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Cambodia's Agriculture: Challenges and Prospects

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Abstract

Agriculture is one of the most complex industries since it involves many stakeholders in different sectors. Cambodia has huge potential to develop agriculture industry since it has vast flat fertile land and about 80 percent of its population living in the rural area. However, the productivity of this sector is still a big challenge. In addition, agricultural export is still limited due mainly to lack of certified quality standard, finance, crops diversification, and market information. In order to develop agriculture, Cambodia needs to cooperate with different partners especially development partners and private sectors to address the gaps in order to reach its potential.

Cambodia's Agriculture: Challenges and Prospects

1. Introduction

*“Besides making ourselves food sufficient, we have to strive to make Cambodia a real exporter of rice and one of the main actors in regional and world food security.”*¹

Cambodia has succeeded in generating high economic growth in its recent history, but the challenges are whether it can manage to sustain rapid growth for an extended period. Nearly a decade long of rapid growth had a significant impact on income per capita with more than a doubling from US\$288 in 2000 to US\$900 in 2009. As a result, Cambodia is one of the few countries that have achieved sustained rapid growth: of 194 countries with data, 46 have achieved 7 percent annual growth on average for 14 consecutive years. Taking into consideration the time period from 1998 to 2007 Cambodia's growth performance ranks 6th in the world.²

Cambodia went through a unique window of opportunity in its recent history with the end of a multi-decade long of conflict and the establishment of peace and political stability coinciding with a favorable external environment of rapid growth of global trade. A profound structural transformation took place with an aggressive pace of economic integration into the global economy: clear policies to encourage Cambodia's fast track accession to the World Trade Organization; a shift of jobs from agriculture to manufacturing; a booming tourism sector, and a migration from rural to urban areas. Growth was fueled to some extent by drawing on some of the country's natural and agricultural assets (forests, fisheries, land) and its cultural assets, such as Angkor Wat temples. Cambodia is a case in point in experiencing geography driven regional integration since geography has played an influential part in Cambodia's growth, being a coastal country in a dynamic and rapidly evolving regionally integrated South East Asia, and East Asia.

With vast flat agricultural lands and access to a number of big rivers and their tributaries, Cambodia has potential to be a significant agricultural net exporter. In order to realize the full potential of agriculture sector, investment in basic physical infrastructure such as irrigation and rural roads are necessary, agricultural technical support and facilitation of trading process and supply chain sustainability are important to raise productivity and trade volume. With the government's ambition to turn Cambodia into one of major rice exporters, Cambodia needs to promote investment in agriculture and rural areas from many sources including public, private investment and from other sources.

This paper aims at examining the current state of agricultural and rural infrastructure development in Cambodia through the lenses of public policy and

¹ Samdech Hun Sen, Cambodian Prime Minister, in his speech on 17 August 2010

² Sustaining Rapid Growth in a Challenging Environment, World Bank 2009

investment, private investment NGOs' activities and development partners assistance in the sector. The paper argues that increasing attention and investment has focused on agriculture in Cambodia. The increasing productivity and market expansion plus regional cooperation and integration are bringing agriculture sector to the frontline of the national economic development strategy with opportunities. However, the process of infrastructure investment and development is still slow and the value chain creation and products diversification are still big challenges.

2. Cambodia Agricultural Development Policy

Being aware of the significant role of agriculture in poverty reduction, the government integrates agriculture to be one of the priorities in Royal Government of Cambodia's Rectangular Strategy. The four sides of this rectangle are: (i) improving agricultural productivity and diversification (including animal husbandry, food security and nutrition, and rural development); (ii) land reform and de-mining; (iii) fisheries reform; and (iv) forestry reform (including environment protection and conservation). Notable features during the last two and half years were: continued RGC efforts in arresting depletion of natural resources and environment; rehabilitating and enhancing irrigation potential; favourable weather conditions; some diversification into cash crops; issuance of more land titles to the farmers; and, further improvement of rural infrastructure. The National Strategy for Agriculture and Water, 2006- 2010, was developed through a consultative process and adopted in 2007.³

The Royal Government's overall goal is "poverty reduction and economic growth through enhancement of agriculture sector development". The sectoral goal is to "ensure food security, increase incomes, create employment and improve nutrition status for all people by improving productivity and diversification, and commercialization of agriculture with environmentally sound protection and food security".

An "Agriculture Sector Strategic Development Plan: 2006-2010" was prepared by the Ministry of Agriculture, Fisheries and Forestry (MAFF) in October 2005 in order to achieve RGC's strategic goals as well as NSDP 2006-2010. A Strategy for Agriculture and Water Sectors that has been prepared by TWG for Agriculture and Water and with the coordination of DPs was adopted in March 2007. However, a sector-wide programme to implement this strategy is expected to be finalised and approved in 2010.

The "Agriculture Sector Strategic Development Plan: 2006-2010" has identified the following seven strategic objectives for the agriculture, fisheries and forestry sectors: Food security, productivity, and diversification. Improve and strengthen agricultural research and extension systems.

- Market access for agricultural products.
- Institutional and legislative development framework.
- Land reform - land market development and pro-poor land access.

³ NSDP Update (2009-2013)

- Fisheries reform - sustainable access.
- Forestry reform - promote sustainable conservation and management of forests, ensure better management of natural protected areas.

To achieve the seven strategic objectives, MAFF has organised its activities in the following five programme areas:

- Programme I: Improving productivity & diversifying agriculture sectors.
- Programme II: Promote market access of agriculture products.
- Programme III: Strengthen institution, legal framework and human resources development.
- Programme IV: Management of sustainable fishery resources.
- Programme V: Management of sustainable forestry resources.

Significant progress has been made by MAFF in increasing the land area for crops, paddy cultivated area, yield per hectare, fishing lots, and area released to fishing communities, fish catch (from all sources), forestry cover, and percent of land area reforested. Moreover, research and development in agricultural technologies have attained remarkable achievements in particular in the enhancement of knowledge in agricultural technologies in the following areas: (1) Developing high-yielding and high-quality seeds; (2) Land preparation methodologies; (3) Effectiveness of the utilisation of green manure residuals; (4) Land fertility management and utilisation of organic fertiliser; (5) Identification of types of pests and the size of their damages as well as preventing and fighting mythologies; and (6) timing of harvesting and seed-drying and seed-storage methodologies. From 2006 to 2009, to further develop this sector, key laws and regulations that have been put in place include:

- Law on Plant Seed Management and Plant Breeder Rights;
- Sub-decree on Phyto-sanitary Inspection;
- Sub-decree on Establishment and Management for Village Animal Health Workers (VAHWs);
- Sub-decree on Sanitary Inspection of Animals and Animal Product;
- Sub-decree on Abattoir Management and Meat and Animal Product Inspection;
- Law on Fishery;
- Sub-decree on Community Fisheries Management;
- Sub-decree on Endangered Fishery Product;
- Sub-decree on the Legal Procedures on Investments, Public Bidding, Contractual Leasing, and Payment of Fishing Fees;
- Sub-decree on Appointment of the Composition in the National Authority for Resolving Land Conflict;
- Sub-decree on International Trading of Endangered Wildlife and Wild-plants Species;
- Sub-decree on Establishment and Functioning of General Secretariat of National Authority for Resolving Land Conflict;
- Sub-decree on Forest and Non-Timber Forest Products Permitted for Import-Export;

- Sub-decree on Permanent Forest Reserve Classification, Transferring, and Conferring of Tenure Rights in Dom Rei Phong Area in Trapeang Pleang Commune of Chhouk District and Stung Keo Commune of Kampot District in Kampot Province;
- Sub-decree on Establishment of Control and Conservation Areas of Bird Sanctuaries for Sarus Cranes and other Birds in Boeng Prek Lopoeuv of Borei Cholosar and Koh Andet Districts in Takeo Province;
- Sub-decree on Detaching of Land Areas from Protected Forest Areas for Conservation of Genetic Resources of Wild-plants and Wildlife in Mondulhiri Province;
- Sub-decree on Rules of Conferring of Rights to Use State Forestlands for Tree Planting;
- Sub-decree on Transforming MAFF's General Directorates to General Secretariats; Upgrading Forestry and Fishery Administrations to General Directorate Levels; Upgrading the Department for Agronomy and Improving Agricultural Lands to General Directorate of Agriculture; and Transforming the General Directorate of Rubber Plantation to a MAFF's General Directorate;
- Sub-decree on Establishment of Protected Forest Areas for Recreation and Hunting Sport in Oya Dav, Ratanakiri Province; and
- Sub-decree on Establishment and Conservation of "Sei Ma" Protected-Forest and Biodiversity Areas of of Mondulhiri and Kratie Provinces.

Besides contributing to the increase in crop productivity, all of these technologies have also contributed to the diversification of cropping systems by shifting from mono-ricecropping to multiple cropping systems and animal husbandry by identifying appropriate soil types, timing and crops planting methods before and after wet-season rice cropping as well as crop rotation patterns in upland areas. Moreover, the MAFF has conserved 2,557 accessions of rice germ-plasma and identified rice varieties that are resistant to flood, drought and Brown Plant Hopper (BPH) along with the conservation of germ-plasma of other crops such as bananas, cassavas, chillies and papayas etc. in order to ensure sustainable use of natural recourses in Cambodia. In addition, the transfer of these technologies has been promoted through improved linkages between research and extension in the forms of human resource capacity development including short/medium training courses, field demonstrations, workshops, seminars, and conferences.

Over the years 2006-2008, the overall agricultural production has increased remarkably provided that concerned institutions have been striving to change farmers' behavior in crop farming practices, crop preservation and harvesting and to increase irrigation capacity together with favorable weather conditions. The share of the agriculture sector was 5.5 percent in 2006, 5.0 percent in 2007, and 5.7 percent in 2008. In 2008, the total cultivated land area was 2.61 million hectares, producing about 7.15 million metric tons of paddies resulting in an average yield of 2.74 tons per hectare and a surplus of 2.02 million metric tons of milled rice.

Over the 2004-2008 period of time, the livestock production has moderately increased and the number of cattle raised has increased by 2.5 percent on a yearly

average. The number of pigs raised has declined from 2.42 million heads in 2004 to 2.21 million heads in 2008 due to an increase in in-flows of pigs and other pig-related products from neighbouring countries. The animal husbandry sub-sector's contribution to the economy has steadily increased and accounted for about 4 percent. This sub-sector needs to grow in order to meet local needs to improve nutrition and to serve the tourism industry. The high priorities of MAFF include: (1) the development of legal and regulatory framework and human resource; (2) the reduction of animal morbidity and mortality rates; (3) improving public health particularly in relation to zoonotic diseases and food safety; (4) promotion of animal feed production; (5) improving the quality of animal breeding stocks; (6) promoting the use of animal manures for bio-gas production; (7) enhancing and strengthening research and extension programmes on livestock production and veterinary activities; (8) improving credit services for livestock production; (9) promoting the investment in livestock production and veterinary activities; and (10) promoting the markets for animals and animal-originated products.

Notwithstanding the significant progress that has been made, a number of challenges remain to:

- Increase productivity in rice and other crops; increase and improve access to extension services, credit and inputs; increase irrigation; ensuring better benefits for farmers through marketing; lack of farmer's knowledge in using agricultural inputs, techniques and soil improvement management.
 - Develop appropriate legal and regulatory tools and law-enforcement capacity for monitoring and control of agricultural inputs and management of agricultural soil and soil fertility such as Law on Agricultural Lands which defines land areas to be targeted for agricultural production and proper soil fertility management.
 - Improve post-harvest management; promote export and domestic markets for agricultural products (including rice – not merely paddy, fruits and vegetables); promote agro-industry including post-harvest processing; improve quality of standard of agricultural products; organise farmers' organisations for better bargaining power; aim for optimum use of land and other resources; and, encourage and increase private sector investments and participation.
 - Establish mechanisms at local level that can provide techniques and services to the farmers; promote programme of agricultural extension at local level; and promote the formation of farmer to be effective and partner with private sector.
- The livestock production in Cambodia has been adversely effected due to:
- Repeated threats from pandemic of severe animal diseases in particular HPAI and H1N1 and from natural disasters such as Ketsanna storm, which have caused a
 - great deal of losses of resources and claimed many people and animal lives.
 - Resources for prevention of the widespread of severe animal diseases and for animal health protection and cares are still limited.
 - The reluctance of some investors to invest in livestock production after the incidence of HPAI and the effect of animal products imported from neighbouring countries.
 - Lack of market competition for meat and animal feed resulting in high costs of animal feeds.

- Comprehensive laws and regulations pertaining to this sub-sector have not been adequately put in place for the effective implementation.

From food self-sufficient to food export: Cambodia has developed its economy based on agriculture as a core sector. Starting from surviving Khmer Rouge regime in 1979, the country had to produce foodstuff to feed its population. Later, the country started to ensure food self-sufficient and food security. The basic policies for development of agricultural, forestry and fisheries sectors from 2001 to 2005 are:

- To continue to focus on food security, especially at community and household level, and reduce poverty of the poor, the highest rate in agricultural sector. To increase food production, especially rice production and subsidiary crops.
- To contribute to the national economy growth through the exportation of surplus agricultural products.
- To improve the quality of agricultural products and increase value added by promotion of development of agri-industrial processing including the creation of new jobs for rural areas.
- To increase family income and reduce poverty through diversity crop production, high yield, and low production cost.
- To manage the natural resource through regulation and technical measures for sustainable exploitation.

Table 2.1: Main Agriculture Statistics

	Unit	2008	2009	2010	2011	2012	2013
Land under crops	000 ha	596	645	774	930	1000	1000
Irrigated land area	000 ha	1120	1145	1170	1195	1220	1245
Paddy: cultivated area	000,000ha	2.61	2.63	2.65	2.65	2.65	2.65
Yield per hectare	Tons	2.74	2.77	2.8	2.83	2.87	3
Fishing Lots	Sq.Km	415	415	415	415	415	415
Released to Community Fishing	%	56.4	56.4	56.4	56.4	56.4	56.4
Fish Catch (from all sources)	Tons	471	515	617	668	726	788
Forestry Cover	% of land area	59	57.59	57.99	58.39	58.79	59.19
Reforested (cumulative total from 1985)	Ha	10.81	18.92	73	73	73	73
Fuel Wood Dependency	% of households	73	67	61	59	56	54
Forest Demarcation	Km	321	228	413	500	500	500
Forestry Communities	no.	124	210	350	400	405	450

Source: NSDP Update 2009-2013

Table 2. 2: Paddy cultivation in Cambodia

Year	Paddy area (000 ha)	Production (000 ton)
2000	2,158	4,041
2001	2,241	4,099
2002	2,013	3,823
2003	2,314	4,170
2005	2,438	5,986
2006	2,541	6,264
2007	2,5886	6,727

Source: Ministry of Water Resources and Meteorology (March 2010). Irrigation development in Cambodia.

3. Investing in Agriculture

3.1. Investing in Agriculture by Government

It should be noted that investment in agriculture requires a huge amount of money to get a positive impact. Cambodia has a small annual budget and about half of which was financed by external assistance. Hence, investment by Government to agriculture is limited because of a budget constraint. Total budget disbursements in 2009 were USD 989.5 million, an annual increase of 3.5% and equivalent to 9% of GDP. Grant support accounted for approximately two-thirds of total disbursements. Japan remains the largest single source of development assistance, disbursing USD 148.4 million in 2009, an 18% increase from the previous year, while China provided support of USD 114.7 million to the infrastructure sectors, representing 13% of total aid and an annual increase of 20%.

Significant funds continue to be allocated to the social sectors, with the combined share of health, HIV/AIDS and education support representing more than 30% of all assistance in 2009. The transportation sector recorded a significant increase, with support rising by 20% in 2009 to become the largest aid-supported sector. The agriculture sector also received an annual increase of nearly 60%, rising to USD 91.2 million or 9.2 percent of the total. Rural development got only USD 62 million or 6.2 percent of the budget.⁴

The financial sources for agricultural development have been taken from national budget foreign assistance, NGOs and private sector. Public investment program in 2001 to 2003 allocated for agriculture was US\$210 million and investment in the sector as stated in the 2nd Social Economic Development Plan (SEDP II) was US\$500 million. In the Agricultural Sector Strategic Development Plan 2006-2010, MAFF has proposed main prioritized programs/projects by sector and sub-sector programs with a budget package of US\$153.27 million.⁵

⁴ According to the Aid Effectiveness Report (2010)

⁵ MAFF (2005), p.31

Though agriculture and rural development are classified as priority areas, public investment to the sectors is still very low. According to Public Investment Programme 2010-2012, the Government is planned to invest only 13 percent of the fund to agriculture.⁶

The government's National Poverty Reduction Strategy (NPRS, 2003-2005) recognizes the need to deepen and accelerate reforms and to focus the limited resources on four pillars: agriculture and rural development, education, health, and infrastructure. Although both the government's Second Socioeconomic Development Plan (SEDP 11, 2001-2005) and NPRS have identified general priorities for the rural sector, more work is needed to develop concrete programs to revitalize the rural economy. To maximize impact, these plans need to start with a clearer and more strategic articulation of priority actions that link reforms and investments to available resources, improve the focus on outcomes and results, and strengthen the coordination between among stakeholders.⁷

Rural infrastructure in Cambodia started to be developed gradually. The Ministry of Rural Development and other government agencies in cooperation with private sector build rural roads, health centres, pagodas and schools, dig water wells for drinking water and provide educations on primary health care, etc.

Table 3.1: Main Statistics for Rural Development

	Unit	2008	2009	2010	2011	2012	2013
Rehabilitated roads (of total 28,000 Kms)	Kms	24,1	25,6	26,6	27,6	28,6	29,6
Access to Improved drinking Water (rural)	% of pop.	40	58	58	58	58	58
		40.4	41.9	43.4	44.9	46.4	47.6
		9	9	9	9	9	9

Source: NSDP Update 2009-2013

Water is a critical natural resource. Its appropriate use and management are key for rural development and poverty reduction in five ways: (1) as a key input to agriculture production to improve rural livelihoods, food security, and nutrition; (2) as the single most important source of hazard risk in the extremes of its availability-droughts and floods; (3) as the source for safe drinking, bathing, sanitation, and other domestic uses-to reduce illness from water-borne disease and related costs of health care and impairment for work and education; (4) as the basis of the aquatic ecosystem to sustain inland capture fisheries production; and (5) as an important mode of transportation for both people and goods, particularly in isolated areas during the wet season.⁸

Cambodia has abundant water resources. It receives an estimated annual runoff of 475 billion cubic meters (BCM) from the Mekong system, which drains over 85 percent of the country. However, rainfall is concentrated in the six-month wet season, and there is

⁶ PIP (2010- 2012)

⁷ World Bank (2005)

⁸ World Bank (2005), Cambodia Rural Sector Strategy Note: Towards a Strategy for Rural Growth and Poverty Reduction, Report No. 32784-KH

very little reservoir storage to capture and regulate wet-season runoff. During the six dry months, evapo-transpiration far exceeds rainfall, and river levels drop significantly, resulting in limited available surface water resources, outside of the Mekong River mainstream and Tonle Sap. Floods are an annual occurrence and are virtually unmanaged, except for a dike that protects Phnom Penh. The annual floods bring positive benefits to the flood plain by replenishing soil nutrients and moisture, and dispersing fish for spawning. However, they also damage infrastructure, crops, and personal property as well as cause costly restrictions to economic and other activities. Groundwater resources are estimated at approximately 20 billion cubic meters overall, but the potential for groundwater use is uneven geographically, and is relatively uninvestigated and untapped. In many areas, aquifers are complexly layered. Furthermore, high arsenic levels are a serious problem in some areas near the Mekong mainstream.

Climate change and deforestation contribute to more frequent natural disasters in Cambodia. Drought and lack of water is the main concern for farmers. “I am concerned about not having enough water to supply to my rice seedlings this year ... because of drought and a lack of irrigation systems,” said Kuch Veng, a farmer from Krakor district in Pursat province. Tan Soksan, a farmer in Kampong Chhnang’s Rolea Phear district, agreed that it had been difficult to grow rice this year due to water shortages. “I and other farmers in my village have serious concerns about the lack of rains,” he said, and some rice crops had died due to lack of water.⁹

Having seen the importance of rural development and water resources, the Government has annually invested in the sectors. However, due to budget constraints, the public investment in the sectors is still very low. As seen in Table 3.2, only about 10 percent of public investment was allocated to rural development and only 4.42 percent to water resources, water supply and hygiene.

Table 3.2 : Public investment Programme 2009-2012 (unit thousands of US dollars)

Sectors	Amount	%
Social Sectors		
Health		17.18%
Education		14.16%
Total		31.34%
Economic Sectors		
Agriculture		13.19%
Crops		6.70%
non-crops		6.49%
Rural Development		10.15%
Manufacturing Mine and Trade		2.54%
Total		25.88%
Infrastructure		
Transport		17.15%
<u>Water Resources, Water Supply and Hygiene</u>		4.42%

⁹ Ministry of Agriculture, Forestry and Fisheries, <http://www.maff.gov.kh/en/>

Energy and Electricity	4.21%
Post and Telecommunication	1.91%
Total	27.68%
Services and Inter-sectors	
Gender Mainstreaming	0.11%
Tourism	1.25%
Environment and Conservation	3.19%
Community and Social Services	2.50%
Culture and Fine-Arts	1.11%
Capacity Building, Governance and	6.94%
Total	15.10%
Grand Total	100.00%

Source: PIP (2009- 2012)

Table 3.3: Number of irrigation system and area by province

No	Province	Irrigation System	
		Number	Area (ha)
1	Banteay Meanchey	125	35,576
2	Battambang	60	59,292
3	Kampong Cham	340	85,277
4	Kampong Chhnang	134	48,940
5	Kampong Speu	107	23,845
6	Kompong Thom	204	77,162
7	Kampot	75	69,707
8	Kandal	252	68,927
9	Koh Kong	13	5,307
10	Kratie	169	9,235
11	Mondul Kiri	18	3,001
12	Phnom Penh	10	6,328
13	Preah Vihear	94	30,366
14	Prey Veng	241	71,221
15	Pursat	64	25,435
16	Ratanak Kiri	32	6,997
17	Siem Reap	224	122,203
18	Sihanoukville	20	15,530
19	Stung Treng	25	5,693
20	Svay Rieng	43	102,256
21	Takeo	114	121,295
22	Oddor Meanchey	29	48,364
23	Kep	9	3,786
24	Pailin	1	520
	Total	2,403	1,046,263

Source: Ministry of Water Resources and Meteorology 2004

Irrigation works with national budget (Completed by 2008)

- rehabilitation/construction of irrigation systems for 328,305 ha
- repair of 794 small pond (reservoir) with dike length of 377 km by farmer participation
- repair of 1,266 canals with total length of 2,256 km by farmer participation
- rehabilitation of 270 gates, 377 culverts, 90 check structures, 29 spillways
- installation of new 12 pumping stations and repair of 78 pumping machines

Table 3.4: Irrigation projects with foreign budget completed by 2009

Irrigation Project Profile Number	Project Name/Title	Donor	Remarks
16-1	Colmatage Irrigation Rehabilitation Project (2,122 ha)	Japan	Completed in 2002
17-1	Stung Chinit Irrigation and Rural Infrastructure Project (3,00 ha)	ADB and AFD	Completed in 2008
24-1	Integrated Development in Battambang Province (1,950 ha)	FAO	Completed in 2008
27-1	Bassac Dam Rehabilitation Project in Battambang Province (20,00 ha)	Japan	Completed in 2006
34-1	Rahabilitation of the Kandal Stung Irrigation System in the Lower Prek Thnot Basin (1,950 ha)	Japan	Completed in 2007
MP-1	Study on Comprehensive Agricultural Development of Prek Thnot River Basin (River Basin No.34)	Japan	Completed in 2005
MP-2	River Basin and Water Use Study for Northwest Irrigation Sector Project (River basin No.24)	ADB+AFD	Completed in 2006
MP-3	Master on Water Resources Development in Cambodia (all 42 river basins)	Korea	Completed in 2008
MP-4	The Basin-Wide Basic Irrigation and Drainage Master Plan Study in the Kingdom of Cambodia (River basin No 26, 27, 28,29)	Japan	Completed in 2009

Source: Ministry of Water Resources and Meteorology (March 2010). Irrigation development in Cambodia.

3.2. Investing in Agriculture by Private Sector

With strong policy support from the Government, private sector in Cambodia grows rapidly. Private sector is very active in investing in all sectors including agricultural development due to personal motivation and profit driven benefit. The number of agricultural and agro-industrial companies both local and foreign ones is rapidly increasing. Farmers in some areas started to use modern technique and

mechanization in agriculture such as farming, harvesting, milling and storage. The Government has encouraged Foreign Direct Investment in agriculture by providing incentive package to investors. However, FDI in the sector is still very low due to many constraints. According to CDC, FDI in agriculture cover about only 5 percent of total.¹⁰

The Council for the Development of Cambodia (CDC) recently approved agricultural investment projects worth more than \$230 million, involving rubber, palm oil and sugar production and processing.¹¹ China's Yellow Field International Ltd and Great Field International are planning to invest \$74.6 million and \$66.4 million respectively to grow sugar cane and other crops; Vietnam plans two rubber plantations and processing factories; a Malaysian company is investing in a palm oil plantation, while United States-based Horizon Agriculture Development and Singapore and Malaysia's Mondul Agri Resources plan to invest \$28.8 million and \$30 million respectively to grow rubber trees.

For investors looking to grow and process crops, Cambodia is an ideal location as it has plenty of land available for agricultural concessions. From 1993 to 2009 a total of 126 companies were granted land concessions for growing crops, according to a report from MAFF. Concessions for the period totalled 1,335,724 hectares in 16 provinces.

Cambodia is rich in farmland and hopes to attract more investment to the sector. The country wants to develop its rice exports and therefore welcomes investors, especially those willing to work with small farmers. In return for investments such as credit and technical assistance, farmers would be contracted to sell their crops to the investor.

Private sector is also investing in providing micro-credit for farmers for buying fertilizer, and other inputs for farming and in irrigation. However, capital is still a big stumbling block for rice entrepreneurs. Lim Bun Heng, president of rice processor and exporter Loran Import-Export Co. talked to Phnom Penh Post on December 21, 2010 that "we have seen that local rice growers and millers are likely to not have enough capital to buy the remaining rice during harvest season because most of them have insufficient capital. Given this lack of capital, we are able to buy only a small quantity of [unhusked] rice compared with outside merchants from neighboring countries like Thailand and Vietnam."¹²

Box 3.1: Steong Sen Water Community

Steong Sen is the name of a small river running across Provincial Capital of Kompong Thom. Though there is a river with permanent water, rice fields in the areas, even near the river, have no water to plant dry season rice. Hence, Steng Sen community is formed in June 2010 by a group of young graduates and entrepreneurs who want to provide irrigation water to develop rice farming with two harvests per year. The

¹⁰ Chap and Chheang (2010) p.17

¹¹ Investing in Cambodia Magazine at <http://www.investincambodia.com/agriculture.htm> accessed on 26 January 2011

¹² Phnom Penh Post, December 21, 2010

community will irrigate about 3,000 hectares of rice fields in 3 Sankats (communes) in Krong Stung Sen (provincial capital) of Kompong Thom province. Taking successful experiences from water (irrigation) communities in Koh Andeth district, Takeo province, the community plans to invest about US\$100,000 in repairing irrigation network left from Khmer Rouge regime and equipping 2 new big water pumps to pump water from Stung Sen river to water the dry season rice for the farmers. In making profit and to recover the cost, the community signed contracts with about 1,000 farmers who need irrigated water and the farmers have to pay in two steps: 1) 30 litres of diesel at starting the season and 2) 420 kg of paddy per hectare after the harvest. It is expected to produce high yield rice of about 6 tons per hectare or twice higher than national average. This is a Win-Win approach by which the community gains profit while farmers gain more rice.

Source: Interview with one of the Stung Sen Water Community Leaders

Many FDI projects involve contract farming and land concession in agricultural land. However, some concessions are not successful due to many reasons such as conflict in land with the local people and land speculation. Private sector is also investing in providing micro-credit for farmers for buying fertilizer, and other inputs for farming and in irrigation.

Box 3.2. Soma Farm

Located in Takeo province, Soma Farm was created to be part of an agricultural development program. Today, the focus goes beyond a simple agricultural development program and into bringing the agro-tourism concept into reality by creating a sustainable tourist development and multi activity in rural areas. Soma Farm is a locally owned and operated company that grows and wholesales cattle, chickens, chicken eggs, fish, jackfruits, coconuts, mango, vegetable, paddy, paddy seed and polished rice. The company caters toward enhancing the local agricultural productions and stressing on the fact that “we can produce with quality”. The Soma facility is situated in Bati District, Takeo province, covering over 300 hectares of land for plantation, livestock and orchid farms. The pilot rice field at Kirivong district with an approximate of 350 hectares is used to grow paddy seed and paddy with modern techniques with best quality perfume rice as a showcase for farmers in the areas. Soma Farm is a Khmer company proud to be a member of the One Village One Product (OVOP) program.

Source: Soma Farm Co,Ltd brochure and website: www.somagroup.com.kh

3.3. Investing in Agriculture by NGOs

Cambodia is considered as NGOs’ Heaven. There are about 2,000 local and international NGOs operating in the country in many areas. As the other stakeholders, the NGOs in Cambodia have been playing significant roles in the process of development and poverty reduction. They are not only the catalyst for democratization and governance but also the bridge to link the public sector and the private sector.¹³

¹³ Chap (2006)

A lot of civil societies focus their activities in rural development, rural credit, small business initiatives, health promotion, technical know-how in agriculture and handicraft while some other expand their activities in advocating democracy, human right, capacity building and education in governance, legal framework, etc. The participation of NGOs working at the grassroots level, the think tanks working in research and development, and the media working in dissemination of information, technology and education has a big impact in the process of economic development in Cambodia. There are many NGOs as well in Cambodia investing in agricultural development. CEDAC is one of the successful examples of NGOs contribution in the sector (see Box 3.3).

Box 3.3: CEDAC (Centre d'Etude et de Développement Agricole Cambodgien) or Cambodian Centre for Study and Development in Agriculture

Established in August 1997, CEDAC envisions a Cambodian society where small farming households enjoy good living conditions and strong mutual cooperation, with the right and power to determine their own destiny, as well as playing an important role in supplying healthy food for the whole society. CEDAC was established with an initial support from the French non-government organization GRET (Group for Research and Exchange of Technology). Only seven staff worked for CEDAC in the beginning to support farmers in 2 villages in Kandal Province. As of November 2010, CEDAC employed 297 staff including 95 women (263 of them or 88.55% work as technical staff and another 34 staff or 11.45% work as administration/supporting staff) providing direct assistance to about 124,000 families from 3,471 villages, 609 communes and 101 districts in 20 provinces of Cambodia. More than 700 students and more than 4,000 rural development practitioners have benefitted from CEDAC's training and exchange program. More than 100 organizations and agencies (community, national and internal organizations foreign government agencies, and multilateral organizations) have cooperated with CEDAC during 12 years of operation.

Source: CEDAC Website: www.cedac.org.kh

3.4. Agricultural Support from Donor Communities

The international donor agencies have supported agricultural development in Cambodia through different programs and projects. For the Japan International Cooperation Agency (JICA), it cooperates with MAFF on "Agricultural Productivity Promotion Project in the West Tonle Sap" or APP Project. This project mainly focuses on the improvement of productivity and marketing of agricultural products in the West Tonle Sap region through technical support to Provincial Departments of Agriculture in Battambang, Pursat and Kampong Chhnang provinces. In the same region, JICA has been implementing another technical cooperation project since September 2009, which targets to improve agricultural river basin management through the capacity development of engineers in the Technical Service Center (TSC) of Ministry of Water Resources and Meteorology.

For Australia, under AusAID, it introduces Cambodia Agricultural Value Chain Project (CAVAC) from 2009 to 2013 to Cambodia's agricultural sector. The aim of the project is to deliver practical benefits including improved food security, increased

income and reduced vulnerability of poor farmers engaged in rice-based farming systems. The project will promote market-oriented agricultural development and product diversification, with an initial focus on rice, vegetables and fruit. The project will initially focus on three provinces: Kampong Thom, Takeo and Kampot. Consideration will be given to expanding the program to other provinces and value chains in future years.

Under the funding from the European Union, the second package of €6.9 million (about \$ 10 million) was awarded to three NGOs (Gret, ZOA, Helen Keller International) and a National development agency (GTZ) in implement food security project from 2010: **Gret** uses the funds to improve the economic and nutritional situation of 15 000 family-scale farms and to increase the resilience of farming families to distress situations through safety net mechanisms (rice banks, health insurance) in ten provinces including Battambang, Kampot, Kampong Cham, Kampong Speu, Prey Veng, Siem Reap, Svay Rieng, Takeo, Kandal, Kampong Thom (EU contribution is over €1.9 million for one and a half year). **ZOA** works to improve the access to irrigation and agricultural inputs of 3 500 families; in addition 10 rice seed stores will be built and 500 semi-urban land poor families will be encouraged to develop income-generation activities in Oddar Meanchey province (€1.25 million for one and a half year). **Helen Keller International** received a grant for improving food security and livelihoods of 6 000 vulnerable farming households in Prey Veng and Pursat provinces (more than €1.7 million for nearly two years). **GTZ** works to improve food security and access to essential services for poor households in rural areas of Cambodia by developing more efficient mechanisms for targeting poor households, in order to support the rapid implementation of poverty alleviation measures and the delivery of specific services and assistance (EU support of €2 million for about two years).

The United States Government, through the U.S. Agency for International Development, or USAID, has awarded a five-year, multi-million dollar contract, designed to improve Cambodia's food security through enhanced agricultural development and better management of natural resources. The five-year contract was awarded to Fintrac, a U.S.-based agribusiness consulting firm that develops agricultural solutions to end hunger and poverty. "Helping Address Rural Vulnerabilities and Ecosystems Stability", or "HARVEST", the Project, will work with public, private and civil society to strengthen food security by increasing agricultural productivity; raising the incomes of the rural poor; preparing the country to adapt to climate change; and reducing the number of Cambodians, especially women and children, suffering from malnutrition. They will be designed in close coordination with the Royal Government of Cambodia, with local stakeholders and with other development partners in order to maximize the collective impact on sustainably reducing hunger and poverty. A "focus on food" approach to rural income diversification and value-chain strengthening will help the Cambodian agricultural sector to become a major contributor to stable and sustainable economic growth for Cambodia and the region. Improved land and other resources management will conserve and maintain the economic value of Cambodia's sensitive ecosystems and rich biodiversity as well as reduce the vulnerability of agriculture and rural communities to climate change. Permanently reducing hunger and maintaining sustainable use of natural or communal resources are the central goals of HARVEST.

4. Regional Environment

Cambodia's economic growth has been strongly driven by external factor which is globalization and regionalization process. Being part of ASEAN family in 1999 and World Trade Organization in 2004 provides Cambodia with opportunities to expand its market to the region and the world. Most of foreign direct investment in Cambodia focuses on external market.

With the emphasis on agricultural development from the state leadership, private companies from both domestic and international have invested remarkably in agro-industry and business. Land concession has been developed to attract large scale investors. Domestic rice exporting companies are mushrooming to explore international market from Europe to US and China.

Regional cooperation in Southeast Asia and the Mekong region has contributed to provide more favorable condition for regional policy coordination and joint development of agricultural sector. ASEAN Free Trade Area and Greater Mekong Subregional Cooperation Scheme give basic ground for the better trade and infrastructure connectivity in the region. The cost reduction in production and transportation helps increase the competitiveness of regional agricultural products to enter larger regional market such as China and other continental markets in Europe and America.

Regional cooperation on agricultural development at both ASEAN and Mekong Subregion has benefitted the member countries especially the exporting countries of agricultural products. Through regional cooperation and integration, Cambodia can develop its agriculture and realize its export through policy coordination, market information, infrastructure, and institutional connectivity.

4.1. ASEAN regional cooperation

Agriculture is one of the main industries in Southeast Asian region. Regarding rice production, ASEAN is the world's leading rice producer, with Thailand and Vietnam alone making for more than half of the global rice trade totaling about 30 million tones of milled rice a year. In 2010, ASEAN produced 155.5 million metric tons, 3.6 percent higher than 2009. The increase of rice supply in 2010 is mainly due to the increase in stock carried over from previous year.¹⁴

So far ASEAN has adopted and implemented various cooperation projects on agriculture and food security. Agreements on agriculture adopted by ASEAN leaders include Agreement on the ASEAN Food Security Reserve in 1979, Declaration on Objectives regarding the ASEAN Agriculture Development Planning Center in 1980, ASEAN Declaration on Specific Animal Disease Free Zone in 1981, ASEAN Declaration on Eradicate Foot and Mouth Disease in 1981, ASEAN Ministerial Understanding on the

¹⁴ ASEAN Agricultural Commodity Outlook (2010). http://afsis.oae.go.th/ACO_No_4_report.pdf

Standardization of Import and Quarantine Regulation on Animal and Animal Products in 1982, ASEAN Ministerial Understanding on Fisheries Cooperation in 1983, ASEAN Ministerial Understanding on ASEAN Cooperation in Agricultural Cooperatives in 1984, ASEAN Ministerial Understanding on Plant Pest Free Zone in 1984, Ministerial Understanding on ASEAN Cooperation and Joint Approaches in Agriculture and Forest Products Promotion Scheme in 1994, Program of Action for ASEAN Cooperation in Food, Agriculture and Forestry 1995-1999, Memorandum of Understanding on ASEAN Sea Turtle Conservation and Protection in 1997, Agreement for the Establishment of ASEAN Animal Health Trust Fund in 2006, and ASEAN Statement on Strengthening Forest Law Enforcement and Governance in 2007¹⁵. In addition, ASEAN Ministers of Agriculture and Forestry convene an annual meeting to discuss and issue a joint statement on agricultural development concerns. At the 32 meeting in 2010 in Cambodia, the Ministers reaffirmed the role and progress of agriculture in realizing ASEAN Community and the Millennium Development Goals.

The sharp increase in international food prices in 2007/2008 has brought serious concern on possible socio-economic impacts of ASEAN Member States. The ASEAN cooperation is highly expected as a means to address the problem, especially by strengthening existing ASEAN initiative/ measures. In addressing the long-term food security in the ASEAN region, an ASEAN Integrated Food Security (AIFS) Framework for 2009-2013 was developed to provide scope and joint pragmatic approaches for cooperation among ASEAN Member States. The goal of SPA-FS is to ensure long-term food security and to improve the livelihoods of farmers in the ASEAN region. To achieve the goal, the following objectives are emphasized:

- a) To increase food production;
- b) To reduce postharvest losses;
- c) To promote conducive market and trade for agriculture commodities and inputs;
- d) To ensure food stability;
- e) To promote availability and accessibility to agriculture inputs; and
- f) To operationalize regional food emergency relief arrangements.

In 2010, the major ASEAN rice-producers Thailand, Vietnam, Laos, Cambodia and Burma decided to form an association to create a sustainable system for trading and production. It focuses on price stabilization, food security in the region and rice development. ASEAN rice millers association was formed in August 2010. The members aim to upgrade the quality of the milling process, strengthen rice management and create more of an integrated rice production network among ASEAN members. The initiative will strengthen the role of millers, middlemen in the rice production process. The effort taps the capacities of rice millers among ASEAN members that produce 25 percent of the world's total output of 448 million tones and supply up to 65 percent of the world's 29-million-tonne global rice trade.¹⁶ In the context of ASEAN, the member

¹⁵ ASEAN Secretariat, <http://www.aseansec.org/19822.htm>

¹⁶ ASEAN Affairs (2010). ASEAN Rice Alliance Formed. http://www.aseanaffairs.com/asean_news/agriculture/asean_rice_alliance_formed

countries can export rice to each other under tariff range from 0 to 5 percent (see Table 7).

Within an extended ASEAN regionalism, ASEAN has reached free trade agreements with China, Japan, and South Korea. From January 2010, China and ASEAN started to implement its Free Trade Agreement. Under ASEAN-China FTA, China provided ASEAN member countries with the Early Harvest Program. Such program could assist agricultural development and economic growth in Cambodia through export opportunities of products such as fresh fruits, livestock, fish, shrimps and prawns. However, Cambodia could not enjoy the full potential of the program due to the absence of macroeconomic stability, a sound business climate, adequate legal frameworks, sufficient infrastructure and effective government institutions. Cambodia has not yet fulfilled these prerequisites.¹⁷ In addition, The lack of information on regional market, lack of government support in facilitating export, and the lack of firm's capacity are the main constraints in promoting Cambodian agricultural export to the region.¹⁸

Table 7: ASEAN Tariff Scheme in Rice

Rice	Status 2007	Status 2008	MFN Tariff	Tentative CEPT rates			
				2007	2008	2009	2010
- Rice in the husk (paddy or rough):							
1006.10.10 - - Suitable for sowing	N	N	0	0	0	0	0
1006.10.90 - - Other	N	N	7	5	5	5	5
- Husked (brown) rice:							
1006.20.10 - - Thai Hom Mali rice	N	N	7	7	7	7	5
1006.20.90 - - Other	N	N	7	7	7	7	5
- Semi-milled or wholly milled rice, whether or not polished or glazed:							
- - Fragrant rice:							
1006.30.11 - - - Whole	N	N	7	5	5	5	5
1006.30.12 - - - Not more than 5% broken	N	N	7	5	5	5	5
- - - More than 5% but not more than 1006.30.13 10% broken	N	N	7	5	5	5	5
- - - More than 10% but not more 1006.30.14 than 25% broken	N	N	7	7	5	5	5
1006.30.19 - - - Other	N	N	7	7	7	7	5
1006.30.20 - - Parboiled rice	N	N	7	6	6	5	5
1006.30.30 - - Glutinous rice (pulot)	N	N	7	7	7	5	5
1006.30.40 - - Basmati rice	N	N	7	6	5	5	5
1006.30.50 - - Thai Hom Mali rice	N	N	7	7	5	5	5
- - Other:							

¹⁷ Hing Vutha and Noun Keosothea (2006), Early harvest programme: Implications for Cambodian agriculture. CDRI Special Report 4, May 2006. CDRI, <http://www.cdri.org.kh/webdata/download/sr/ehpe.pdf>

¹⁸ Chap and chheang (2010b). Trade liberalization under ACFTA and its possible impacts on Cambodian Industries. ADB Unpublished Research Paper.

1006.30.61	- - - Whole	N	N	7	6	5	5	5
1006.30.62	- - - Not more than 5% broken	N	N	7	6	5	5	5
	- - - More than 5% but not more than							
1006.30.63	10% broken	N	N	7	6	5	5	5
	- - - More than 10% but not more							
1006.30.64	than 25% broken	N	N	7	7	5	5	5
1006.30.69	- - - Other	N	N	7	7	5	5	5
1006.40.00	- Broken rice	N	N	7	7	5	5	5

NOTE: CEPT: ASEAN Common Effective Preferential Tariff Scheme

N: Normal Track of the Inclusion List

Source: ASEAN Secretariat, <http://www.aseansec.org/18137.htm>

4.2. Mekong Subregional Cooperation

The Mekong Subregion relies much on agriculture for economic development and livelihood. The Mekong River is the main biggest water flow in the region supplying the production of agricultural products especially rice cultivation. Thailand is the world's biggest rice exporter, exporting about 8 million tons per year. Vietnam exports approximately 6 billion tons per year. Cambodia exports much less than Thailand and Vietnam with about 100, 000 tons per year. The Cambodian government commits to increase its export to reach 1 billion ton by 2015. Agriculture in the Subregion has been developed from traditional subsistence to commercial farming by introducing agricultural machinery and land expansion. Such trend encourages regional leaders to cooperate and find the market for their products.

However, climate change and the decreasing water flow in the Mekong River are threatening the agricultural development in the region. In early this year 2010, Mekong River is facing with lowest water flow in the last fifty years. According to the Mekong River Commission's research, it reveals that the main causes of this phenomenon are the result of extreme national conditions. Very low rainfall in this dry season, following a particularly end to the wet season in 2009.

According to Jeremy Bird, CEO of the Mekong River Commission, such phenomenon is putting many people in serious poverty. "Difficulties in access to water make livelihoods farming and fishing more precarious for affected communities and raises the risk of disease from use of polluted sources. Low water levels have also severely disrupted river transport both for trade and tourism, further affecting livelihoods of people who depend upon the river".¹⁹ According the scenarios studies by the MRC research team, it predicted that Cambodia and Vietnam would be hardest hit by climate change and sea level rise and a series of hydropower dams construction in the upstream. Agricultural sector will be seriously hit due to seasonal change, lack of rain and water.

¹⁹ Mekong River Commission (2010). Low river levels caused by extreme low rainfall http://www.mrcmekong.org/mrc_news/press10/Op-Ed-13-3-10.htm

During the meeting among Mekong regional leaders in Phnom Penh in November 2010 called the Ayeywady-Chao Phraya-Mekong Economic Cooperation Strategy Summit, Cambodian Prime Minister Hun Sen proposed a regional rice agreement in order to boost rice production and export. He stated “the aim of ACMECS to create the Association of Rice Export is to ensure the stability of food in the world and at least in the region, which is suffering from climate change”.²⁰

5. Global agricultural trade: unfair but improving²¹

Agricultural Market Access: While opportunities for trading in industrial goods are normally clear and competition relatively fair, that cannot be said of agricultural trade. The global trading system is now fragmented by regional, bilateral and preferential trading arrangements. As an LDC, and a member of the ASEAN Free Trade Area (AFTA), Cambodia benefits from many such arrangements. Market access barriers are often high. Subsidies in developed countries distort markets seriously, and food safety standards are increasingly complicating export opportunities for poorer suppliers.

For nearly fifty years, farm goods were excluded from the normal disciplines of world trade. GATT maintained a series of special conditions that permitted the growth of subsidies, and high and unpredictable market protection. The world market for many important agricultural products are completely artificial. Special rules allowed the European Community to develop its complex systems of market protection, domestic subsidization of farmers, and export subsidies called the "Common Agricultural Policy" (CAP). The US sheltered long-standing farm subsidy programs. Japan, Switzerland, the Scandinavian countries, and most other developed countries, were able to maintain highly protected agricultural sectors.

Tariff Quotas: The WTO outlaws the use of quotas on imports and exports. Customs duties are the main legal form of protection, but there are two important exceptions, in the garments and agricultural sectors. The permitted use of quotas in the agricultural sector are termed "tariff quotas" because they allow a certain volume of access to the market at a low or zero customs duty. All imports outside the tariff quota are subjected to a much higher tariff, usually so high that imports cannot compete. The system of tariff quotas in the WTO is in place largely to ensure that very high tariffs cannot act to eliminate imports completely. Around 1,400 tariff quotas are currently in place affecting access in about 43 WTO member countries. Cambodia itself does not use tariff quotas under the WTO, but agribusinesses exporters in Cambodia will often encounter them directly or indirectly.

Cambodia already benefits from many favorable trade relationships. The influence of WTO accession on the further opening of the Cambodian market is limited. Where they do not enjoy preferential access terms, its exporters seldom have to pay duties above the local MFN applied rates. The principal market access advantage for Cambodian

²⁰ Kong Sothearith, VOA Khmer Phnom Penh, Thursday, 18 November 2010

²¹ Sok Siphana, “Breaking into the World Markets for Cambodian Agriculture Products”, Policy Discussion Paper, SNEC, November 2009.

producers in export markets will be the security of the bound tariffs committed by all other WTO members. In almost 150 countries, Cambodian exporters will have a guaranteed ceiling to the customs duties they can be charged by customs authorities.

The availability of tariff advantages under the Generalized System of Preferences (GSP) will continue to be important for Cambodian exporters, especially for some major industrial country markets like the US. GSP benefits cannot be guaranteed in the WTO, and their application is often subject to arbitrary decisions by the importing countries. Although all developing countries can qualify for most GSP schemes, there is increasingly a view in the industrial world that it should be the poorest nations that receive the most benefits.

Dealing With Non-Tariff Barriers: Once favorable customs duties are identified as market opportunities, other obstacles, called "non-tariff barriers," will affect whether or not Cambodian products succeed. WTO membership have proven especially useful in dealing with these barriers. In joining the WTO, Cambodia has had to take on the requirements of a series of agreements on non-tariff measures. But these rules, and a range of others, also apply to Cambodia's main trading partners in the WTO. They should all act to restrict the ability of WTO Member governments to block Cambodian imports unfairly.

Technical Standards as a Trade Barrier: An area in which non-tariff barriers can hit Cambodian exports is the use of technical standards. International agreements usually recognize a difference between compulsory standards and voluntary standards. In the WTO, compulsory standards are usually referred to as technical regulations. However, to meet real market needs, Cambodian exporters will usually have to try to meet all relevant standards, whether they are voluntary or compulsory. In doing so, a variety of testing, certification, and conformity assessment procedures, as well as mutual recognition arrangements, need to be understood.

Market conditions for Rice Export: The rice sector is heavily protected and subsidized, hence the relatively low level of international trade compared with demand. There are a lot to the political sensitivity. Some rice-growing traditions often retain an almost religious significance. There is also the issue of national food security. Bound tariffs on rice in key markets are usually very high, often over 100%. Special treatment on market access applies particularly to Japan, Korea, the Philippines. Taiwan have all avoided the "tarrification" of the rice sector by providing access through tariff quotas amounting to 8% of their consumption. Tariff quotas operate, under WTO commitments, for Colombia, Costa Rica, Indonesia, Morocco, Thailand, and Venezuela. China opened a large tariff quota up to 4 million metric tons a year at a 1 % duty rate when it joined the WTO. The EU's "Everything but Arms (EBA)" preferential arrangements initiative has since 2009 allowed rice import complete duty-free, quota-free treatment.

The market access conditions for rice in ASEAN are almost as complicated as those under the WTO. Rice is covered under AFTA terms for sensitive products. This applies to Indonesia, Malaysia, the Philippines, Vietnam, and Cambodia itself. Indonesia has

bound an MFN rate for rice at Rp. 430/kilo. Malaysia, as a large importer, offers access at a zero CEPT rate (although importers need permission from the Malaysian authorities to secure this rate). Singapore is tariff free. Thailand has a bound rate at B3.00/kilo and a CEPT applied rate at 5%. 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. Rice is not included in the duty-free list under the "early harvest" arrangement with China.

Market conditions for Cashew Export: Cashew nuts are a favorite snack food and confectionary ingredient in many countries, second to almonds in global tree-nuts market share. The cashew nut market is estimated at 350,000 tons of kernels and growing as consumer eating habits change toward more snack foods. The major consuming countries are the United States, European countries, India and China. The United States alone consumes 73,000 tons per annum.²²

The world market for cashew nuts is highly dynamic compared to the other industries. The dramatic increase seen in recent years in the consumption of almonds is based on heavy promotion and consumer awareness of the health benefits. Cashew market share in the snack sector has remained relatively stable in the West. Cashew prices are buoyant, even in recession. This can continue as a function of diversified demand as countries such as India, China and in the Middle East become more important markets. Viet Nam is now the biggest cashew nuts producer worldwide, with high growth rates in recent years; the other main producers are India, Brazil and several African countries.

Market access conditions for the cashew nut industry throughout the world are favorable compared to the other industries. Tariffs for Cambodian cashew kernels in most regional markets are low and Cambodia faces the same tariffs as its main competitors. Overall Cambodia's tariff advantage is 0.2%. The major importing countries (USA, EU, Australia, Canada, Japan, India) apply a zero MFN tariff for RCN and kernels. Some ad-valorem tariffs in % are (MFN / preferential tariff for Cambodia): China (MFN -10% / Cambodia – 5%), Indonesia (MFN - 5%/ Cambodia – free), Japan (Cambodia – free), South Korea (MFN - 8% / Cambodia – free), Lao PDR (MFN -30% / Cambodia – 10%), Malaysia (Cambodia – free), Thailand (MFN -40% / Cambodia – free), Viet Nam (MFN - 40% / Cambodia – 5%).

Tariffs for RCN are only relevant for countries that have a processing industry, notably Viet Nam and Thailand. Viet Nam applies a 10% tariff to Cambodia, but it is not clear whether this is actually paid, as the trade is informal. India, the world's biggest RCN importer, applies an MFN tariff of 30%.

Standards and SPS measures apply, which will become an issue for Cambodia once processing and direct exports to consuming countries have started. As a luxury product, cashew nuts require careful attention to product quality, not just organic certification.

²² Sok Siphana, Cambodia Study: "Operationalising the Rectangular Strategy for Growth: Towards Better Business Processes for Trade", Business Process Analysis (BPA), ESCAP 2011 (Draft)

Traceability is fast becoming a requirement for most food products going into developed country markets, a trend accelerated by recent chemical and salmonella contamination disasters, in China and the USA respectively.

Farmers selling to local collectors, who sell on to middlemen, who sell to export traders, is typical. In fact, this is the experience in every country that lacks its own indigenous shelling operations. The long chain usually inhibits returns to growers. Cambodia has a distinct advantage over other exporting countries due to its proximity to the market for in-shell cashews.

The Asian regional markets so far identified are Thailand, which imported 1,775 mt in 2007, mainly from Vietnam; Singapore, a small market in the region (1,000 mt per year) but a market in which organic is becoming significant; and China, which may become a very important market.

Box: Selected excerpts from the Keynote Address of Samdech Akka Moha Sena Padei Techo Hun Sen at Third Cambodia Economic Forum

....Agriculture is important for sustaining growth and reducing poverty. Progress in agriculture has been historically impressive. There is still more room for yields improvement, compared to yields achieved in neighboring countries by making investment in physical infrastructure, especially irrigation system, increasing agriculture productivity, and promoting agricultural diversification. The Government has given serious thoughts to the factors of production costs and output as well as capacity in purchasing, stockpiling and processing Cambodian rice....in 2008, the Government provided a special credit line amounting to US\$12 million, through the Rural Development Bank, to private rice millers to collect paddy/rice to ensure domestic supply.... In 2009, the Government offered a budget amounting to US\$18 million to the Rural Development Bank to continue the activities.... the Government will convert the budget to establish a "Agriculture Support and Development Fund" to support private sector, especially small and medium enterprises, on a number of targets including (1) Provide short-term credit for collecting paddy/rice from farmers at appropriate price to maintain price stability and ensure food security, and (2) Provide medium-term credit to rice millers to increase capacity in stockpiling, drying and processing... the Government will continue to enforce zero tariff policy on importing agriculture materials such as seeds, fertilizers, pesticide and agricultural equipments etc. ... the Government has worked to streamline procedures in rice exports and to gradually strengthen rice export management mechanism while improving domestic capacity in rice purchasing, processing, distribution and export.... the Royal Government is drafting legal procedures for investment projects in agriculture especially investment projects in agriculture produces processing such as investment projects in rice stockpiling and processing. These projects are to be considered as priority projects with high incentive within the existing investment law framework.... the Government is trying to strengthen the partnership between small-holder farmers with large-farm owners, as well as agriculture enterprises, between social land concessionaires and economic land concessionaires, with the emphasis on establishing farmer associations and partnership with companies involved in rice purchasing, processing, distribution and export.

6. Trade in Agriculture

6.1. Domestic Condition

Context for Diversification: Despite some initial signs of recovery from the recent global financial crisis, Cambodia felt the need to enhance its competitiveness. Maintaining competitiveness is important given the social implications of the agricultural sector, in which rice export alone, once it reaches 3 million metric tons, could make up approximately 20% of GDP.

Policy Direction: In realizing the vision of agriculture development, the Royal Government has adopted a three-pronged strategy — **productivity enhancement, diversification and agricultural commercialization** (from subsistence to commercial agriculture).

Rice Export Policy: The promotion of milled rice export is the first step to catalyze the export of other agricultural products such as cashew, rubber and other crops. 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.

Market Access and Export Diversification

Priority and potential of export products: The Government has identified 19 products with good export potential, the majority of which are in agriculture (rice, cashew nuts, cassava, maize, fish, livestock, rubber, silk, soybeans, fruit and vegetables – including organic, mango, palm, pepper – and wood products).

- *Rice* production shows strong potential for a significant increase in yields and in volume.
- *Cassava* is a promising crop, with yields recently reaching 23 tons/ha (a level similar to Thailand and Vietnam) – but only 3 percent of cultivated land is used for it.
- *Rubber* (exports of around US\$175 million in 2006) has witnessed an accelerated growth in recent years with recent significant investment in new rubber plantations.
- *Fruits and vegetables* are grown only on a small scale, despite a significant potential as an import substitution to support the increasing demand fueled by the tourism industry.
- *Silk*, now accounting for US\$10 million of exports also has potential to develop with the expansion of tourism domestic market, and growing exports potential.
- *Livestock*, which witnesses a steady stock increase at an average of 2 percent per annum over the past decade, has strong potential, provided many SPS issues are tackled.

- *Fisheries* exports (around US\$100 million annually of pond-reared fish such as catfish and tilapia estimated at between 500,000 and 1,000,000 tons annually) are constrained by the absence of Sanitary and Phyto-Sanitary (SPS) standards.

Market Access: As an LDC, Cambodia benefits from preferential access through the “General System of Preferences” (GSP) Schemes with the USA, Japan, and some 20 plus developed countries. Moreover, Cambodia is a member of the WTO, ASEAN, and a number of Regional Trade Agreements between ASEAN and its development partners, like China, India, Australia and New Zealand, etc.

“Everything But Arms”(EBA) initiative: The European Union is a major destination for Cambodia’s rice exports. Preferential access to the EU is provided under the “Everything But Arms”(EBA) initiative launched by the EC in 2001 to replace the previous GSP system. Under the EBA, most products from LDCs, including Cambodia, get duty-free access to European markets with greater predictability. Cambodia’s utilization of preferential access to the EU market has grown vigorously since the phasing in of rice in the program in September 2009. Almost 100 percent of Cambodia’s exports to the European Union are eligible for preferential access to the European Union. Cambodia’s utilization of its quota for “wholly-obtained long grain rice” stood at 78.9% in 2005. Under these trade preferences, the company can export rice shipment to the European market with special tax preferential treatment of about 140 Euros per ton as compared to exporters from developing Thailand and Vietnam.

6.2. Challenges

There are different inter-related challenges facing agricultural development in Cambodia. These are poor performance in regional trade, speculative land price distortions, un-performing economic land concessions, brain drain, finance, market information, and infrastructure.

Poor performance in regional trade: Cambodia has not benefited as it should have from regional markets (only 13 percent of its trade is intra-regional, against an average of 49 percent). A tremendous potential to integrate further into the Asia region with preferential market access to development partner countries, like China, India, Australia, New Zealand, Japan, and South Korea.

Weak cross border trade facilitation: In the World Bank “Doing Business” rankings for 2010, Cambodia is ranked 22nd out of 24 East Asia and Pacific nations in the overall index and 21st out of 24 in the “trading across frontiers” index.

Speculative land price distortions: Cambodia still suffers from the perverse effects of the land price distortions arising from the speculative bubbled of the pre-global financial crisis years, which is diluting Cambodia’s perceived comparative advantages of a country with a relatively abundant land, natural assets, and inexpensive labor.

Underperforming Economic Land Concessions (ELC): The ELC approach has not delivered the expected results. Out of some 60 ELCs, but only a small fraction of these are have actively invested in the concessions, and many of others still entangled in numerous conflicts with indigenous communities over traditional use of land and forest and, by law, a right to this use).

Reversing the brain drain: In the labor market, the major challenge is to ensure that those educated labor market which have benefited in recent years from the exposure to higher labor productivity jobs outside of agriculture, i.e. in industry and services, be reallocated back to agriculture, a phenomenon which can have a significant impact on growth and provide the necessary incentives for reverse migration back to the rural areas.

The intractable sanitary and phytosanitary issues: Cambodia does not have a compliant basic Sanitary and Phyto-Sanitary management system in place at the moment, which allows its exports of livestock and the fisheries products to key markets like the EU and China, for example.

Finance Shortage: There are four main challenges for the rice export of Cambodia: lack of capital to buy unmilled rice surplus from farmers is the most important issue, lack of rice storage capacity, low level of unmilled rice drying capacity, and not enough middlemen. For the year 2010, Cambodia's local middlemen could buy only 0.5 million tons while 3 million and 8 thousand tons of rice were exported to Thailand and Vietnam for further processing and packaging. According to some experts, it needs additional \$800 million in order to buy all unmilled rice surplus from the local farmers.²³

The government's Rural Development Bank has provided only \$18 million in credit for rice millers in 2010. Latter, the government has offered US\$36 million [from \$18 million] for rice millers to buy paddy from farmers, according to the Ministry of Economy and Finance. however, the money is a small amount compared to market demand of \$350 million²⁴. The unregulated cross-border rice trade in places like Kompong Trabek causes the vast majority of Cambodia's roughly 3.5 million tons of annual rice surplus to slip away unprocessed to Vietnam and Thailand". The farmers said they could sell their rice with higher price to Vietnamese traders. One farmer said "I don't think the government policy will be successful because the rice millers are not hungry to buy our rice".²⁵

Lack of market information: Cambodian farmers do not get access to updated accurate market price data for their products. For instance, with 166,600 productive rubber plantations, Cambodia produces about 60,000 tons per year. But Cambodia's rubber is being undersold at about \$4,500 per ton, about ten percent less than other rubber producing countries like Malaysia. On Tuesday December 28, 2010, at the Malaysian

²³ Radio France Internationale (Khmer Service), Broadcasted on January 3, 2010

²⁴ Phnom Penh Post, January 17, 2011, <http://www.phnompenhpost.com/index.php/2011011746118/Business/government-doubles-rdb-miller-lending.html>

²⁵ Cambodia Daily, December 31, 2010 (pages 1, 30)

Rubber Exchange, it cost \$5,011.50 per ton, and at Tokyo Commodity Exchange, it cost \$5000 per ton.²⁶

Weak production infrastructure

- ***Lack of irrigation facilities:*** Approximately 7 percent of cropland is irrigated, the lowest in all of South-East Asia. The dependence of the agriculture sector on rainfall subjects the sector to weather vulnerability.
- ***Inadequate fertilizer usage:*** Fertilizer usage in Cambodia is significantly lower than in neighboring countries at about 5-6 kg/ha, much lower than the average in the region. Only 27 percent of rain-fed farms use inorganic fertilizers, compared to 70 percent of dry season farmers who have access to irrigation.
- ***Weak collective actions:*** Currently no credible private sector organization for collective action exists in the agriculture sector as a whole or at the sectoral level, like rice or cashew, although there are numerous rice milling associations whose membership is diffuse both geographically and politically.

7. Conclusion and Recommendations

7.1. Conclusion

The potential for growth in agriculture is significant due to efforts by the Government, private sector, local community, NGOs and development partners in promotion of agriculture and rural development in the sectors. Provided the RGC can solve the issues related to rice export in the same way as it has done for the garment sector, a substantial value added will be retained 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.

Cambodia can be used as a model for LDCs in economic development starting from agriculture with great cooperation among the related ministries/institutions, local authorities, development partners and agencies, national and international NGOs, private sector and the community for the cooperation and support provided to the formulation of action plans and implementation to increase efficiency and quality and accelerate progress in the agriculture sector. These efforts and contribution spirit are a big catalyst for realizing the vision of the agricultural sector.

²⁶ Cambodia Daily, December 29, 2010 (pages1 and 36)

Due to budget constraint, investment by Royal Government to agriculture is still limited. Many investments have been done by private sector, non-government organizations and development partners (donors). All partners have contributed to make a great impact to increase in productivities in agriculture and rural development.

In order to develop agriculture, the Government cannot perform alone. It needs participation from private sector, Non-Government Organization and development partners. All actors have to work together with good cooperation and support from one another with clear planning and strategy.

Cambodia really has a potential for agro-products exporter, especially rice. However, to move from food self sufficient or subsistent production to food exporter is not an easy task. It is a time consuming and persistent work. Changing people behaviour from private and family business to a commercial corporate or production community is still a daunting duty.

7.2.Recommendations

Rural Focus Development: Due to most of the poor are living in the rural and remote areas, more investment should be focused to rural development and support to agricultural development such as providing irrigation network, low interest credit for agricultural inputs such as fertilizers and seeds. Irrigation and rural roads have to be improved in order to raise the proportion of multi-cropping and improve access to markets domestically and internationally. The forthcoming royalty from offshore gas/oil in Cambodia, as confirmed by Government, could be partly utilized to develop Cambodia's agricultural, together with strengthening education in the rural areas. Irrigation, roads, agricultural research and development, and rural education have proven to be the most important productivity enhancing and poverty reduction in Cambodia.

Rice Productions with big scale and world quality: The dry season rice must be promoted throughout the country, especially starting with areas where they are near the water sources. It is important for farmers to know what sort of rice species and quality that is demanded by the local and international markets so that we could orientate our rice production to answer those demands. National standard in different categories of rice should be finalized by the Institute of Standards of Cambodia (ISC) so that Cambodia can have its own standards to access to markets. There has been argument that exporting paddy rice is easier because there is no need to fulfill the customs and/or trade procedures. But we should also see that exporting paddy results in loss of value added stuff such as rice bran, broken parts, husk and also jobs for our people. It has been studied and estimated to be some 600 million US dollars loss if we were to export a sum of three million tons of rice in the form of paddy. It is therefore a must for us to change the situation whereby all value added stuff will be retained in the country. Farmers such as rice farmer should form "farmer association" or "rice production community" to make big scale of production and ensure the same seed and quality. This will facilitate access to bank loan as well.

Diversification into new markets and new products: 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. Cambodia needs to build on its existing capabilities and develop new ones as a step towards diversifying its economy. The remarkable economic growth of the past decade could be sustained only if Cambodia increases its competitiveness and diversifies away from its current narrowly based form of growth.

Need for complementarity with new sectors: Agriculture will continue to be important, but needs to be complemented by development in other sectors.

- Agro-industries in rural areas, i.e. non-farm activities (e.g. rice milling, trade) should be major sources of growth.
- Foreign investors – which can bring access to global value chains, technology, and finance – to invest in contract farming should be encouraged and attracted.
- Market linkages for fish products, fish processing technology and investment, and the ability to produce international certificates for food safety needs to be capitalized.
- Securing additional source of financing for production and export. Cambodia's financing, which comes primarily from foreign savings, highlights the adverse impact on growth in Cambodia as a result of tighter conditions in international financial markets.

Need for multi prong partnerships: The management of agricultural resources in creating the opportunity for growth in the sector, stimulated by good policies and governance arrangements and combined with external pressure from international drivers and foreign investors, is crucial.

- ***With foreign equity partners:*** Large investments have been difficult to undertake without the partnership with foreign investors. In the rice sector, serious and credible foreign involvement in the export has begun to emerge.
- ***With national dialogue partners:*** The recent adoption of the rice export policy provides the incentive to develop a hand-in-hand partnership between the government and the rice milling industry.
- ***Government-Private Sector Forum:*** Cambodia can simulate successful sector-specific or product-specific arrangements, which has achieved rapid growth like the garments sector. Collective action arrangement under the Government-Private Sector Forum can give the private sector a sense of security for their investments in the agriculture sector.

Need to integrate Cambodian products in the global or at least the regional value chain: Geography is a major driver of development and Cambodia has the opportunity to further harness the dynamism of neighboring countries. Regional integration can also help generate economies of scale for supply chain and help Cambodia in its discovery of what it can produce. The short-term outlook is less encouraging given the global trade environment and the impasse in the current WTO Development Round. However, the slowdown of global trade gives an added sense of priority to deepen Cambodia's integration, in particular in the East Asia region.

- There are opportunities to increase subregional trade within the Greater Mekong Sub region (GMS), making Cambodia the bridge between the two of the largest cities in South East Asian, Ho Chi Minh and Bangkok.
- Priority efforts should focus on connecting Cambodia's agricultural firms into the sub-regional supply chains by attracting Vietnamese, Thai, and Chinese firms to locate their processing factories in Cambodia. The rice export sector has an opening in exports to the EU through its zero tariff for Least Developed Countries initiative "Everything But Arms".
- Implementing existing cross-border transport agreements with neighboring countries would further stimulate the cross border trade flow.

Capacity building issues²⁷. Capacity building for exporting firms on export procedures: Human resource remains the main constraint for the majority of Cambodia medium exporting firms. In the area of capacity building, there is a clear need for training medium size provincial rice millers on the actual process of international trade, in particular on the specificity of the export procedures. With the exception of the top ten rice millers, most of the three hundred rice millers have only a vague idea of the export process. The myth remains that export is such a complicated process that only large and sophisticated rice millers can successfully engage. This myth reinforces the existing marketing practices of paddy buyers from neighboring countries, who constantly reaffirm the message that it is too complicated to mill the paddy and then have to go through the hassle of exporting the milled rice. Capacity building strategies should therefore be on practical, hands on, and network based. All the institutional actors, both public and private, should be brought in one training session to explore all the hypothetical scenario surrounding a few export cases. The role of practitioners within a particular government agencies as much as those of the shipping agents / freight forwarders and port authorities are crucial in order to address issues surrounding export procedures and documentation. As a result of an efficient and effective information exchanges the trade and transport community will benefit from faster time-to-market, substantial cost-savings, and increased firm-level competitiveness.

Capacity building on market access conditions: The regional institutions such as ESCAP, IFC, and ADB should further engage and implement more trade projects to support Cambodia promising exporting firms by helping them, first, to understand concrete export opportunities arising from numerous regional and sub-regional trade agreements and, second, to understand the export rules and regulations and other procedural aspects of international trade.

Mobilization of private sector rice actors. There are a clear need to mobilize more formally the myriad of private sector representative bodies (e.g., provincial rice millers associations or groupings and the Federation of Rice Millers Associations led

²⁷ Sok Siphana, Cambodia Study: "Operationalising the Rectangular Strategy for Growth: Towards Better Business Processes for Trade", Business Process Analysis (BPA), ESCAP 2011 (Draft)

by Okhna Phou Puy, *le Rassemblement des producteurs du riz* driven by Green Trade), which would be in a better position to present a common position and interest of their members to deal with government with regards to specific trade facilitation issues and the development of the rice export industry as a whole.

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