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## FISHERY REFORMS ON THE TONLE SAP LAKE: RISKS AND OPPORTUNITIES FOR INNOVATION<sup>1</sup>

The prime minister's announcement in 2012 to abolish the system of private freshwater fishing lots has brought a second wave of reform to the Tonle Sap Lake, the heart of the most productive fishing grounds in Cambodia. While increasing the area available for community fisheries and the area designated for conservation, the reforms nevertheless introduce an array of new institutional challenges and new risks of conflict.

This brief highlights insights from an action research and dialogue process aimed at understanding these risks and opportunities and supporting local innovations to address them. The process culminated in a Lake Basin dialogue on 19 December 2012 hosted by the Fisheries Administration (FiA), which brought together community fishery representatives, local government officers, civil society groups, non-governmental organisations (NGOs), and officials from a range of agencies.<sup>2</sup>



A consultation on current fisheries management issues in Phat Sanday commune, Kompong Thom province, 5 January 2012

### Reform, Risks, and Opportunities

**Two waves of reform share similar goals but different contexts.** Cambodia's recent freshwater fishery sector reform, instigated at the top level of government, is one of the country's most significant contemporary policy developments addressing natural resources management and rural development. Implemented in two main waves, the first took place in 2000-01 when 56 percent of

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<sup>2</sup> The Tonle Sap action research and dialogue process was co-organised by CDRI, Fisheries Administration (FiA), WorldFish, and ADIC as part of a larger, cross-regional programme financed by the German Federal Ministry for Economic Cooperation and Development (BMZ), called "Strengthening Aquatic Resources Governance: Institutional Innovation to Build Livelihood Security and Reduce Conflict in Lake Victoria, Lake Kariba, and Tonle Sap/Lower Mekong Eco-regions". Additional partners include Adelphi Research in Berlin and domestic NGOs FACT and HOM, supporting local innovations in Kompong Thom Province. A full report is forthcoming.

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fishing lot areas in the Tonle Sap Lake were released for community access. In early 2012, the second wave of reform culminated in the complete removal of all inland commercial fishing lots. This final step was hailed by international organisations and local civil society groups as well as local communities and local fishers, whose livelihoods are largely dependent on fisheries in the Tonle Sap Lake. The reforms have provided new opportunities for co-management of fisheries resources to improve local incomes, food security and livelihoods, though illegal fishing and use of fisheries resources remain serious problems.

The fisheries reform in 2000-01 happened at a time when commercial fishing was dominant on the lake and issues of physical access and conflict between local fishers and lot operators were at a peak. This shift from large-scale commercial management to decentralised community-based resource management led to marked changes in user rights. The reform gave local fishers more opportunity to catch fish and improve their income, yet also aimed to protect fisheries resources. In practice, these goals have sometimes competed – a tension that continues in the current phase of reform.

The 2012 reform was intended to build on the previous reform, and came as part of a broader campaign to address recurring conflicts around the Tonle Sap Lake. The issues at stake included demands for expanded access by communities to certain areas, decreasing fish catches, and ongoing disputes between fishers and lot operators. Also important was recognition on the part of government that revenue generated by the commercial fishing lots had become less important to the national economy than the livelihoods sustained by small-scale fishing.

***A rush to institute new regulations yields confusion and discontent.*** In both waves of reform, the release of the lots was declared first and formulation of a mechanism on how to manage the newly released areas followed. The first reform introduced a period of effectively open access, then several years of experimentation with community fisheries. Feeble legal framework, however, led to loopholes that allowed the continuation of commercial fishing and virtually excluded small-scale fishers from the more lucrative fishing grounds. In the 2012 reform, new legal instruments and decisions on re-

delineation of fishing areas followed only a few months after the prime minister's announcement. In addition, multi-sectoral task forces were created to respond to widespread large-, medium- and even family-scale fishing that was considered both illegal and destructive. The reform resulted in the designation of over 65 percent of the released areas for management by community fisheries (CFi) and about 35 percent for conservation purposes.

Many welcome the permanent withdrawal of commercial fishing lots, but numerous inconsistencies and contradictions between the new sub-decree, some articles in the Fisheries Law, and other regulations have created confusion among fisheries managers and local fishers. These inconsistencies and loopholes render these regulations ambiguous and open to interpretation, making them very difficult to apply on the ground. Immediate sources of confusion and conflict include boundary demarcation specifying the extent of community fisheries, clear definition of permitted fishing gear and regulations on mesh size, and clarification of the roles and responsibilities of implementation and administrative authorities.

***A surge in fishing effort, with new risks.*** The 2012 fisheries reform has broadened access to resources by local fishers. Recalling the fishing boom following the last reform when enforcement was temporarily suspended, many fishers rushed to invest in larger gear – mostly destructive – to take advantage of the confusion immediately after the reform. Many soon saw their gear banned or confiscated by officials.

Although more people now have access to fishing grounds in more areas, many local fishers report that the poor remain relatively disadvantaged in accessing these resources and are unprepared financially to take advantage of the expanded access rights. The reforms have also raised new ecological risks as more people fish, particularly in the seasonally flooded terrestrial environments, increasing pressure on sensitive fishery habitats.

***New challenges and new opportunities for community fisheries.*** Most CFi committees are under-prepared technically and institutionally to take on responsibility for larger areas. While all CFi on the Tonle Sap Lake are now registered, many have little understanding of their legal rights, roles and responsibilities; lack commitment by CFi members; and have weak mechanisms for

advocating their interests and collaborating with different government agencies. In addition, with expanded areas of the Tonle Sap Lake available for small-scale fishers, the incentives to invest in managing and protecting existing CFI areas may have decreased. Some CFI committees are likewise concerned that newly allocated areas are too large for them to manage effectively.

Policy and legal reforms are necessary for addressing the challenges of sustainable resource management and resilient livelihoods on the Tonle Sap Lake, but they are not sufficient. Also essential are actions that build the capacity of actors at all levels, and that strengthen collaboration across sectors (e.g., fishing, farming, and conservation) and across scales (from village to whole lake) to manage competing uses equitably. Key questions that need to be addressed include:

- *Enforcement capacity:* How will monitoring of fishing practices and enforcement of fisheries regulations be strengthened to support implementation of the new policies?
- *Conservation measures:* What changes will be made to fish sanctuaries and protected areas to support ecosystem recovery? How can the efforts of communities and various agencies be better aligned to support conservation?
- *Enhancing community fisheries:* How will the authority and capacity of CFI be strengthened? How should these CFI be reoriented or reshaped to improve the livelihood of community members and at the same time ensure sustainable use of fisheries resources?

### Areas for Innovation

**Updating and clarifying fishing regulations.** Declaration No. 129 on Family-Scale Fishing Gear Identification was issued quickly in an attempt to implement the new policy reforms. Yet, because it was put in place with little consultation and adopted a standardised approach without room for adapting the rules to different local contexts, the measure has failed to settle disputes over allowable gear or provide a basis for consistent enforcement. Any amendment process would benefit from consulting stakeholders, particularly local fishers and beneficiaries around the Tonle Sap Lake, to get grassroots perspectives and ideas on how to make the contents of fisheries regulations more appropriate to current fishing conditions and resource protection needs.

Indeed, clarifying the limits of allowable family-scale fishing could be considered a precondition to success with other management options because it can help build commitment to enforcement and conservation measures. The main risks are that debates over regulatory changes could provoke new conflicts, and that well-positioned commercial investors could try to curb gains for community resource access.

**Strengthening linkages between community fisheries and local government.** Building partnerships between CFI organisations and local authorities could create conditions for local organisations to work together in order to achieve shared goals of conservation, law enforcement and livelihood development more effectively. In particular, integrating CFI and commune council planning could lend financial and administrative support to implementing the CFI management plans, both building CFI management capacity and reinforcing the aims of current decentralisation policy. This also offers an avenue to address resource competition involving fisheries and other sectors, particularly disputes over expansion of dry-season rice farming, dry-season water allocation, and clearance, protection or rehabilitation of flooded forests. Risks include the possibility that CFI committees could lose their independence in the process and that they would lack the evidence to make a compelling case for investment in resource management, as opposed to the more traditional infrastructure projects typically favoured in commune development plans.

**Joint patrolling and enforcement.** Joint participatory fishery law enforcement in fishing grounds and conservation areas by local communities, local authorities, FiA and other concerned agencies could improve the effectiveness, efficiency, transparency and accountability of enforcement efforts. Since each agency has its own weaknesses and strengths, working together to complement each other could achieve successful outcomes in the attempt to eliminate illegal fishing practices.

In areas that have dry season rice cultivation and/or a Community Protected Area, participatory law enforcement by stakeholders at the local level is especially important. In certain areas of the flooded forest zone, tensions between dry-season rice farmers and community fisheries remain high, focused on water management, land use and protection of



the flooded forest habitat. In such circumstances, the political will of authorities seems to play an important role in supporting collaborative efforts to enforce the rules.

**Exploring community-based commercial production.** Community-based commercial production has recently emerged as a model that would increase the financial incentives for community-based management. Although the approach is not suitable in all areas, it is worth exploring where the resource base offers potential for sustainable commercial production. In the dialogue held in December 2012, CFI representatives affirmed their interest in this model as a way forward in generating revenues to cover costs of CFI operations, especially in response to increasing effort needed to protect and manage larger fishing grounds. Community revenue generation would provide leverage for members to engage more effectively in co-management schemes while ensuring their own livelihoods are not compromised.

Yet many obstacles to implementation remain. Individual government officials remain skeptical about local innovation on community revenue generation and question to what extent such innovation is allowable under the law and how long it would take to put in place. Other unresolved issues include: (1) what size of area would be appropriate within the management capacity of the CFI committee; (2) authority of the CFI committee, including rights to exclude outside users; (3) how earnings would be managed and benefits distributed; (4) roles and responsibilities of various agencies regarding joint management, monitoring, formulation of rules; and (5) who would provide the necessary capacity-building support.

### **A Commitment to Experimentation and Learning**

Participants in the December 2012 Lake Basin dialogue emphasised the importance of local participation in formulating rules and policies that affect fishing communities. Rules formulated without community consultation have been viewed as unsuitable to local needs, building tension between the communities and enforcement authorities. Yet, long delays in deciding or implementing new rules can be equally problematic. Striking the right balance to achieve both effective participation and timely implementation is difficult.

As the Director General of FiA affirmed at the dialogue, the challenge of implementing the reforms is ongoing, requiring open communication among all players and a willingness to experiment and learn together. A commitment to experimentation and participatory learning implies further innovation in terms of processes to promote local innovation, document lessons, and apply these to future institutional and policy reform efforts. New capacities are required on the part of government agencies and local agents to support this approach.

The Tonle Sap Lake is a vast, complex and fragile ecosystem that supports the livelihoods and food security of millions. Because of its central importance in the rural economy, the Lake's sustainable management is also critical to reducing the vulnerabilities that poor families face, thus contributing to social stability. The reforms open up significant opportunities to enhance these benefits, but require long-term collaboration among multiple stakeholders to innovate new institutional arrangements, evaluate and learn from these experiences, and adapt on the basis of this learning.

### **Suggested Reading**

- Kurien, John, So Nam and Mao Sam Onn (2006), "Cambodia's Aquarian Reforms: The Emerging Challenges for Policy and Research" (Phnom Penh: Inland Fisheries Research and Development Institute, Fisheries Administration)
- Ratner, Blake (2011), "Common-Pool Resources, Livelihoods, and Resilience-Critical Challenges for Governance in Cambodia", IFPRI Discussion Paper 01149 (Penang: WorldFish)
- Ratner, Blake (2006), "Community Management by Decree? Lessons from Cambodia's Fisheries Reform", *Society and Natural Resources*, 19, pp.79-86
- Ratner, Blake, Guy Halpern and Mam Kosal (2012), *Catalyzing Collective Action to Address Natural Resource Conflict: Lessons from Cambodia's Tonle Sap Lake*, CAPRI Working Paper No.103 (Washington, D.C.: International Food Policy Research Institute) <http://dx.doi.org/10.2499/CAPRIWP103>
- WorldFish (forthcoming), "After the Reforms: Strengthening Governance of Tonle Sap Aquatic Resources" (Phnom Penh: WorldFish)

# The Role of Foreign Direct Investment in Cambodia's Industrial Development<sup>1</sup>

## Introduction

Cambodia's economic growth has continued at a robust pace since the country opened its doors to the global economy in the mid-1990s. At 38 percent, the share of agriculture to total GDP remained substantial during 1995-2010, while that of industry edged up to 23 percent. Despite promising industrial sector growth of 16 percent over the last 18 years (MOP 2010), low income and domestic savings and limited infrastructure have hindered the country's industrial development. Foreign direct investment (FDI) plays a vital role in mobilising capital inflow to developing and credit-constrained economies. In addition, it brings new technology, stimulates innovation, transfers skills and knowledge, and builds local capacity. FDI also has tremendous influence on benefits from greater integration in regional and international communities (Olayiwola and Okodua n.d.). An important facet of FDI is its ability to accumulate human capital and technological know-how, which are key enabling factors for the long-term economic growth of recipient countries. Although necessary, FDI alone is insufficient for economic growth. Indeed, the effects of FDI are conditional on the source of inflows, sectors receiving it, stock of human capital (skills), infrastructure facilities, and the absorptive capacity of the recipient country (Blomström *et al.* 1999). Global experience shows that FDI works well in high-income countries and countries with a small technology gap.

This article draws on the findings of a study (Phann 2013) that examines the contribution of FDI

inflows to outputs in eight selected industries and the industrial sector as a whole. To do so, it used time series macro data for the period 1997 to 2010 collected from the National Institute of Statistics (NIS), the Council for the Development of Cambodia (CDC), and UNCTAD. Production function based on Solow's growth model (Barro and Sala-i-Martin 2004), which included only two inputs – capital stock (K) and labour (L), was applied. Because of the short timeframe, the stationarity problem of time series analysis was ignored and simple ordinary least squares (OLS) method employed. To support the regression results, the study also briefly overviewed the experience of Thailand, Vietnam, Philippines, Bangladesh and Myanmar.

## Cambodia's Industrial Sector

Spurred in the early 1990s, Cambodia's impressive industrial growth continued through to 2008-end, then slowed due to the global financial crisis later recovering to a lower yet still respectable pace. This robust growth stemmed chiefly from the garment sector driven mainly by foreign investments, especially from China. The recent phenomenon in advanced Asian economies of industries' fragmentation, as established businesses shift labour-intensive manufacturing to lower labour cost countries to maintain their global competitiveness, has possibly opened a way for Cambodia to upgrade and diversify its industrial structure (Kimura 2009 cited in Banomyong 2010). Although the country's industrial sector shows improvement, it has evolved based on low technology and labour intensive assembly industry. The major industrial

<sup>1</sup> Prepared by Phann Dalis, research assistant at CDRI.

Table 1: Shares of Industrial Sectors to Total Industrial Output (percent), 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2000-2010
Textiles, apparel & footwear	42.1	48.7	50.4	52.6	56.3	54.5	55.5	56.3	55.3	51.4	58.1	53.2
Construction	23.8	21.0	22.8	22.6	21.9	23.7	24.1	23.7	24.1	25.9	18.4	23.1
Food, beverages & tobacco	14.6	13.5	11.2	10.5	8.5	8.2	7.2	6.8	7.0	7.5	7.7	9.4
Other manufacturing	10.0	9.0	8.4	8.1	7.5	7.8	7.6	7.5	7.7	8.5	8.6	8.3
Electricity, gas & water	1.9	2.0	1.9	1.8	1.7	1.7	1.9	2.0	2.1	2.3	2.4	2.0
Wood, paper & publishing	4.3	2.7	2.3	1.8	1.6	1.6	1.4	1.4	1.4	1.5	1.5	2.0
Mining	1.1	1.1	1.2	1.2	1.3	1.5	1.4	1.4	1.6	2.0	2.4	1.5
Rubber manufacturing	2.2	2.0	1.7	1.4	1.1	0.9	0.8	0.8	0.8	0.9	1.0	1.2

Source: National Institute of Statistics (unpublished data 2000-2010)

Table 2: Cumulative Industrial Foreign Fixed Asset Investment Approvals by Sector and Investing Country (USD million), 1995-2010

Top 15 countries (in USD m)	Textiles, apparel & footwear	Mining	Wood, paper & publishing	Food, beverages & tobacco	Construction	Rubber manufacturing	Electricity, gas & water	Other manufacturing	1995-2010
Mainland China	450.5	574.5	84.0	130.0	6.1	196.1	1211.7	305.7	2958.6
Taiwan	350.7	10.0	97.3	89.9	4.2		50.0	65.0	667.1
Korea	116.0	4.3	25.8	17.2	172.5	79.0	3.2	94.8	512.8
Thailand	16.5	2.5	22.1	365.4	46.5		25.4	18.0	496.4
Malaysia	63.1		236.2	27.6	2.7	31.7	64.8	59.0	485.1
Vietnam	1.6	0.4		25.1	3.3	276.8	2.8	74.7	384.7
Singapore	57.2		11.0	79.1	1.6	41.4	16.5	12.6	219.4
Hong Kong	108.0		62.5	10.1	4.3			25.3	210.2
United States	34.3	1.3	20.4	1.4		28.5	8.7	53.4	148.0
Canada	20.5	2.5		4.3	39.5			13.7	80.5
United Kingdom	68.4		0.1	13.5				2.3	84.3
India							75.0	0.3	75.3
Japan	7.1			31.5	2.8			15.2	56.6
Australia	12.9	4.3	5.3	15.8			0.3	2.3	40.9
Belgium								35.0	35.0
Total countries	1337.9	605.0	604.4	825.9	290.2	653.5	1459.3	794.6	6570.8

Source: Council for Development of Cambodia (unpublished data 1995-2010)

sectors include mining; food, beverages and tobacco; textiles, wearing apparel and footwear; wood, paper and publishing; rubber manufacturing; electricity, gas and water; construction; and other manufacturing (Table 1).

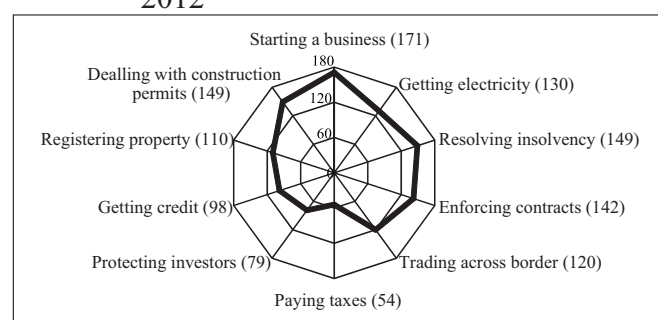
### *FDI Inflows in Industry*

Cambodia's low domestic savings rate (16 percent of GDP during 2000-2010) and corresponding shortfall in domestic investment capital underscore the need to attract FDI. Besides financial support, FDI brings other productive assets and knowledge that can advance economic development. FDI inflow in Cambodia has been determined by external factors such as shocks in FDI-sending countries and favourable terms in international markets rather than by domestic factors such as cheap labour and raw materials. By 2010 FDI inflows had increased to 5.3 percent of GDP from 3.8 percent in the 1990s and a mere 0.02 percent in the 1970s (UNCTAD). On average, in 2000-10 the biggest FDI inflow at 50 percent of total investment approvals went to the service sector while 49 percent went to the industrial sector. Table 2 shows Cambodia's FDI inflows to the eight main industrial sub-sectors from the top 15

investing countries.

Apart from the special privileges afforded the country's textiles, apparel and footwear sector, there are no focal factors that locationally bind foreign investments to Cambodia by being tied to certain activities. Despite the attractiveness of the country's abundant low wage labour, the relatively high costs of setting up and doing business deter FDI. Using Doing Business indicators compiled by the World Bank and the International Finance Corporation (IFC), Figure 1 illustrates Cambodia's ranking among 183 economies.

Figure 1: Cambodia's 'Doing Business' Ranking, 2012



Source: World Bank and IFC (2012), Doing Business

**Effects of FDI on the Industrial Sector: Empirical Framework**

The contribution of FDI to Cambodia’s industrial sector was analysed using the Cobb-Douglas production function (Barro and Sala-i-Martin 2004), which describes the variation in output affected by the inputs capital and labour in a production process. This is captured by applying the below production function to different industrial sectors identified by *i* at time *t*:

$$Y=F(K, L) \tag{1}$$

where *Y* is real output of each industrial sector, *K* is physical capital and *L* is labour. *K* is defined by the sum of domestic capital stock (*K<sub>d</sub>*) and foreign capital stock (*K<sub>f</sub>*), which can be written as *K<sub>total</sub>* = *K<sub>d</sub>* + *K<sub>f</sub>*. The regression equation then assumes the following linear form:

$$\log GDP_{it} = b_{0i} + b_{1i} \log K_{dii(t-1)} + b_{2i} \log K_{fii(t-1)} + b_{3i} \log L_{it} + u_{it} \tag{2}$$

$$\log GDP_{foodt} = b_{0food} + b_{1food} \log DomK_{foodt-1} + b_{2food} \log FDIK_{foodt-1} + b_{3food} \log Labor_{foodt} + u_{foodt} \tag{2.1}$$

$$\log GDP_{textiles_t} = b_{0textiles} + b_{1textiles} \log DomK_{textiles_{t-1}} + b_{2textiles} \log FDIK_{textiles_{t-1}} + b_{3textiles} \log Labor_{textiles_t} + u_{textilest} \tag{2.2}$$

$$\log GDP_{rubber_t} = b_{0rubber} + b_{1rubber} \log DomK_{rubber_{t-1}} + b_{2rubber} \log FDIK_{rubber_{t-1}} + b_{3rubber} \log Labor_{rubber_t} + u_{rubbert} \tag{2.3}$$

$$\log GDP_{miningt} = b_{0mining} + b_{1mining} \log DomK_{miningt-1} + b_{2mining} \log FDIK_{miningt-1} + b_{3mining} \log Labor_{miningt} + u_{miningt} \tag{2.4}$$

$$\log GDP_{utility_t} = b_{0utility} + b_{1utility} \log DomK_{utility_{t-1}} + b_{2utility} \log FDIK_{utility_{t-1}} + b_{3utility} \log Labor_{utility_t} + u_{utilityt} \tag{2.5}$$

$$\log GDP_{wood_t} = b_{0wood} + b_{1wood} \log DomK_{wood_{t-1}} + b_{2wood} \log FDIK_{wood_{t-1}} + b_{3wood} \log Labor_{wood_t} + u_{woodt} \tag{2.6}$$

$$\log GDP_{construc_t} = b_{0construc} + b_{1construc} \log DomK_{construc_{t-1}} + b_{2construc} \log FDIK_{construc_{t-1}} + b_{3construc} \log Labor_{construc_t} + u_{construc} \tag{2.7}$$

$$\log GDP_{othermanu_t} = b_{0othermanu} + b_{1othermanu} \log DomK_{othermanu_{t-1}} + b_{2othermanu} \log FDIK_{othermanu_{t-1}} + b_{3othermanu} \log Labor_{othermanu_t} + u_{othermanu} \tag{2.8}$$

$$\log GDP_{indus_t} = b_{0indus} + b_{1indus} \log DomK_{indus_{t-1}} + b_{2indus} \log FDIK_{indus_{t-1}} + b_{3indus} \log Labor_{indus_t} + u_{indust} \tag{2.9}$$

where *GDP<sub>it</sub>* = the outputs of each industrial sector *i* at time *t*; *b<sub>0i</sub>*, *b<sub>1i</sub>*, *b<sub>2i</sub>* and *b<sub>3i</sub>* are the intercept terms and coefficients of each variable; *u<sub>it</sub>* is a term of residual of *i* sectors (*i*=1, 2, 3... 9 representing the eight selected industrial sub-sectors and the overall industrial sector); and *K<sub>di</sub>*=DomK and *K<sub>fi</sub>*=FDIK, which denote domestic and foreign capital stocks of industrial *i*.

To allow for delayed returns to capital outlay, as it may take enterprises some time to order and install capital assets such as machinery and equipment prior to operating, the study takes one lag of *K<sub>di</sub>* and *K<sub>fi</sub>* calculated using the perpetual inventory method. Then, *K<sub>(t+1)</sub>* = (1-d) \* *K<sub>t</sub>* + *I<sub>t+1</sub>* where *K<sub>(t+1)</sub>* and *K<sub>t</sub>* are the capital stock in time (t+1); *t*. *d* is the depreciation rate of capital, which is set at 5.0 percent for

Cambodia (see Net 2011); and *I<sub>t+1</sub>* is the fixed assets investment inflow at time (t+1). The fixed assets investment shared by Cambodia is represented by *I<sub>d(t+1)</sub>*, while the share of foreign nationality is written as *I<sub>f(t+1)</sub>*. This study takes *K<sub>1995</sub>* as the initial capital stock for both domestic and foreign capital stocks for each selected industrial sector. Based on the assumption that the rate of capital-output ratio was constant during the 1990s, it then calculates *K<sub>1995</sub>* = *I<sub>1995</sub>* / (*g<sub>1995</sub>* + *d*) following Harberger (1978), where *g<sub>1990s</sub>* is the average growth rate of capital, which is equal to the growth rate of outputs (GDP) during the 1990s, and *L<sub>i</sub>* is employment in sector *i*.

**Results**

The econometric estimation of capital inputs found that FDI has beneficial impact on four industrial sectors: food, beverages and tobacco; textiles, apparel and footwear; utilities; and other manufacturing. However, FDI is still in the diminishing returns to scale stage (see Table 3), indicating the ineffective use of capital and the need for productivity

improvement. Cambodia has not yet achieved economy of scale. Findings also reveal that FDI has a statistically insignificant effect on overall outputs at aggregate industrial level. The different effects of

FDI on industrial sectors are possibly caused by the nature of FDI itself, sector-specific economic characteristics and infrastructure, and regulatory barriers and bureaucracy (Lean 2008). However, all models were found to be hugely trended when the time variable was included (meaning they were affected by time rather than the nature of the data). Therefore, the short time series as well as poor data quality and accuracy problems could invalidate the results.

**Lessons for Cambodia from the Experience of Selected Countries**

Cambodia’s industrial structure is similar to that of Vietnam, Bangladesh and Myanmar. Textiles, apparel and footwear and to some extent food,



Table 3: Ordinary Least Squares Results of Equation (2)

Dependent variable: LogGDP(t)_i Method: Ordinary Least Squares Sample: 1997, 2010 Included observations: 14				
	Constant	Coef. logDomK (t-1)_i	Coef. logFDIK (t-1)_i	Coef. logLabor(t)_i
(2.1) logGDP(t)_food	4.415***	-0.045	0.192***	-0.023
(2.2) logGDP(t)_textiles	2.330**	-0.557	1.612**	-0.213
(2.3) logGDP(t)_rubber	3.113***	-0.002	0.038	-0.049
(2.4) logGDP(t)_mining	-0.629	0.291	0.019	0.319***
(2.5) logGDP(t)_utilities	2.291***	0.164***	0.205**	-0.035
(2.6) logGDP(t)_wood	6.537***	-0.330	-0.014	-0.194**
(2.7) logGDP(t)_construc	0.253	0.594**	-0.345	0.330***
(2.8) logGDP(t)_othermanu	2.973***	-0.079	0.493***	-0.025
(2.9) logGDP(t)_indus	0.138	1.542**	-0.600	0.137

Note: \* 10 percent, \*\* 5 percent and \*\*\* 1 percent level of significance. Source: Author's calculation.

beverages and tobacco remain the dominant sub-sectors, which benefit from the ample low wage labour force. Textiles, apparel and footwear manufacturing relies heavily on importing and assembling intermediate inputs. This means that in the event of adverse conditions or the expiration of privileges, investments in this sector can readily leave the country. Diversification of the food-processing sub-sector is a focus of the government's industrial policy, yet it remains immature due to narrow product variety and poor quality standards.

Given that Cambodia is unable to invest in heavy industrial facilities and high technology in the short run, it has to sustain its current labour-intensive industries. Therefore, industrial development policy at this stage would do better to emphasise agricultural linkages and labour-intensive manufacturing. This is crucial if the country is to establish economies of scale and develop high technology industries that in turn would enable the country to accumulate human and physical capital and increased productivity for a long-term resilient industrialisation process. To enhance its growth prospects, the country must also learn to choose sources of investment wisely to build its competitiveness, drive innovation and reduce poverty.

### Conclusion

Based on econometric results and case study analysis, the two subsectors most likely to attract investments are food, beverages and tobacco and textiles, apparel and footwear. Cambodia needs to prepare itself to lure high technology investments to compete against emerging competitors like

Myanmar, and to confront possible higher wage rates in the future. A first step would be to determine the potential industrial sub-sectors and zones that should be prioritised in its policy strategy. Further, the country needs to learn how to create and manage the necessary pre-conditions for industrial support sectors. Choosing the right policy mix is critical for the country's industrial development, especially given its limited productive resources.

### References

- Banomyong, R. (2010), "Challenges and Prospects for Upgrading and Diversification of Industrial Structure in CLMV Countries", in R. Banomyong and M. Ishida (eds.), *A Study on Upgrading Industrial Structure of CLMV Countries*, ERIA Research Project Report 2009-7-3 (Jakarta: ERIA) pp.471-483
- Barro, R.J. and X. Sala-i-Martin (2004), *Economic Growth*, Second Edition (Cambridge, MA: MIT Press)
- Blomström, Magnus, Steven Globerman and Ari Kokko (1999), *The Determinants of Host Country Spillovers from Foreign Direct Investment: Review and Synthesis of the Literature*, Working Paper Series in Economics and Finance 339 (Stockholm: European Institute of Japanese Studies)
- Harberger, A.C. (1978), "Perspectives on Capital and Technology in Less Developed Countries" in M.J. Artis and A.P. Nobay (eds.) *Contemporary Economic Analysis* (London: Croom Helm)
- Lean, H.H. (2008), "The Impact of Foreign Direct Investment on the Growth of the Manufacturing

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# Case Study: Rice Marketing Value Chains in Takeo Province<sup>1</sup>

## Introduction

Agricultural productivity has markedly increased, with average annual growth of about 5 percent during 2001-10. Rice is by far the largest crop sub-sector—with average growth around 7.7 percent a year it contributed about 26 percent of agriculture sector GDP in the same period (NIS 2011). Despite this demonstrated improvement, many studies have identified post-harvest constraints affecting agricultural productivity. These include high losses and low quality due to post-harvest handling practices, storage facilities, and milling capacity and standards; high production costs compounded in some years by low yield; trading standards and informal cross-border trade with Thailand and Vietnam (ACI and CamConsult 2006; RGC 2010; Sok *et al.* 2011). Of particular concern to rice farmers are high production costs and weak marketing infrastructure and coordination.

Takeo holds huge potential for cross-border trading. Indeed, selling paddy to Vietnam has become a crucial condition for economic development in the province. Study on production costs and marketing chains in the province can help clarify how benefits are distributed among value chain actors and shed light on post-harvest constraints hindering Cambodia's rice sector development.

The aim of this study is to examine rice marketing value chains in Takeo province and provide policy options to increase the benefits accruing to rice growers and value added in Cambodia. Specific objectives are to (1) map the rice value chains; (2) analyse the revenues, costs and margins of rice production; (3) examine market information and determine the governance relationships between adjacent enterprises on the value chains; and (4) identify appropriate policies to improve rice marketing in Takeo province.

Qualitative and quantitative methodological approaches from “Making Value Chains Work Better for the Poor” (M4P 2008) were used to map the rice value chains and their coordination structures, control mechanisms, rules and regulations in Takeo province. Field data was collected from mid-February 2012 through to mid-March 2012. As well as field observations, information was compiled from focus group discussions (FGDs) and key informant interviews (KIIs) with various value chain actors ranging from farmers, collectors and traders to mill owners, rice exporters and marketing organisations. FGDs with farmers were held in villages across Tramkok, Prey Kabas and Koh Andaet districts. Information on rice marketing was collected in two more districts – Angkor Borey and Kirivong – and Takeo town. Both qualitative and quantitative primary and secondary data were used to analyse the value added between adjacent actors on the value chain.

## Results and Discussion

### *Value Chain Mapping*

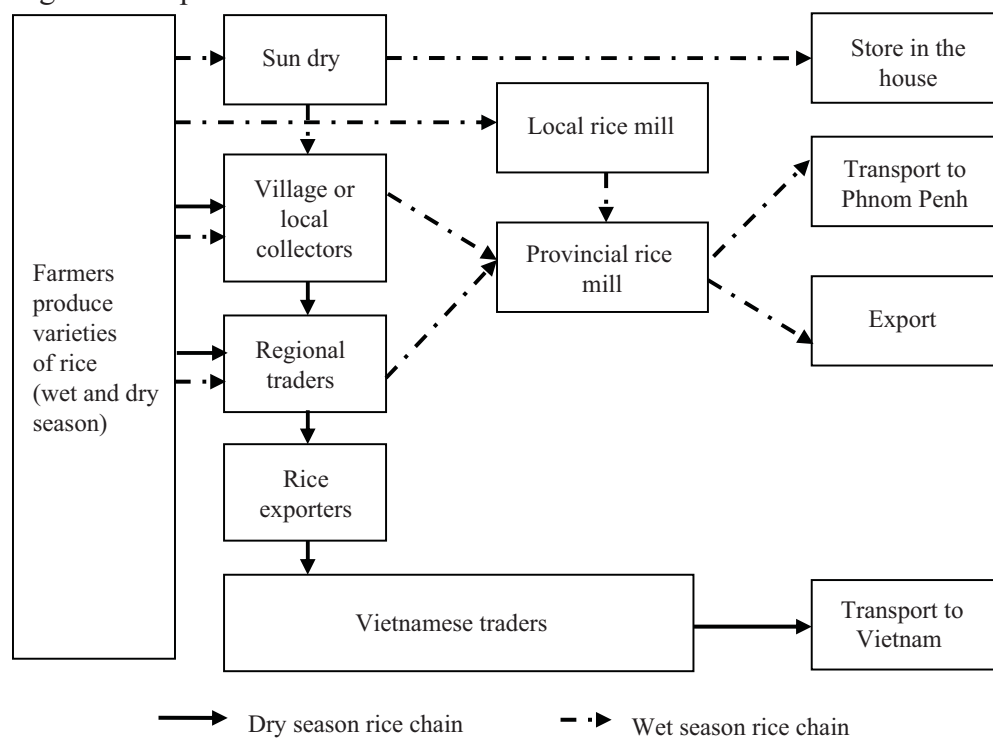
There are two rice value chains – wet and dry season. Most farmers grow wet season rice mainly for home consumption. The few farmers that produce dry season rice do so mainly for commercial purposes. All actors in the dry season value chain are dynamic, whereas those in the wet season value chain are less active. Village collectors and/or traders are key actors in both value chains (Figure 1). These are small-scale enterprises with buying capacity of 10-30 tonnes, determined by lack of transport and low capital investment. They buy different rice varieties and mix them together, but separate premium quality rice and sell it at a higher price to regional traders. Village collectors and traders are usually farmers in the villages, who either use regional traders' capital to buy paddy from individual farmers and deliver it to those traders for a commission fee of USD0.05 per 50 kg sack, or use their own capital to buy and sell paddy for profit.

### *Production Costs, Gross Margins and Net Cost Returns on Own Labour*

Rice farmers in the study areas face high input costs

<sup>1</sup> Prepared by Chhim Chhun, research associate, Dr Theng Vuthy, research fellow, and Nou Keosothea, senior research fellow at CDRI. This article draws on a Rice Marketing Value Chain case study for the ACIAR-supported project (ASEM/2009/023) “Developing Agricultural Policies for Rice-based Farming Systems in Laos and Cambodia” that will end in May 2014.

Figure 1: Map and Flow of Actors in the Rice Value Chains in Takeo Province



much less fertiliser, at about 11 percent of crop revenue (Table 1). In terms of the quantity of fertiliser used, farmers reported following advice given by fertiliser merchants or neighbours. Others, especially dry season farmers, said they apply what they can reasonably afford to get a higher yield.

Cost of pesticides is another significant drain, particularly for dry season farmers. Wet season farmers generally do not use pesticides, except in the event of a severe pest outbreak.

of labour and machinery hire (for land preparation), fertilisers, pesticides (for dry season crops), seeds and irrigation water (Figures 2 and 3). Labour cost is considerable at around 30 percent of total production or 15 percent of total wet season harvest value (Table 1). Most wet season rice farmers use traditional cropping systems where the biggest cost incurred is for hired labour, particularly for transplanting which is more labour-intensive than direct-seeding (broadcasting) usually done by family members. By contrast, dry season farmers use intensive cropping systems where direct seeding and mechanisation reduces the cost of hired labour to zero.

Water fees for wet season crops account for 25 percent of production costs or 13 percent of harvest value, and water fees for dry season crops account for 19 percent of production costs or 11 percent of harvest value<sup>2</sup>. Water fees are one of the highest costs that farmers, especially dry season producers, complained about the most.

Chemical fertiliser is the biggest cost for dry season farmers, taking on average about 23 percent of total crop revenue. Wet season farmers purchase

Wet season farmers mainly save seed from their own fields and prefer their own seed because that is what they can afford. Dry season farmers on the other hand commonly buy seeds at a considerably high cost at about 6 percent of harvest value (Table 1).

On average, wet season crops yield about 2.3 tonnes of paddy per ha and dry season crops yield around 7.2 tonnes per ha. Farm gate prices per tonne are around USD250 for wet season rice and USD194 for IR dry season rice. The wet season farm gate price reported in field interviews in March 2012 was similar to the recorded price for October 2011 (Table 2), indicating the relative stability of paddy prices at the time of study (RGC 2011). Average gross farm incomes are USD575 for wet and USD1396 for dry season rice (Table 1). Production costs for both wet and dry season rice are extremely high and mostly beyond farmers' control. Hence the very low gross returns for rice production in both seasons.

#### Value Chain Analysis

The market structure is well organised with a network of collectors, traders, exporters, millers and international traders (Figure 1). The paddy market is highly efficient with many actors and strong competition at prices set by market forces. Farmers can sell their paddy throughout the year in a highly competitive market. Information on prices for

<sup>2</sup> Wet season farmers spent more on water fees than dry season farmers did because of the short drought during the 2011 planting season when they had to pay for water pump hire and fuel to irrigate their crops.

Figure 2: Wet Season Farming Costs (ha)

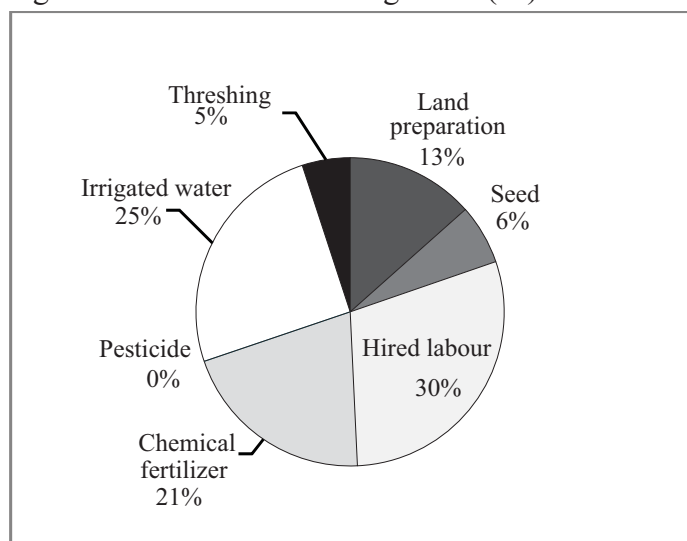
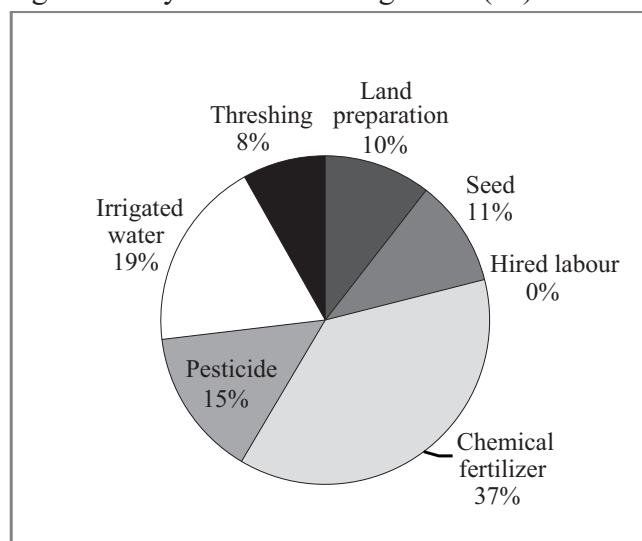


Figure 3: Dry Season Farming Costs (ha)



Source: Authors' calculation based on field interviews, May 2012

different varieties and qualities of paddy is updated almost daily, indicating the high competition for profit among actors in the rice value chain (Gergely *et al.* 2010).

Tables 3 and 4 present a breakdown of costs and mark-ups along the rice value chains. Value added between adjacent actors in the value chains was calculated based on information on buying and selling prices, logistics and transport costs and mark-ups collected during field interviews in February-March 2012.

Most wet season farmers sell paddy on an individual basis to village collectors at farm gate prices of around USD0.25 per kg (USD250 per tonne). Village collectors bear the costs of loading, materials (sacks, string, containers) and transport, which add up to around USD3.4 per tonne or 1.4 percent of farm gate price for mixed wet rice. They mark up the price by about 3.6 percent, equivalent to a mark-up of USD9 per tonne, bringing the rice value for collectors to USD263 per tonne. Village traders' mark-up of 22 percent (USD55 per tonne)

Table 1: Gross Margin Analysis for Rice Farming (per ha)

Activity	Wet season		Dry season	
	USD	%	USD	%
Output : Paddy production	575	100	1396	100
Input				
Land preparation	40	7	90	6
Seed	19	3	90	6
Hired labour	88	15	0	0
Chemical fertiliser	61	11	321	23
Pesticide	0	0	125	9
Irrigation water	75	13	160	11
Threshing	15	3	70	5
Total input costs	298	52	856	61
Gross margin, excluding HH labour	277	48	540	39
Gross margin, including HH labour	150	26	297	21
Net cost return of labour per day	8.15		8.31	
Cost ( per kg)	0.13		0.12	
Benefit ( per kg)	0.12		0.07	

Note: Exchange rate USD1=4000 riels; calculations exclude household own labour.

Source: Authors' calculations based on field interviews, May 2012

is high compared to regional traders' mark-up of 16 percent (USD40 per tonne), especially given that village traders spend less on logistics and transport (USD7.5 per tonne) than regional traders do (USD10 per tonne). By the time rice arrives at the mill, the price has reached USD377 per tonne, which is a 50 percent increase on the farm gate price (USD250).

Unlike wet season farmers, dry season farmers grow rice for commercial purposes. Therefore, actors in the dry rice value chain are very active and trading is competitive. Mostly IR varieties, which produce lower quality grain than wet season varieties, are traded in the dry season. Thus, the farm gate price is also lower, at around USD193 per tonne (Table 4). As in the wet rice value chain, the value added after the farm gate price is due to similar costs of loading, transport and informal fees. However, the mark-ups between adjacent actors are not as variable as in the wet rice value chain, ranging from 3.4 percent to 7.5 percent or around USD7 to USD14 per tonne, respectively. This indicates that the dry rice market is more efficient with high competition among actors. Importantly, there is a continuous flow of updated information on rice prices.

#### ***Relationship, Governance and Challenges in Rice Marketing Value Chain***

Figure 4 illustrates the coordination and sequence of information exchange in the rice value chains in Takeo province. Vietnamese traders set the price, quality and quantity and farmers are the final price takers. Cambodian traders have little bargaining power when negotiating prices and quality with Vietnamese traders. Quality does not seem to be a serious problem when demand is high,

but Vietnamese traders often take advantage and downgrade quality to reduce the price.

There is no formal or systematic quality control mechanism to classify paddy quality at each stage of the value chain. Actors assess quality, the main criteria being moisture content and grain rot, based on their own knowledge and experience.

#### ***Rice Policy***

Takeo is one of the main rice producing provinces in Cambodia, accounting for 12.5 percent of national production and contributing 17.6 percent of national surplus. That makes it a key province for driving the government's "white gold" policy aimed at exporting 1 million tonnes of milled rice by 2015. Despite Takeo's high potential for producing surplus rice for export, there are many shortcomings including the main variety cultivated, low quality seeds, limited extension services, and inadequate post-harvest marketing infrastructure.

**Rice varieties:** MAFF recommends and promotes 10 rice varieties, including three early IR types – Sen Pidor, IR66 and Chulsar – that have the potential to produce export-standard grain. However, farmers continue to use IR504 from Vietnam, to the detriment of the local varieties being promoted for export markets. IR504 is widely used by farmers in irrigated and recession rice areas and makes up about 41 percent of total production in Takeo. Although the variety is considered poor quality in local markets, high yields and demand from Vietnamese traders have led farmers to grow it on a commercial scale.

**Low quality seeds:** Farmers continue to use low quality seeds. Despite the development of specialist

Table 2: Cambodia's Rice Prices (USD per tonne), August 2011 to October 2011

	Cambodia	Thailand	Vietnam	Price difference	
				Thailand	Vietnam
<b>White Rice</b>					
Farm gate	250-350	340-350	340-350	90-0	90-0
Milled rice	650	490-493	461	157-160	89
Export price (FOB)	680	605-610	565-575	70-75	105-115
<b>Fragrant Rice</b>					
Farm gate	354-452	402-452	-	47-0	-
Milled rice	870	907-910	-	37-40	-
Export price (FOB)	900	1075-1085	675-685	175-185	185-225

Note: FOB = free on board

Source: RGC 2011



Table 3: Wet Season Rice Marketing Value Chain (USD per tonne)

	Village collectors		Village/local traders		Regional traders		Provincial rice millers	
	USD	%	USD	%	USD	%	USD	%
Buy in	250.0	100.0	262.5	105.0	325.0	130.0	375.0	150.0
Loading	1.0	0.4	2.0	0.8	2.0	0.8	2.0	0.8
Transport	1.4	0.6	4.1	1.6	5.0	2.0	0.0	0.0
Materials	1.0	0.4	1.5	0.6	1.5	0.6	0.0	0.0
Informal fees	0.0	0.0	0.0	0.0	1.5	0.6	0.0	0.0
Mark-up	9.1	3.6	54.9	22.0	40.0	16.0	0.0	0.0
<b>Total</b>	<b>262.5</b>	<b>105.0</b>	<b>325.0</b>	<b>130.0</b>	<b>375.0</b>	<b>150.0</b>	<b>377.0</b>	<b>150.8</b>

Source: Authors' calculations based on field interviews, May 2012

seed producers, seed supplies are still limited in many areas of the country including in Takeo province. Most farmers do not renew their seeds regularly and storage practices mean that seeds are mixed, thus reducing germination rate and quality from one production season to the next. Farmers, especially wet season farmers, tend to renew seed only when collectors and millers demand better quality, or in order to fetch a higher price for their crops.

**Lack of extension services:** Farmers complain about problems accessing technical assistance from local authorities to control pest problems, particularly in the dry season. They apply many different kinds of pesticides, but some of these are banned products and harmful to health and the environment. More seriously, because most pesticides sold on the market are imported from Vietnam or Thailand, the instructions are in Vietnamese or Thai and farmers cannot read the precautions or recommended dilution and application rates. The dearth of extension services information and advice on fertiliser application leaves farmers reliant on merchants' advice or simply using fertiliser at rates/quantities

they can afford. Poor quality control at the border allows non-standard fertilisers to enter the market. Further, about 10 percent of fertilisers are diluted or low-grade products re-bagged in sacks labelled with a high-grade brand (Theng 2012).

**Rice marketing:** About 69 percent (764,902 tonnes) of total rice production in Takeo is surplus, which indicates the huge potential for export. Because of lack of capital investment in rice mills and modern milling technology, the sector has limited capacity to process this surplus. Hence, mainly paddy (non-milled grain) is exported and chiefly to Vietnam. Trade seems to be dominated by Vietnamese traders setting prices and quality standards, which allows them to downgrade quality or underestimate value and lower the price. It is critical, therefore, that measures be put in place to classify paddy quality. In doing so, trade would be fairer for both sides.

#### Policy Implications

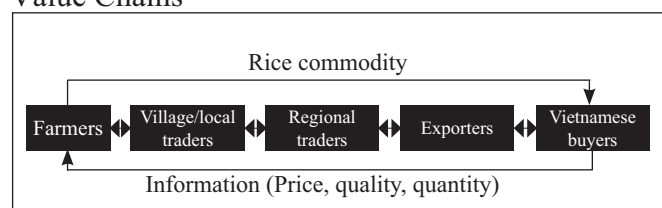
Farmers face high production costs and low farm gate prices. This indicates the need to lower production costs, particularly those beyond the control of

Table 4: Dry Season Rice Marketing Value Chain (USD per tonne)

	Village collectors		Village/local traders		Regional traders		Exporters		Vietnamese traders	
	USD	%	USD	%	USD	%	USD	%	USD	%
Buy in	192.5	100.0	202.5	105.2	217.5	113.0	237.5	123.4	262.5	136.4
Loading	1.0	0.5	2.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0
Transport	1.4	0.7	4.1	2.1	5.0	2.6	5.0	2.6	0.0	0.0
Materials	1.0	0.5	1.5	0.8	1.5	0.8	1.5	0.8	0.0	0.0
Informal fees	0.0	0.0	0.0	0.0	1.5	0.8	2.0	1.0	0.0	0.0
Mark-up	6.6	3.4	7.4	3.8	10.0	5.2	14.5	7.5	0.0	0.0
<b>Total</b>	<b>202.5</b>	<b>105.1</b>	<b>217.5</b>	<b>112.9</b>	<b>237.5</b>	<b>123.4</b>	<b>262.5</b>	<b>136.3</b>	<b>264.5</b>	<b>137.4</b>

Source: Authors' calculations from May 2012 field interview data

Figure 4: Coordination of Information along the Value Chains



producers, and to improve farm gate prices for both wet and dry season rice.

Value chain analysis shows that the rice produced in Takeo province does not meet the required standard for export. Actions to consider on the production side include introducing quality rice varieties, distributing and regularly renewing quality seeds, and providing extension services on best farming practices including pest control and soil fertility and enrichment. Doing so will enable farmers to reduce their costs, particularly fertiliser and pesticides, and produce higher yields of export quality paddy that fetch better market prices.

The well-structured rice market in the province enables farmers to sell their paddy at very competitive market prices. Paddy surplus is milled and traded efficiently in local markets, but due to low milling capacity and inadequate capital investment the milling sector cannot process the entire surplus. Export of paddy, therefore, remains crucial. Presently, paddy surplus is traded with Vietnam only. Cambodia has signed a Memorandum of Understanding with Vietnam to export and import rice commodities, but changes in Vietnam's rice trade policy through higher tariffs, quota restrictions or the closing of its borders to protect its local markets would throw Takeo's rice sector into crisis. An important economic safety measure to counter the risk of such disruption would be to open a Cambodia export rice chain.

## References

ACI –Agrifood Consulting International and CamConsult (2006), “Cambodia Agriculture Sector: Diagnostic Report” prepared for AusAID (Bethesda, MA: ACI)

Gergely, N., P. Baris and C. Meas (2010), “An Economic Survey of Rice Sector in Cambodia” Agence Francaise de Développement, Supreme National Economic Council and GIG Consultants

M4P (2008), *Making Value Chains Work Better for the Poor: A Toolkit for Practitioners of*

*Value Chain Analysis*, Version 3 (Phnom Penh: Agricultural Development International)

NIS –National Institute of Statistics (2011), *National Accounts of Cambodia 1993-2010* (Phnom Penh: Ministry of Planning)

RGC –Royal Government of Cambodia (2010), *Policy Document on Promotion of Paddy Rice Production and Export of Milled Rice*, <http://www.foodsecurity.gov.kh/sites/default/files/Rice-Policy-Eng.pdf>

RGC (2011), “Review Report on the Implementation of the Policy Paper on Promotion of Paddy Rice Production and Export of Milled Rice” (Phnom Penh: Committee for Economic and Financial Policy)

Sok Siphana, Chap Sotharith and Chheang Vannarith (2011), *Cambodia's Agriculture: Challenges and Prospects*, CICP Working Paper No. 37 (Phnom Penh: Cambodian Institute for Cooperation and Peace)

Theng Vuthy (2012), “Fertiliser Value Chains in Cambodia: A Case Study in Takeo Province”, *Cambodia Development Review*, 16(4), pp.5-9

## Continued from page 8 **The Role of Foreign...**

Sector in Malaysia”, *International Applied Economics and Management Letters*, 1(1), pp. 41-45

MOP–Ministry of Planning (2010), *National Strategic Development Plan (NSDP) 2006-2010* (Phnom Penh: MOP)

Net, S. (2011), “Economic Growth in Cambodia, Vietnam, and Thailand: Has FDI Really Played an Important Role? Empirical Evidences and Policy Implications, Master's degree thesis, Graduate School of International Development, Nagoya University, Japan

Olayiwola, K. and H. Okodua (n.d.), “Foreign Direct Investment, Non-oil Exports, and Economic Growth in Nigeria: A Causality Analysis” (Ota, Nigeria: Covenant University)

Phann Dalis (2013), “The Contribution of Foreign Direct Investment to the Industrial Development of Cambodia”, Master's Thesis, Graduate School of International Development, Nagoya University, Japan

World Bank and International Financial Corporation (2012), *Doing Business in a More Transparent World* (Washington, DC: International Bank for Reconstruction and Development, World Bank)

# Economy Watch—External Environment<sup>1</sup>

This section describes economic indicators of major world economies and economies in south and east Asia.

Uncertainty and vulnerability in the global economy remained as fluctuations and slowdown continued in the first quarter of 2013 in major Asian and industrialised countries. Albeit more slowly, Asia continued to be a driving force for global economic recovery.

Real GDP growth in Indonesia decreased slightly in the first quarter, to 6.0 percent from 6.1 percent a quarter earlier and 6.3 a year earlier. Malaysia's GDP growth dropped to 4.1 percent from 4.7 percent a year earlier. GDP growth in Singapore shrank to 0.2 percent, the lowest since 2010, from 1.6 percent a year earlier. China's economy is still one of the fastest growing, with GDP growth at 7.7 percent in the first quarter, a slight drop from 7.9 percent a quarter earlier. China's economy might slow further, affecting both domestic and international consumer and commodity markets. In that case, China might have to consider structural transformation to achieve fast and sustained growth. Although territorial disputes over a number of islets between China and Japan, and between China and several south-east Asian countries, have partly been normalised, China needs to seek peaceful resolution of the conflicts to ensure a smooth flow of foreign trade and investment. The real GDP growth in Hong Kong increased to 2.8 percent from 2.5 percent a quarter earlier; in South Korea it declined to 1.5 percent from 1.6 percent.

Recovery efforts in the euro zone have been partly successful as positive growth emerged in the first quarter after negative growth in three consecutive quarters. GDP growth in the euro zone increased to 1.1 percent in the first quarter from -0.9 percent a quarter earlier. Japan's economy was also slow, with growth of 0.4 percent, compared to 2.8 percent a year earlier. The US continued to perform well compared with other rich economies, growing at 1.8 percent after 1.6 percent in the previous quarter.

## World Inflation and Exchange Rates

Inflation in the first quarter in nearly all economies was reasonably well controlled. In Cambodia, inflation dropped to 1.5 percent from 1.8 percent a quarter earlier and from 5.5 percent a year earlier. Inflation in Vietnam continued to normalise to 6.9 percent from 16.0 percent a year earlier. Japan experienced a decrease in overall prices, putting upward pressure on real interest rates. Deflation persists in Japan although massive spending has been initiated through "Abenomics".

In the first quarter, the riel appreciated 0.02 percent (1.3 percent year on year) against the dollar. The Indonesian rupiah depreciated 0.7 percent from a quarter earlier (6.6 percent year on year) and Malaysian ringgit was unchanged. The Thai baht appreciated 2.9 percent from quarter earlier (3.8 percent year on year). The euro remained unchanged against the dollar while the Japanese yen depreciated 13.5 percent (16.4 percent year on year), increasing Japanese export competitiveness.

## Commodity Prices in World Markets

In the first quarter, the price of maize (US No. 2) decreased 1.8 percent to USD305.2/tonne, but year on year increased by 10.0 percent. Prices of palm oil rose by 5.4 percent (23 percent drop year on year) to USD852.7/tonne and of rubber (SMR5) by 3.0 percent (18.1 percent decline year on year) to USD3029.5/tonne. In the same period, prices of Thai rice (100% B) went down 0.4 percent from a quarter earlier (8.3 percent rise year on year) to USD594.7/tonne and of soybean (US No. 1) by 3.4 percent (13.8 percent rise year on year) to USD558.4/tonne. The price of crude oil (OPEC spot) went up 2.1 percent from the previous quarter (6.6 percent drop year on year) to USD109.5/barrel. Prices of gasoline (US Gulf Coast) dropped by 3.3 percent (10.1 percent year on year) to USD0.71/litre. The price of diesel (low sulphur No. 2) increased by 1.5 percent from a quarter earlier to USD0.82/litre, but decreased by 2.7 percent year on year.

<sup>1</sup> Prepared by Roth Vathana, research associate at CDRI.

# Economy Watch—External Environment

**Table 1. Real GDP Growth of Selected Trading Partners, 2008–13** (percentage increase over previous year)

	2008	2009	2010	2011				2012				2013
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Selected ASEAN countries												
Cambodia	6.8	0.1	-	-	-	-	-	-	-	-	-	-
Indonesia	6.1	4.2	6.2	6.5	6.5	6.5	6.5	6.3	6.4	6.2	6.1	6.0
Malaysia	4.6	-2.4	9.0	4.6	4.0	5.8	5.2	4.7	5.4	5.2	6.4	4.1
Singapore	1.1	-4.5	14.7	8.3	0.9	5.9	3.6	1.6	1.9	0.3	1.5	0.2
Thailand	2.6	3.3	7.9	3	2.6	3.5	-9.0	0.0	4.2	3.3	19.5	5.4
Vietnam	6.2	4.7	6.7	5.4	5.7	7.2	6.1	-	-	-	-	-
Selected other Asian countries												
China	9.0	8.2	10.4	9.7	9.5	9.1	8.9	8.1	7.6	7.4	7.9	7.7
Hong Kong	2.4	-3.2	6.9	7.2	5.1	4.3	3.0	4.2	3.6	1.3	2.5	2.8
South Korea	2.2	-1.0	6.1	4.2	3.4	3.4	3.4	3.0	2.4	1.5	1.6	1.5
Taiwan	0.1	-3.6	11.1	6.5	4.9	3.4	1.9	0.4	-0.2	1.0	3.7	1.7
Selected industrial countries												
Euro-12	0.9	-3.8	1.6	2.5	1.6	1.4	0.7	0.0	-0.4	-0.6	-0.9	1.1
Japan	-0.7	-5.4	4.1	-1	-1.0	0.0	-1.0	2.8	3.5	0.1	0.5	0.4
United States	1.1	-2.5	2.7	2.3	1.5	1.6	1.6	2.1	2.2	2.5	1.6	1.8

Sources: International Monetary Fund, Economist and countries' statistic offices

**Table 2. Inflation Rate of Selected Trading Partners, 2008–13** (percentage price increase over previous year—period averages)

	2008	2009	2010	2011				2012				2013
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Selected ASEAN countries												
Cambodia	19.7	-0.5	4.1	5.5	6.2	6.7	4.9	5.5	2.9	1.6	1.8	1.5
Indonesia	10.1	4.7	5.1	3.8	5.9	4.7	4.1	3.8	4.5	4.5	4.4	5.3
Malaysia	5.3	0.4	1.7	2.3	3.3	3.4	3.2	2.3	1.7	1.4	1.3	1.4
Singapore	6.5	0.5	2.9	4.9	4.7	5.5	5.5	4.9	5.2	4.2	4.0	3.6
Thailand	5.5	-0.9	3.1	3.4	4.1	4.1	4.0	3.4	2.6	2.9	3.2	3.1
Vietnam	23.3	7.3	9.0	16.0	19.4	22.5	19.8	16.0	8.6	5.6	7.0	6.9
Selected other Asian countries												
China	5.9	-0.8	3.2	3.8	5.7	6.3	4.6	3.8	2.9	1.9	2.1	2.4
Hong Kong	4.3	-0.3	2.4	5.2	5.1	6.5	5.7	5.2	4.2	3.1	3.8	2.2
South Korea	4.6	2.8	3.0	2.9	4.2	4.8	4.1	2.9	2.4	1.6	1.7	1.4
Taiwan	3.2	-1.1	1.0	1.3	1.6	1.3	1.4	1.3	1.6	3.0	1.9	1.8
Selected industrial countries												
Euro-12	3.3	0.4	1.6	2.7	2.7	2.7	2.9	2.7	2.5	2.5	2.3	1.8
Japan	1.4	-1.3	-0.7	0.3	0.3	0.2	-0.3	0.3	0.2	-0.4	-0.2	-0.3
United States	3.8	-0.4	1.7	2.8	3.5	3.8	3.3	2.8	1.9	1.7	1.9	1.7

Sources: International Monetary Fund, Economist and National Institute of Statistics

**Table 3. Exchange Rates against US Dollar of Selected Trading Partners, 2008–13** (period averages)

	2008	2009	2010	2011				2012				2013
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Selected ASEAN countries												
Cambodia (riel)	4054.2	4140.5	4187.1	4041.9	4044.9	4095.7	4071.9	4046.0	4054.3	4060.2	3995.9	3995
Indonesia (rupiah)	9699.0	10413.8	9089.9	8902.0	8593	8625.8	8985.7	9078.6	9281.3	9490.3	9614.6	9681.9
Malaysia (ringgit)	3.3	3.5	3.2	3.1	3.0	3.0	3.2	3.1	3.1	3.1	3.1	3.1
Singapore (S\$)	1.4	1.5	1.4	1.3	1.2	1.2	1.3	1.3	1.3	1.6	1.2	1.2
Thailand (baht)	33.4	34.3	31.7	30.6	30.3	30.2	31.0	31.0	31.3	31.3	30.7	29.8
Vietnam (dong)	16382.0	17725.2	19200.8	20,273.8	20,693.6	20,699.6	20,997.7	20,971.2	20849.7	20847.5	20839.3	20829.6
Selected other Asian countries												
China (yuan)	6.9	6.8	6.76	6.6	6.5	6.4	6.36	6.3	6.3	6.4	6.2	6.2
Hong Kong (HK\$)	7.8	7.8	7.77	7.8	7.8	7.8	7.78	7.8	7.8	7.8	7.8	7.8
South Korea (won)	1137.2	1277.8	1156.3	1020.2	1084.3	1084.9	1144.87	1131.2	1152.6	1132.9	1089.9	1085.9
Taiwan (NT\$)	31.5	33.0	31.3	29.3	28.9	29.2	30.26	29.7	29.6	29.8	29.2	29.5
Selected industrial countries												
Euro-12 (euro)	0.8	0.7	0.8	0.7	0.7	0.7	0.74	0.8	0.8	0.8	0.8	0.8
Japan (yen)	102.5	93.6	87.8	82.3	81.7	77.9	77.78	79.3	80.1	78.6	81.3	92.3

Sources: International Monetary Fund, Economist and National Bank of Cambodia

**Table 4. Selected Commodity Prices on World Market, 2008–13** (period averages)

	2008	2009	2010	2011				2012				2013
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Maize (USNo.2)—USA (USD/tonne)	218.2	167.3	167.3	280.3	311.6	302.8	270.8	277.5	270.5	327.1	310.9	305.2
Palm oil—north-west Europe (USD/tonne)	912.2	686.8	834.7	1251.0	1147.0	1079.0	1024.7	1106.7	1083.3	993.0	809.3	852.7
Rubber SMR 5 (USD/tonne)	2586.3	1884.8	3152.2	5278.0	4968.8	4617.6	3658.0	3701.2	3361.0	2799.2	2941.5	3029.5
Rice (Thai 100% B)—Bangkok (USD/tonne)	615.3	524.5	456.2	528.3	514.3	581.3	610.3	549.0	600.3	595.7	597.0	594.7
Soybeans (US No.1)—USA (USD/tonne)	460.4	414.0	375.4	537.2	525.7	514.0	454.8	490.8	546.5	649.4	577.8	558.4
Crude oil—OPEC spot (USD/barrel)	95.4	60.5	71.6	93.3	113.3	108.9	109.1	117.3	106.7	106.6	107.3	109.5
Gasoline—US Gulf Coast (cents/litre)	62.2	42.9	49.8	63.2	78.7	74.6	68.5	79.0	74.0	71.6	73.4	71.0
Diesel (low sulphur No.2)—US Gulf Coast (cents/litre)	76.20	43.05	51.6	72.5	75.7	77.3	77.3	83.8	77.8	81.1	80.3	81.5

Sources: Food and Agriculture Organisation and US Energy Information Administration



## Economy Watch—Domestic Performance<sup>1</sup>

### Main Economic Activities

Economic prospects in the first quarter of 2013 were not so optimistic, because of a significant slowdown in important sectors, signalling that the government needs to be attentive if the expected economic growth of about 7 percent is to be achieved this year.

Fixed asset investments approved by the Council for the Development of Cambodia in the first quarter of 2013 declined by 81.1 percent from a quarter earlier (47.5 percent year on year) to USD218.9 m. This is not an encouraging sign for the growth rate of about 7 percent the government expects this year. Investment in agriculture dropped 98 percent from the preceding quarter (98.5 percent year on year) to USD2.3 m, despite increased government attention to improved competitiveness and productivity in this sector, especially rice. Investment in industry, an important driving force for growth, declined by 0.6 percent from the previous quarter (6.4 percent year on year) to USD195.4 m. Investment in garments—the major manufacturing commodity—went down 28.4 percent from a quarter earlier (21.4 percent year on year) to USD109.5 m. Albeit strong, no investment was made in hotels and other tourism-related businesses in the first quarter. Nonetheless, Cambodia continued to attract more tourists as foreign visitor arrivals in the first quarter increased by 16.4 percent from the preceding quarter (17.8 percent year on year), of which arrivals by air rose 22.1 percent (19.0 percent year on year) and by land and water by 10.8 percent (16.5 percent year on year).

Construction is one of the pillars of growth affected by the global financial crisis, and recovery has been slow. The total value of construction in the fourth quarter decreased 65.8 percent from the previous quarter (59.7 percent year on year) to USD59.9 m; villas and houses dropped 53.6 percent (86 percent year on year) to USD8.5 m and flats by 83.4 percent (82.6 percent year on year) to USD10.2 m.

Exports also slowed. Total exports in the first quarter declined by 59.8 percent from a quarter earlier (54.3 percent year on year) to USD585.3

m. Garments—accounting for 79.0 percent of the total export value—dropped by 59.5 percent (56.8 percent year on year) to USD462.5 m, of which exports to the US accounted for 43.1 percent, the EU 33.7 percent, ASEAN 1.0 percent and Japan 18.1 percent. Exports of agricultural commodities, of which rubber and rice are important, declined by 56.9 percent (41.7 percent year on year) to USD46.9 m. In the first quarter, total imports rose 13.1 from a quarter earlier (36.2 percent year on year) to USD2.2 bn. Imports of gasoline went up 0.1 percent (11.6 percent year on year), while those of diesel decreased by 0.6 percent (0.3 percent year on year) and construction materials 20.5 percent (2.2 percent year on year).

### Public Finance

Increased fiscal space through strengthening revenue collection continues to be a necessary condition for the government and economy. A sign of improvement was the year-on-year rise in government revenue, mainly current revenue. In the first quarter, total revenue decreased by 9.8 percent from a quarter earlier (5.3 percent rise year on year) to KHR1820.2 bn. Current revenue went down 9.0 percent (5.1 percent increase year on year) and tax revenue by 4.4 percent (12.2 percent rise year on year). Revenue from domestic tax declined by 1.9 percent from the preceding quarter to KHR1253.1 bn, but year on year rose by 14.7 percent. Non-tax revenue dropped by 30.6 percent (27.8 percent year on year) to KHR239 bn. Capital revenue dropped by 75.3 percent (87.4 percent rise year on year) to KHR5.9 bn. Efforts to curb waste in government spending were also seen in a decrease of government expenditure in the first quarter. Nonetheless, the decreased public expenditure could have negative effects on the economy if expenditure on important social programmes is cut. Total expenditure declined by 66.3 percent from a quarter earlier (45.2 percent year on year) to KHR925.9 bn. Capital expenditure dropped by 85.6 percent (79.1 percent year on year) and wages by 33.6 percent (22.3 percent year on year). Expenditure on subsidies and social assistance went down 41.2 percent from a quarter

<sup>1</sup> Prepared by Roth Vathana, research associate and Pon Dorina, research assistant, at CDRI.

earlier to KHR247 bn, but year on year increased by 30.5 percent.

### **Inflation and Foreign Exchange Rates**

Inflation rate was well managed in the first quarter, decreasing to 1.5 percent from 1.8 percent a quarter earlier or 2.9 percent a year earlier. The price index of food and non-alcoholic beverages increased 1.7 percent, compared to 3.4 percent a year earlier. In the same period, the riel appreciated 0.02 percent from a quarter earlier (1.3 percent year on year) against the US dollar. The price of gold dropped by 3.2 percent (2.1 percent year on year) to USD199.8/chi. Prices of diesel fuel rose by 0.1 percent from the preceding quarter to KHR5134.4/litre, but year on year decreased by 1.2 percent. The price of gasoline went up 2.2 percent from a quarter earlier (0.3 percent year on year) to KHR5410.5/litre.

### **Monetary Developments**

In the fourth quarter, total liquidity increased by 20.9 percent from a year earlier to KHR28,591.6 bn, money by 2.3 percent and quasi-money by 44.6 percent. Net domestic assets rose by 24.3 percent from a quarter earlier (81.2 percent year on year), of which net claims on government increased by 1.9 percent (17.1 percent year on year) and credit to the private sector by 10 percent (34.1 percent year on year), signifying increased lending to private companies.

### **Poverty Situation**

Selling labour and earning from small trading are major income sources of the nine vulnerable groups and their families. In May, the average daily income of rice field workers and motorcycle taxi drivers fell, while other groups showed an improvement.

Rice field workers earned KHR 6427 per day, a slight decrease (0.1 percent) from the previous year. However, it was 11 percent more than what they earned in February. Due mainly to a decrease in workers in the same occupation, the respondents were able to demand higher wages. These workers spent an average KHR4118 per day, of which 85 percent was on food.

The daily earnings of motorcycle taxi drivers were KHR 12,522, 8.0 percent less than a year earlier and 13 percent less than three months earlier. Half of the respondents rent housing in Phnom

Penh. On average, there were three people living under the same roof. They spent merely 1.3 percent of their daily expenditure on rent, while 95 percent was spent on food. On this income, they can feed their family only if other members work.

Scavengers' daily earnings reached KHR 10,440, a very fast growth of 26 percent from the preceding year, and 10 percent from three months earlier. More people entered this work; however, the respondents still increased their earning for that they knew the rubbish areas quite well. They travelled to collect garbage, reflected in their biggest spending after food being on transportation.

Small vegetable traders earned KHR 11,571 per day, a rise of 16 percent from February. Eighty-five percent of the respondents were from provinces, and only 47 percent commuted from home every day. Most of their daily spending was on food and travel. The traders would take loans or put other family members into work if their earnings could not support them.

Compared with February, the daily earnings of skilled construction workers dropped by 6.7 percent to KHR 14,136, while unskilled-workers' increased by 9.4 percent to KHR13,725. The heavy spending of skilled workers was on transportation, while for unskilled workers it was on house rent, after food. Skilled workers could save more than unskilled ones.

The earnings of waiters/waitresses went up by 3.3 percent from three months earlier. Having more customers was the main reason for the increase. Only 15 percent of the respondents could save for the future. The workers were provided shelter, which was a large saving for them. Porters earned KHR 12,823, 0.6 percent more than three months earlier. They spent on average KHR10,070 per day. Food and transportation costs were a burden to them. The income of cyclo drivers rose by 11 percent.

Garment workers' earnings decreased 2.2 percent from February, reaching KHR9776. Fifty-five percent of the respondents worked in sewing. The workers averaged 58 hours per week. They expected more overtime works to get more pay. They could send some money to support their families, but it was not enough. However, they did not want to change their work because they did not have any skill other than sewing.

# Economy Watch—Indicators

**Table 1. Private Investment Projects Approved, 2008–13**

	2008			2009				2010				2011				2012				2013	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	Fixed Assets (USD m)																				
Agriculture	92.0	615.0	530.68	4.1	156.4	123.9	440.6	154.7	81.2	181.1	114.6	2.3									
Industry	724.9	818.5	403.66	67.1	257.1	2361.0	174.9	208.7	173.7	245.6	196.5	195.4									
<i>. Garments</i>	142.8	90.1	122.81	57.1	108.4	109.7	118.7	139.4	97.5	107.2	152.9	109.5									
Services	10,003.2	4432.0	1337.34	209.5	2229.2	264.1	722.6	50.9	18.0	2.1	845.6	21.2									
<i>. Hotels and tourism</i>	8758.1	3980.1	1105.14	107.9	2221.9	264.1	257.0	50.9	0.0	0.0	640.6	0.0									
Total	10,570.9	5865.5	2271.7	280.7	2642.7	2748.9	1338.1	414.4	273.0	428.8	1156.6	218.9									
Total	-	-	-	-77	8.41	-4	-51.3	-69	-33.9	55.6	169.8	-81.1									
Total	308.6	-44.5	-61.3	-42.2	643.2	753	9.6	48.4	-89.6	-84.4	-13.6	-47.5									

Including expansion project approvals. Source: Cambodian Investment Board

**Table 2. Value of Construction Project Approvals in Phnom Penh, 2008–12**

	2008			2009				2010				2011				2012					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
	USD m																				
Villas and houses	154.7	64.3	36.2	4.1	5.9	106.3	60.9	64.8	66.6	18.3	8.5										
Flats	221.6	149.6	183.8	16.1	22.8	90.0	58.5	60.8	219.3	61.6	10.2										
Other	740.9	227.3	269.7	23.6	48.7	51.1	29.3	197.2	47.8	94.9	41.2										
Total	1117.0	441.2	489.8	43.8	77.4	247.4	148.7	322.8	333.6	174.9	59.9										
Total	-	-	-	-58.7	76.7	219.7	-39.9	117.1	3.3	-47.6	-65.8										
Total	75.7	-60.5	11	-14.8	-61.7	215.6	40.29	637.1	331.1	-29.3	-59.7										

Source: Department of Cadastre and Geography of Phnom Penh municipality

**Table 3. Foreign Visitor Arrivals, 2008–13**

	2008			2009				2010				2011				2012				2013	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	Thousands																				
By air	1239.4	1111.7	1304.3	227.4	286.9	335.3	430.7	513.6	317.1	370.5	500.7	611.2									
By land and water	881.9	999.7	1094.6	351.0	319.6	364.5	366.3	481.5	424.3	450.3	506.1	560.9									
Total	2121.3	2111.5	2398.9	778.4	606.5	699.8	797.1	995.2	761.4	820.9	1006.8	1172.1									
Total	-	-	-	10.4	-22.1	15.4	13.9	24.9	-23.5	7.8	22.6	16.4									
Total	5.3	0.5	13.6	13.9	12.8	20.2	13.0	27.8	25.5	17.3	26.3	17.8									

Source: Ministry of Tourism

**Table 4. Exports and Imports, 2008–13\***

	2008			2009				2010				2011				2012				2013	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	USD m																				
Total exports	3097.8	2901.6	3630.2	1017.6	1132	1455.6	1324.2	1280.1	1775.9	1595.8	1454.7	585.3									
Of which: Garments	2986.2	2565.3	3223.4	880.5	964.15	1285.7	1129.23	1070.8	1474.7	1329.1	1140.83	462.5									
<i>. To US</i>	1908.3	1512.6	1853.9	464.5	466.7	619.4	504.71	493.3	627.3	566.6	456.07	199.3									
<i>. To EU</i>	689.0	644.7	809.5	232.0	301.4	397.5	391.3	328.4	504.1	462.7	421.82	156.0									
<i>. To ASEAN</i>	10.76	6.9	9.9	3.8	4.18	4.7	4.95	6.4	11.7	11.4	9.76	4.7									
<i>. To Japan</i>	25.2	44.5	86.5	34.3	28	43.4	41.25	50.1	48.9	47.1	42.47	18.8									
<i>. To rest of the world</i>	352.9	356.5	463.6	145.9	163.89	220.7	187.03	192.5	282.7	241.3	210.71	83.8									
Agriculture	44.5	73.1	164.9	74.0	97.07	98.9	92.06	80.5	101.3	86.1	108.77	46.9									
<i>. Rubber</i>	35.8	51.6	89.1	49.9	48.6	56.1	43.06	40.3	46.4	46.1	43.84	20.2									
<i>. Wood</i>	3.4	3.5	34.1	6.2	16.8	16.1	9.7	8.9	12.4	4.1	11.6	0.1									
<i>. Fish</i>	2.3	3.9	2.8	0.6	0.4	1.4	0.7	0.5	0.7	0.4	0.4	0.1									
<i>. Rice</i>	2.6	10.9	34.7	16.9	30.3	22.4	37.0	27.1	37.5	31.7	50.2	22.4									
<i>. Other agriculture</i>	0.5	3.0	4.1	0.5	1.0	2.9	1.6	3.9	4.4	3.9	2.8	4.1									
<i>. Others</i>	67.1	263.22	242.0	63.2	70.8	71.0	102.9	128.8	199.9	180.6	205.1	76.0									
Total imports	4272.5	4331.5	5190.6	1454.9	1690.1	1519.1	1711.9	1609.2	1885.4	2015.2	1938.2	2192.1									
Of which: Gasoline	84.8	91.13	108.6	62.2	76.7	73.8	81.8	70.7	76.7	78.0	78.8	78.9									
Diesel	19.5	180.67	203.8	92.7	129.9	118.9	105.5	139.4	126.6	138.3	139.9	139.0									
Construction materials	56.3	49.74	57.6	18.8	12.7	11.6	12.0	13.5	14.1	16.5	16.6	13.2									
Other	4011.8	4010	4820.6	1288	1471	1315	1513	1386	1668.0	1782.4	1703.0	1961.1									
Trade balance	-1174.7	-1429.9	-1560.5	-437.2	-558.1	-63.5	-387.6	-329.1	-642.2	-419.4	-483.6	-1606.68									
Total garment exports	-	-	-	-6.6	9.5	33.4	-12.2	-5.2	-37.7	-9.9	-14.2	-59.5									
Total exports	-	-	-	-4.9	11.2	28.6	-9.0	-3.3	38.7	-10.1	-8.8	-59.8									
Total imports	-	-	-	-8.9	6.2	-10.1	12.7	-6.0	17.2	6.9	-3.8	13.1									
Total garment exports	1.6	-14.1	25.7	40.8	34.5	37.0	19.8	21.6	53.0	3.4	1.0	-56.8									
Total exports	1.6	-6.3	25.1	46.7	37.9	39.3	23.7	25.8	56.9	9.6	9.9	-54.3									
Total imports	1.3	1.4	19.8	30.1	33.7	3.2	28.1	10.6	11.6	32.7	13.2	36.2									

\*Import data include tax-exempt imports. Sources: Department of Trade Preference Systems, MOC and Customs and Excise Department, MEF (web site)

**Table 5. National Budget Operations on Cash Basis, 2008–13** (billion riels)

	2008	2009	2010	2011				2012				2013
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Total revenue	5290.0	5988.99	2805.83	1000.5	1564.25	1510.1	1776.61	1728.9	2045.1	1900.8	2017.0	1820.2
Current revenue	5210.7	5859.08	2786.12	1378.6	1563.01	1497.59	1740.12	1725.8	1928.6	1796.4	1993.1	1814.3
Tax revenue	4409.9	4692.96	2457.02	1142.3	1367.52	1313.35	1454.33	1403.82	1721.8	1560.7	1648.5	1575.3
Domestic tax	3248.4	3533.57	1727.10	875.6	1095.26	996.642	1104.12	1092.27	1403.4	1230.0	1277.2	1253.1
Taxes on international trade	1161.5	1159.39	639.00	266.7	272.27	316.709	350.207	311.253	318.4	330.7	371.4	322.3
Non-tax revenue	800.8	1166.13	507.13	236.3	195.48	184.23	285.8	330.98	206.9	235.7	344.6	239.0
Property income	78.0	291.13	4.87	10.6	18.64	15.19	19.35	91.28	13.1	22.5	16.2	8.2
Sale of goods and services	424.7	460.07	268.08	130.0	138.92	144.192	175.627	166.899	171.4	132.8	196.3	152.8
Other non-tax revenue	298.2	408.91	391.70	95.7	37.9	24.856	90.815	63.8	22.4	80.5	132.1	78.0
Capital revenue	79.3	129.92	2019.39	21.9	1.25	12.513	36.486	3.148	116.4	104.4	23.9	5.9
Total expenditure	6297.8	8784.65	4259.67	1581.6	2025.15	2310.61	3115.05	1688.33	2425.6	2951.3	2751.5	925.9
Capital expenditure	2574.4	2853.23	1495.19	579.8	721.01	801.167	1444.89	699.937	716.2	1194.5	1017.7	146.3
Current expenditure	3809.0	4773.07	2848.81	857.5	1304.13	1509.44	1670.15	988.398	1709.4	1756.7	1733.9	879.6
Wages	1397.0	2048.81	1208.81	401.0	531.6	629.697	608.253	508.919	725.2	657.5	595.0	395.3
Subsidies and social assistance	927.1	1099.42	613.31	257.4	450.85	323.282	487.345	189.594	514.6	462.1	420.5	247.4
Other current expenditure	1384.9	1624.84	1067.07	199.1	321.7	556.5	574.6	289.9	469.7	637.1	718.4	236.9
Overall balance	-1007.8	-2795.66	-1453.83	-181.2	-460.9	-800.5	-1,338.4	196.5	-380.6	-1050.5	-734.5	0.0
Foreign financing	2055.10	1845.21	772.81	544.4	576.9	272.9	985.0	577.8	491.5	959.3	429.2	894.4
Domestic financing	-127.00	938.64	567.96	-2718.5	238.7	312.5	105.6	-565.7	148.4	22.1	62.4	-44.2

Source: MEF web site

**Table 6. Consumer Price Index, Exchange Rates and Gold Prices (period averages), 2008–13**

	2008	2009	2010	2011				2012				2013
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
(October-December 2006:100)	Consumer price index (percentage change over previous year)											
Phnom Penh												
- All Items	19.7	-0.7	4.1	3.6	6.3	6.7	4.9	2.9	2.9	1.6	1.8	1.5
- Food & non-alcoholic bev.	33.1	-0.3	4.4	3.7	7.6	8.2	6.2	3.4	3.4	1.3	1.4	1.7
- Transportation	19.4	-10.7	7.0	5.0	7.3	8.8	6.3	3.0	3.0	1.1	1.2	-0.8
Exchange rates, gold and oil prices (Phnom Penh market rates)												
Riels per US dollar	4058.2	4140.5	4187.1	4041.9	4044.9	4095.7	4071.9	4046.0	4054.3	4060.7	3995.9	3995
Riels per Thai baht	123.5	121.1	133.13	132.7	133.8	135.2	131.1	130.2	129.0	129.3	131.3	134.7
Riels per 100 Vietnamese dong	24.8	23.4	21.725	19.9	19.6	19.8	19.4	19.3	19.4	19.5	19.2	19.3
Gold (US dollars per chi)	105.9	113.1	147.58	147.9	181.5	204.6	203.8	204.1	194.5	198.3	206.5	199.8
Diesel (riels/litre)	4555.2	3170.9	3859.3	4427.2	4784.6	4924.5	4908.3	5193.9	4458.3	4983.9	5128.8	5134.4
Gasoline (riels/litre)	4750.8	3593.1	4368.1	4750.1	5065.5	5248.4	5113.8	5395.8	5308.3	5251.3	5295.4	5410.5

Sources: NIS, NBC and CDRI

**Table 7. Monetary Survey, 2007–12** (end of period)

	2007	2008	2009	2010	2011				2012			
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Billion riels												
Net foreign assets	10,735.0	10,345.0	14,655.0	16,697.9	17079.1	18,099.9	17,695.2	17,893.9	18,652.3	18,729.6	18,463.8	18,154.5
Net domestic assets	576.0	1513.3	1573.0	2778.9		3907.7	4961.6	5760.8	6211.2	7922.3	8400.3	10437.4
Net claims on government	-1816.0	-2987.0	-2252.0	-2126.6		-2252.7	-2184.2	-1925.8	-2123.1	-2542.4	-2399.9	-2486.4
Credit to private sector	6386.0	9894.0	10,532.0	13,331.2	13,909	15,290.6	16,385.7	17,552.8	18,789.0	20,081.4	21,398.2	23,536.6
Total liquidity	11,311.0	11,858.0	16,228.0	19,476.8	20,278.3	22,007.6	22,656.8	23,654.7	24,863.5	26,651.9	26,864.1	28,591.9
Money	2052.0	2399.0	3120.0	3220.9	3497.2	3539.8	3681.3	3956.2	3984.6	3871.8	3818.2	4045.7
Quasi-money	9259.0	9459.0	13,108.0	16,255.9	16,781.1	18,467.8	18,975.5	19,698.5	20,878.9	22,780.1	23,046.0	24,546.2
Percentage change from previous year												
Total liquidity	62.9	4.8	36.9	20.0	17.7	20.5	20.0	21.5	20.2	21.1	18.6	20.9
Money	23.8	16.9	30.1	3.2	11.1	13.6	20.2	22.8	11.4	9.4	3.7	2.3
Quasi-money	75.2	2.2	38.6	24.0	19.1	21.9	19.9	21.2	22.0	23.4	21.5	44.6

Source: National Bank of Cambodia

**Table 8. Real Average Daily Earnings of Vulnerable Workers** (base November 2000)

	Daily earnings (riels)									Percentage change from previous year		
	2008	2009	2010	2011	2012				2012	2013		
					May	Aug	Nov	Feb		May	Nov	Feb
Cyclo drivers	12,628	8091	9055	9532	10,686	10690	10454	9588	10,681	12.5	2.2	0.0
Porters	9005	9549	9964	10,785	12,713	12,479	12,574	12744	12,823	9.4	18.0	0.9
Small vegetable sellers	9926	8273	8266	8337	9901	10,347	10,542	9949	11,571	49.0	-19.1	16.9
Scavengers	4652	5857	6698	8388	8266	9139	9328	9483	10,440	-9.3	18.7	26.3
Waitresses*	4327	4646	5607	5986	6261	5569	6436	6527	6744	3.2	5.6	7.7
Rice-field workers	8697	6197	5691	5695	6431	8483	5000	5828	6427	9.9	23.8	-0.1
Garment workers	6554	7085	7746	8409	8391	9599	8989	10,000	9776	4.7	16.9	13.6
Motorcycle-taxi drivers	15,691	10,685	10,623	11,568	13,616	12,807	13,042	14,427	12,522	1.1	17.7	-8.0
Unskilled construction workers	8779	8343	8790	10,307	11,589	10,690	11,375	12,548	13,728	15.4	17.7	18.5
Skilled construction workers	12,710	12,487	11,952	13,159	12,847	14,029	14,270	15,156	14,136	-4.4	9.6	10.0

\* Waitresses' earnings do not include meals and accommodation provided by shop owners. Surveys on the revenue of waitresses, rice-field workers, garment workers, motorcycle taxi drivers and construction workers began in February 2000. Source: CDRI



*Continued from page 24* **CDRI Update**

local governments in the sustainable and equitable management of natural resources focusing on extractive industries such as mining and oil; the annual East Asia Development Network (EADN) and associated Global Development Network meetings in Manila co-hosted by the World Bank and the Philippines Institute for Development Studies where he gave a presentation on “Growth and Inclusiveness in the GMS Countries – An Assessment”; and a one day expert meeting on Energy Markets and Management in Myanmar in Bangkok organised jointly by the Energy Research Institute of Chulalongkorn University, the Economic Research Institute for ASEAN and East Asia, and Tokyo University.

On 28 June CDRI held a one day 2011-15 strategic plan mid-term review workshop involving senior and middle management and senior researchers to assess major achievements against current performance indicators, to identify areas of weakness or under-achievement that need to be a focus for the remainder of 2011-15, to update the goals and performance indicators to reflect new or changed circumstances/priorities since the plan was developed, and to revise the performance indicators for the remainder of the plan to ensure they are more measurable. The outcomes will be reported to CDRI’s August 2013 board meeting and the Sida mid-term review later in 2013.

In late June, CDRI was saddened to learn of the death from cancer of one of its highly valued Board members, Dato’ Dr Mahani Zainal Abidin, Chief Executive of ISIS Malaysia. A distinguished economist, policy influencer and active participant in ASEAN and regional affairs, her passing is a great loss. CDRI extends its condolences to her family and friends, ISIS Malaysia, and the many regional colleagues who so valued her intellectual and personal strengths.

## RESEARCH

### ***Democratic Governance and Public Sector Reform Programme (DGPSR)***

Seven research projects, mainly funded by the Swedish International Development Cooperation Agency (Sida), are in their final stages. The report

for *Urban Governance in Decentralised Cambodia* is being finalised based on comments from the advisor. The reports on *Gendered and Democratic Decentralisation: Analysis of Gender in Political Parties in Cambodia* and *Sub-National Civil Society in Cambodia: A Gramscian Perspective* are being prepared for publication. Comments on the report *20 Years After UNTAC: Cambodian Civil Society Strengthened?* have been addressed and the document is in the last phase of publication. Key informants are being identified for the project *Emerging Youth’s Role in Political Activities*. Literature review for *Linking Local Governance and SME Development* has been done and is now being written up.

The first journal article on ‘*All Good Things Do Not Go Together*’ – *Analysing Contradictions between Peace-building and Democratisation*, a project with the University of Gothenburg to identify how and why conflicts emerge (in the short- and long-term) in the wake of, and possibly triggered by, peace-building interventions, is being finalised for publication in September.

Two new projects are in the design phase. The aim of *Cambodian State: How is it Developmental?* is to assess the impacts of governance reforms on the state’s institutional ability to promote development using the model of the developmental state as the framework for analysis. The project *Political Settlement and Inclusive Growth in Cambodia*, commissioned by the Centre for Effective States and Inclusive Development at the University of Manchester, is part of a multi-country study that uses political settlements analysis to understand how fast a country develops, how inclusive that development is, and whether the development is sustainable.

### ***Economy, Trade and Regional Cooperation Programme***

The team continues to carry out and report on the quarterly *Vulnerable Worker Survey* and monthly *Provincial Price Survey*. Eight analytical papers of the *Global Financial Crisis and Vulnerability in Cambodia* project and the report on *Binding Constraints on Economic Growth in Cambodia: A Growth Diagnostic Approach* have been published as CDRI working papers.

The Sida-supported five-year research project on *Inclusive Growth* is in progress. It has five

sub-themes: High and Sustainable Economic Growth; Economic Growth, Inequality and Poverty Reduction; Assessing the Pro-Poorness of Fiscal Policy; Economic Growth, Trade and Poverty Reduction; and How to Achieve Inclusive Growth. An article on *Leveraging Trade for Economic Growth in Cambodia* within the Economic Growth, Trade and Poverty Reduction component is being prepared for publication as a working paper. Two other studies on the *Pro-Poorness of Fiscal Policy* and of *Labour Market Policy* are being designed.

The programme has been commissioned to undertake two research projects: *Food Security, Impacts of Risks and Shocks, and Rural Development Paths in Cambodia and Laos* by Hannover University; and *Survey on the Usage of US dollar in Cambodia* by ASEAN+3 Macroeconomic Research Office Ltd (AMRO). Fieldwork for the first project covering 600 households in 30 villages of Stung Treng province has been completed. The survey for the second project, which involves interviewing 1500 households and 500 SMEs in 75 villages across 17 provinces, is on-going. The proposal to conduct research on *Labour Migration in Cambodia: Causes and Impact on Poverty, Inequality and Productivity* has been awarded a grant by the Partnership for Economic Policy (PEP).

In June the GMS-Development Analysis Network convened in Phnom Penh to review Stage I research particularly the synthesis report, adjust plans for Stage II to reflect budget shortfall and methodological issues, and discuss the draft concept note for the next phase and ways forward.

#### ***Natural Resources and the Environment (NRE)***

Of the six research projects underway, three are funded by Sida. The report for the project *Climate Change Adaptation and Livelihoods in Cambodia* has been revamped for publication as a CDRI working paper. The working paper *Gender and Water Governance: Irrigation Management and Development in the Context of Climate Change* is being revised and prepared for publication. Fieldwork for the study *Adaptation Capacity of Rural People in the Main Agro-ecological Zones* is being conducted.

The feasibility case study for *China Goes Global: A Comparative Study of Chinese Hydropower Dams in Africa and Asia*, a project funded by

the Economic and Social Research Council, is in progress. For *Climate Change and Water Governance in Cambodia*, a study supported by the International Development Research Centre (IDRC), preliminary research findings were reported at the Regional Workshop on Climate Change and Water Governance organised by IDRC in Kathmandu on 18-21 June, and participatory and downscaling approaches for climate change vulnerability and adaptation assessment are being reviewed. The team is preparing the Cambodia Country Brief on “Tourism, Manufacturing, and Energy: Opportunities, Challenges, and Policy Implications in Cambodia”, which draws on the study *Practical Approach to Supporting Competitiveness of Low/Lower-middle Income Countries in a Carbon Constrained World*.

#### ***Poverty, Agriculture and Rural Development (PARD)***

The team is working on six projects. The final report for the *Study on the Contribution of Arbitration Council (AC) Services in Improving Industrial Relations in Cambodia: A Case of Garment Factories* was accepted by the Arbitration Council Foundation (ACF) and the project is now concluded. For the project on *Developing Agricultural Policies for Rice-based Farming Systems in Cambodia and Laos*, the case study reports on farm credit, fertiliser value chains, and rice value chains are being reviewed by the project leader at Queensland University, and the report on rice contract farming is nearing completion. As part of the second phase of this project, two more case studies – livestock (cattle) value chains and extension access – have been initiated. Data collection in the field for the Sida-supported study on the *Impact of Contract Farming on Smallholder Livelihoods* was postponed due to the national elections. The final report on the *Baseline Assessment Study for the USAID-HARVEST Programme* has been accepted. The Sida-funded *Study on Farm Mechanisation and Labour Market Trend in Agriculture* was started. Work has also begun on a new project, the *Position Paper on the Development of the Fertiliser Industry in Cambodia*, a cross-country study covering South East Asia, South Asia and Central Asia contracted by the International Food Policy Research Institute (IFPRI) with funding support from USAID. In May,

the team joined the other eleven country research teams at an inception workshop in Phnom Penh.

**Social Development Programme (SD)**

Eight projects are being undertaken. The six-year research programme consortium on *Building Poor Health Systems during Recovery from Conflict* “ReBUILD”, funded by UK-DFID, is making substantive progress. Data is being collected for all three sub-studies: The Impact of Health Financing Policy Change on Patterns of Poor Household Expenditure for Healthcare in Cambodia, Policies to Attract and Retain Health Workers in Rural Areas, and The Change Process in Contracting Arrangements within the Cambodian Health Sector.

A partnership with World Vision, the study on *Eliminating Exploitative Child Labour through Education and Livelihoods*, funded by the US Department of Labour, is in the literature review and design phase. Data has been collected and

processed for *Verification of Sanitation Outcomes in Cambodia*, a project funded by the Bill & Melinda Gates Foundation. Research protocol for the UNICEF-funded project *Qualitative Assessment of Child Nutrition Programme in Cambodia* was submitted to the National Ethics Committee for approval. Work has started on a new Sida-funded project *Supply and Demand of Workforce* that aims to identify the links between higher education and the labour market, and to help find a fit between the skills that higher education institutes produce and the skilled labour that firms demand.

Joint projects are the ACIAR-funded *Rice Contract Farming Case Study*, expected to complete in July; the CAVAC-supported *Impact Assessment of CARF-Funded Projects*, for which the report is being finalised; and *Improving Water Governance and Climate Change Adaptation*, now at the literature review and design phase. In addition, the team submitted several expressions of interest and research proposals to potential partners.

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## CDRI UPDATE

## MAJOR EVENTS

In April CDRI hosted a roundtable briefing on major development issues for Cambodia with the new Mission Director of USAID in Cambodia, Ms Rebecca Black. In May-June CDRI met with the newly established Parliamentary Institute of Cambodia to discuss development policy research and dissemination partnership, and hosted roundtable briefings with the Cambodia Country Manager of the World Bank, Mr Alassane Sow, and the Ambassador of the European Union to Cambodia, HE Jean-Francois Cautain, and some of his development team, to share the major current areas of CDRI's work and discuss potential partnership.

The annual partnership review meeting between CDRI and the Swedish International Development Agency (Sida), CDRI's long term resource partner, was held in May. CDRI reported on progress in the priority areas of research support provided by Sida – democratic governance and public sector reform, inclusive growth, poverty analysis, agriculture and rural livelihoods for inclusive growth, climate change adaptation and livelihoods, and human resource development with a focus on technical and vocational education and training – and on achievements in its operations management, also supported by Sida. An independent mid-term review of Sida's support for 2011-15 will be held in late 2013. In June CDRI had further discussions with the Swiss Agency for Development and Cooperation (SDC) on the design of another significant long term

resource partnership focused on SDC's priority areas in Cambodia – agricultural development; labour market, employment and skills development; and social protection.

In May, CDRI's Executive Director participated in the 2013 Asia Macroeconomic Conference on "Middle Income Trap and East Asia Economic Transition" in Beijing co-hosted by China's Institute of Economic Research and the Academic Division of International Studies of the Chinese Academy of Social Sciences (CASS). This was followed by a research workshop on the East Asia Economic Transition project led by Professor Zhang Yunling of CASS, at which the Executive Director made a presentation on his contribution to this project on "ASEAN Small Less Developed Economies: Need or a New Approach". In June he attended the inaugural Asia Think Tank Summit at the Asian Development Bank Institute in Tokyo on the theme "The Role of Think Tanks in the Asian Century: Seizing the Opportunities and Managing the Threats".

Over the April-June quarter CDRI's Director of Research participated in a one day brainstorming session on ASEAN Energy Market Integration (AEMI), a Track 2 initiative organised by the ASEAN Studies Centre and Energy Research Institute at Chulalongkorn University in Bangkok to formulate an AEMI vision within the framework of the forthcoming AEC 2015 and identify research priorities; a two-day consultative seminar at the European Commission in Brussels on the role of

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