.5% increase in yield resulting in 5.7% total increase in dry season production. For the wet season rice, yield is at 2.8 tons/ha, low compared to the dry season.

57. Wet season rice dominates the production in Cambodia, with 75% of total production. From the 2013 Agricultural census, about 285,740 hectares which represent 11.8% of total agricultural land were cultivated with fragrant rice, with the highest share in Tonle sap area at 17.6% and the lowest in the Coastal Zones at 1.0%. The ratio may go as high as 42.4% in Pailin province; 36.0% in Preah Vihear; and 30.0 in Pursat. Glutinous rice occupies 18,480 hectares and the remaining 2.11 million hectares are cultivated with non-aromatic rice.

58. The 2008 food crisis was a major incentive for the Government to focus on the rice sector. Between 2006 and 2008, the global prices of different types of rice increased by around 100%, resulting in worldwide food crisis. In 2008, Cambodia had 3.2 million tons of paddy available for export⁷, most of it going through informal channels to Thailand and Vietnam. To better organize the sub-sector, the Government had tasked a group of experts to draft the 2010 Rice Policy.

⁷ MAFF Statistics, Rice Balance

59. After the 2008 peak, the prices of rice remained above the pre-crisis level; the price of fragrant rice even continue to remain beyond \$1,000 per ton for some years. However, since 2013, the prices started to decline and reverse to trend, resulting in a substantial threat to the sustainability of the rice sector in Cambodia. During the same three years, rice production has also stagnated around 9.2 million tons.

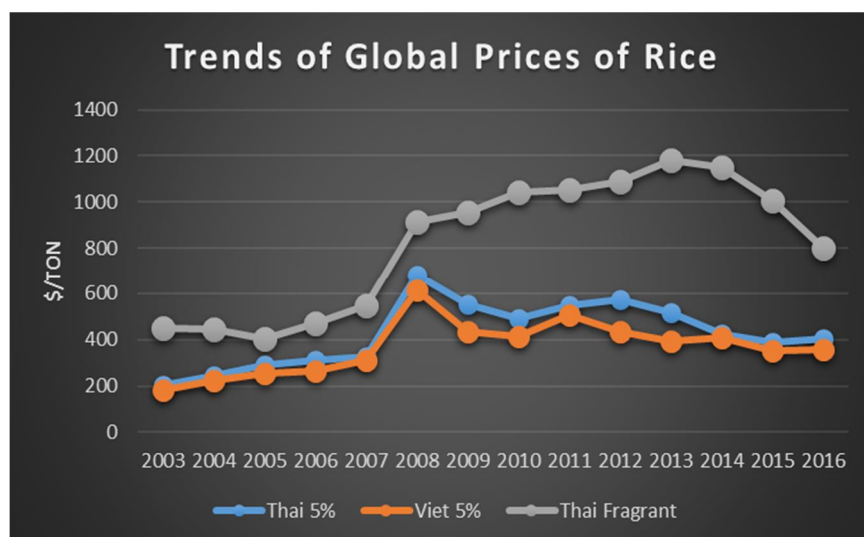


Figure 1 Trends of Global Prices of Rice

Source: www.fao.org – Retrieved on August 8, 2016

60. In 2016, there is a looming crisis in the rice milling industry due to the substantial investment made by the private sector after the 2010 Rice Policy engagement by the Government.

61. The review document will analyze individual policy measures, and provide the status of achievement following the four categories identified in the 2010 Rice Policy: Production; Paddy Collection and Processing; Logistics; and Marketing.

ANNEX 2 SUMMARY OF THE REVIEW OF THE RICE POLICY 2010

62. The “Promotion of Paddy Production and Rice Export” policy enacted in 2010 (henceforth the “Rice Policy 2010”) included 73 policy measures, from production to marketing, through collection and processing and logistics. Out of these 73 measures; 37% were implemented; 41% were partially achieved and ongoing; and 22% were not implemented.

63. The Rice Policy 2010 has facilitated the dramatic increase in private sector investment in milling and the emergence of the Cambodian Rice Federation (CRF) as a major player. The capacity of rice milling in Cambodia rose from 96 tons per hour in mid-2009 to 829 tons per hour in 2015. Similarly, the capacity for rice polishing increased by more than 7 folds from 72 tons per hour in mid-2009 to 520 tons per hour in 2014. CRF was established in 2014, and is becoming the national champion in promoting the rice sector.

64. Between 2009 and 2015; formal export of rice has increased by a factor of 44 from below 12,163 tons to 538,396 tons. Indeed, the target of 1 million tons by 2015 was not achieved but this does not offset the relative success of the Policy. The target of 1 million rice exports was perhaps too ambitious given the initial low development of the milling industry.

65. Rice is produced by millions of smallholders all across the country. None of the rice milling units has established a solid supply chain management system. Currently, the capacity of millers in supply chain management is still at a nascent stage. Difficult access to finance is often reported by some rice millers as a constraint; however, it is not clear how binding is the finance constraint for the rice milling industry. There is no evidence that the banking sector is biased against rice milling or rice exports. Other constraints like lack of liquidity to service debt, lack of collateral, and the level of interest rates are constraining the capacity of the industry to access finance.

66. A major concern is the fact that productivity in rice farming has remained stagnant in the past 5 years. Statistics from the Ministry of Agriculture, Forestry, and Fisheries (MAFF) show stagnant yield of 3.1 tons per hectare between 2011 and 2015. The analysis of the public investment in research and extension estimated at 0.18% of the agricultural GDP in 2013 does not indicate strong engagement from the Government to increase productivity; this in turn affects the availability and thus the adoption of innovative technologies required to boost productivity. Productivity at the farm level and rice farmers’ income have remained low in spite of the higher use of inputs such as fertilizers and farm equipment, increased investments in irrigation, enhanced access of farmers to credit, investment in rural roads and electricity infrastructure, and the enactment of new regulations for cooperatives and contract farming.

67. The implementation years following the Rice Policy 2010 have witnessed improvement in Cambodian logistics. Export procedures were streamlined and the costs of logistics reduced. Transport infrastructure including railways between Poipet and Phnom Penh and Phnom Penh and Sihanoukville, and the port of Sihanoukville were upgraded. New

sanitary and phytosanitary regulations and SPS capacity have been improved. However, Cambodia still lags behind its neighboring countries in the logistic aspects and SPS compliance.

68. The Rice Policy 2010 was formulated without sufficient consultations with the private sector and farmers and did not establish an independent and regular monitoring and evaluation system. The Policy has not provided a clear vision encompassing sustainability of the sector and targets for values of exports, value added, and farm income.

69. In spite of increased production and exports, there is no evidence that farmers' income has improved. Rice millers have benefited from high prices in the few years after the food crisis, but recently, as prices are moving towards a long-term negative trends, the industry is under considerable stress. On the other hand, input suppliers (particularly equipment and fertilizer suppliers) have been major beneficiaries of increased production.

70. The Rice Policy 2010 was organized around 73 measures related to four components: Production, Collection and Processing, Logistics, and Marketing.

71. The main findings on the "Production" component of the policy are:

- In spite of progress on the use of inputs (fertilizer and farm machinery), irrigation, credit to farmers, infrastructure (rural roads and electrification), and regulations (cooperatives, contract farming), **the productivity at the farm level has remained low.**
- **RiceFarmers' income** has remained stagnant; the attractiveness of rice farming itself has not been sufficiently addressed.
- **Innovation** in rice farming (eg water use management, new rice varieties, contract farming, sustainable use of land) is limited and **Investment in research and extension is low** and insufficient to meet the aspiration of Cambodia to become a rice basket and a major exporter of milled rice.
- The **impact of irrigation on productivity and profitability of the rice sector is well below its potential.** There is the need to improve water use management and irrigation investment efficiency.

72. The main findings on the "Collection and Processing" component of the Policy are:

- **There has been a major progress by establishing CRF** as the leading rice industry platform for the rice private sector and farmers to dialogue with the government.
- It is yet not clear **how binding is the finance constraint** for the rice milling industry. Even with additional access to finance, it is doubtful that supply chain management constraints (eg. Long lags between orders and delivery, reliability of supplies, quality of paddy, management of stocks in warehouses, multiple intermediaries in the value chain, absence of contracts) might be resolved.
- There is no clear reference in the policy to **supply chain management** capacity of the rice milling industry.

73. The main findings on the "Logistics" component of the Policy are:

- There has been some progress in **simplifying export** procedures and reducing logistics cost. However, Cambodia still lags behind competitors in streamlining processes and reducing logistics costs.
- Although more remains to be done, there has been progress on establishing **standards and improvement of port and railway infrastructure**.
- **SPS regulations and capacity** have improved but work is ongoing on the regulatory side and on improving capacity.
- **There were no actions in increasing the number of financing institutions for infrastructure and export– import.**

74. The main findings on the “Marketing” component of the Policy are:

- There has been some Progress on **establishing relations with importing countries**
- **More information is available on rice markets** internationally, but there is not yet a Market Intelligence Unit and a process for dissemination of information
- **There is yet no clear strategic orientation** of Cambodia in international markets penetration.