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FORESTS AND THEIR CONTRIBUTION TO LOCAL LIVELIHOODS¹

Introduction

The role that forests play as a livelihood safety net should not be underestimated, particularly in the context of a changing climate where people's agricultural production is damaged or lost to natural disasters such as flood, drought and pest infestation or livestock succumb to disease epidemics. In such instances people have recourse to forest resources for food, fodder and medicine among many other products. Community Forestry International (CFI) (2006) posits that non-timber forestry products (NTFPs) not only serve as a safety net in times of food shortage, they are also a valuable source of household income and materials.

In rural areas forests are an essential source of resources and products that enhance the livelihoods of local communities and indigenous peoples and hence help bolster their resilience to change (FAO 2010).

Forests provide multiple benefits, from the sequestration of carbon as a global public good to critical livelihood contributions for forest users. It is increasingly recognised that forest resources contribute to livelihoods in a variety of ways. Forest goods and services are extremely important in providing food, medicine, fodder, shelter, fuel, timber and building materials. Forest related enterprises such as fuel-wood and charcoal sales,



Forest products: an important livelihood safety net for poor villagers, Sangke Satob commune, Kompong Speu province, 2010

handicrafts and other products made from NTFPs provide cash income. Moreover, the forestry sector provides formal and informal employment and is an important foreign exchange earner. In his trade chain analysis of resin products in Cambodia, Tola (2009) reports that the annual domestic market/export value of the estimated 11,000–18,0000

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¹ This article is prepared by Dr Koy Ra, programme coordinator, and Mr Lonn Pichdara, research assistant, at CDRI. This paper is an extract from “The Value of Forests for Local Livelihoods” (forthcoming) and a Poverty and Environment Network (PEN) working paper (forthcoming).

tonnes of resin collected each year is approximately USD4.7 million to USD7.6 million.

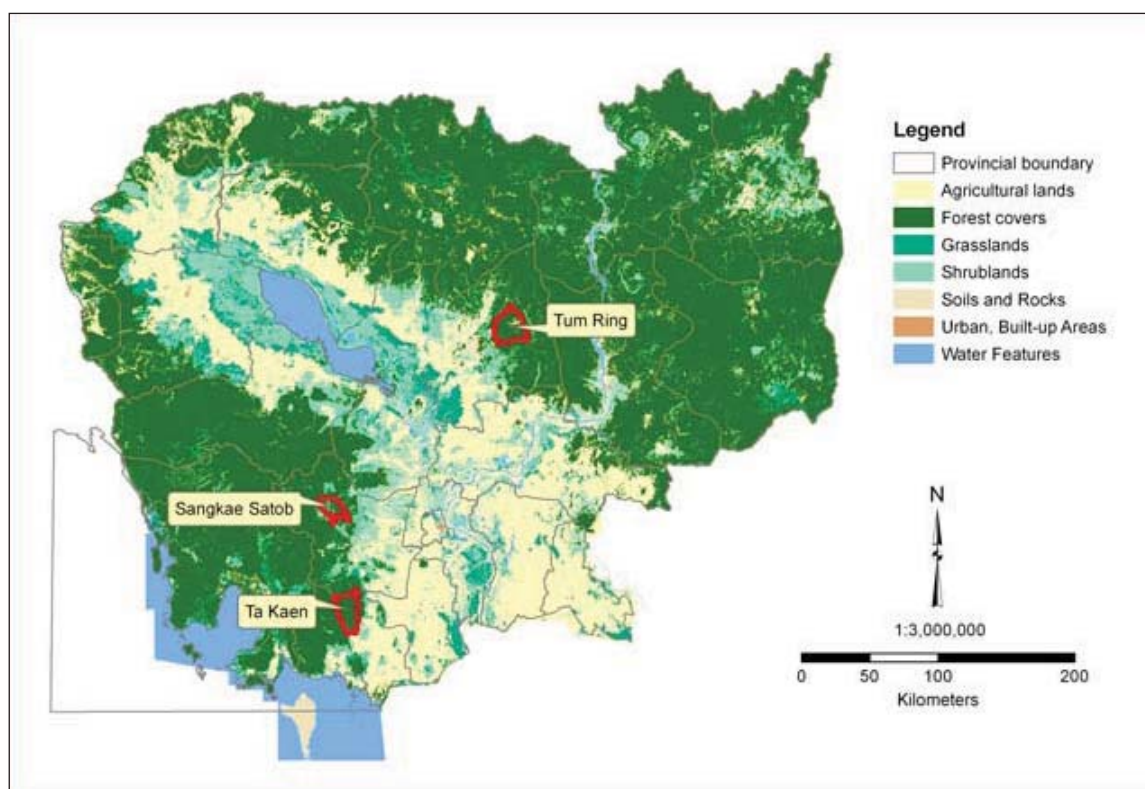
The majority of rural people rely on forest resources to supply their energy consumption needs. Based on the National Strategic Development Plan 2009-2013 (RGC 2010), 73 percent of total Cambodian households were dependent on fuel wood in 2008, dropping to 67 percent in 2009 and 61 percent in 2010. Apart from using wood for fuel, rural people collect timber for construction purposes and harvest many other NTFPs such as bamboo poles, bamboo shoots and wild vegetables to improve their livelihoods as well as to meet their daily consumption needs. Forests play a critical role in ensuring food security for local people, especially for communities located close to the forest. In 2008 the forestry sub-sector contributed 6.9 percent of the agriculture sector's total GDP (Chao 2009).

That forests provide many benefits to local people is well recognised, but because we do not know the value of the resources that local people derive from forests in monetary terms, we do not know the extent to which forests contribute to poverty alleviation. Many studies have been carried out in Cambodia, but these are poorly

documented in terms of the direct value of forest resources for local livelihoods. Most study results were generated from snapshot interviews or focus group discussions drawing on participants' recall of information over a whole year, likely leading to omitted, under-reported or duplicated reports on collected forest products. Other researchers have focused on the value of natural resources as a whole to local communities, but few have explored the value of specific forest resources to income at household level. It is therefore imperative to adopt a method for estimating the value of forest products collected by forest users so that the quality of data can be improved and more useful results attained.

This paper results from a study on "Tropical Forests for Poverty Alleviation: From Household Data to a Global Analysis", a collaborative project between the Centre for Forest, Landscape and Planning (S&L) at the Faculty of Life Sciences, University of Copenhagen (KU), the Forests and Livelihood Programme at the Centre for International Forestry Research (CIFOR), the Forestry Research Institute of Ghana (FORIG), the Department de Sociologies at the University of Ouagadougou (DSUO) in Burkina Faso, and the

Figure 1: Study Area



Cambodia Development Resource Institute (CDRI). The project is funded by DANIDA.

This study focuses on 1) the methods for estimating forest product prices, including utilisation and selling, and 2) the contribution of forest income to local livelihoods for poverty reduction.

Method

Study Areas

The study was conducted in 15 villages located in Takaen commune, Kampot province, Sangke Satob commune in Kampong Speu province, and Tumring

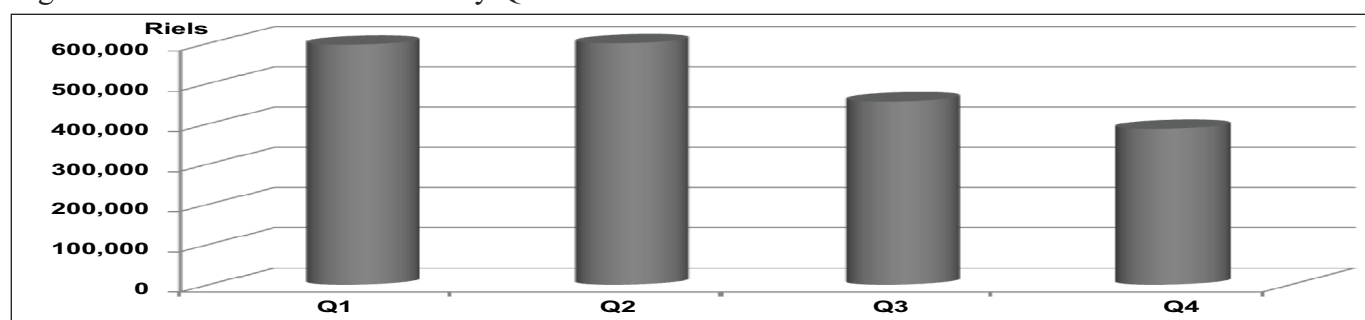
commune in Kampong Thom province (Figure 1). The main land cover in each commune is briefly described below.

- *Takaen commune*: Major land cover is evergreen, deciduous, and re-growth forest. This area is open to all villagers for accessing forest resources and a section of it is a designated protected area.
- *Sangke Satob commune*: Land cover can be divided into deciduous forest, re-growth forest and bush. Community forestry is established in this commune and the area is part of a protected zone.

Table 1: Value of Forest Goods Collected by Sample Households (riels)

Products	Local unit	N	Min	Max	Mean	S.D.	Technique
Forest products							
Poles	Stick	38	500	45000	5971	8709	Local market
Bamboo	Ox cart	11	3000	120000	43455	40636	Local market
Tree branches	Ox cart	10	5000	50000	24100	17489	Local market
Logs	Stick	108	2000	300000	52847	64476	Local market
Fence posts	Stick	91	250	15000	3095	2598	Local market
Mushrooms	Kg	69	500	10000	3797	2375	Local market
Roots and tubers	Kg	5	2000	10000	5200	3947	Local market
Game - mammals	Piece	47	1000	150000	16362	32644	Local market
Game - reptiles	Piece	41	1000	10000	4598	2584	Local market
Game - insects and worms	Bowl	12	500	3000	1500	826	Local market
Game - amphibians	Piece	13	50	500	242	161	Local market
Palm stem	Stick	38	100	250	201	39	Local market
Palm heart	Stick	36	100	500	265	128	Local market
Bamboo shoots	Kg	295	200	2500	864	577	Local market
Crabs, snails, shrimps and prawns	Kg	80	300	10000	2591	2148	Local market
Fuel wood	Ox cart	668	3000	70000	23154	13533	Substitute
Lianas and vines	Bundle	5	1000	5000	2500	1732	Substitute
Rattan	Stick	12	100	1000	213	255	Substitute
Wild fruits	Bag/sack	5	4000	25000	13800	9203	Substitute
Wild vegetables	Handful	55	200	3000	867	628	Substitute
Medicinal plants	Kettle	19	1000	10000	3716	2776	Substitute
Latex and resin	Kg	11	300	1600	927	410	Substitute
Thatching grass	Ox cart	9	5000	60000	27000	17457	Substitute
Game - birds and bats	Piece	33	1000	30000	4521	7286	Substitute
Processed forest products							
Sawn timber	m3	101	200000	3000000	748515	379294	Local market
Charcoal	Heaps	262	6000	1200000	322389	169047	Local market
Wooden furniture	Piece	22	1500	400000	70295	85903	Local market
Rattan furniture	Piece	10	2500	25000	8800	6,642	Local market
Bamboo furniture	Piece	7	300	15000	5686	5324	Local market
Roofing	Bunch	11	400	1000	664	196	Local market
Bamboo shoots	Kg	10	500	15000	6150	5623	Local market

Figure 2: Total Household Income by Quarter



- *Tumring commune*: Land cover is predominantly evergreen, deciduous and re-growth forest. This area underwent major land use change just a few years before our survey with the introduction of rubber plantation.

Household Survey

In order to obtain a good sample and ensure representative and credible results, a total of 600 households, 200 households distributed across five villages in each commune, were interviewed four times in 2008: in January, March-April, June-July and October-November. This was done to create a consistent platform of data collection so as to reduce problems of participants' recall of forest products that they had collected.

Approximately 40 households or 10-30 percent of the total households within each village were randomly selected for interview. This follows the Poverty and Environment Network (PEN) (2007) technical guidelines which stipulate that households must be randomly sampled from the entire population. The selected households were then marked by a yellow sticker on the outside front wall of their house. This enabled the enumerators to find the sample family units more readily in subsequent survey rounds.

PEN Prototype Questionnaire Version 4, which was developed in the English language, was used for the quarterly household surveys – Q1, Q2, Q3 and Q4. The questionnaires were translated into the Khmer language to ensure the collection of high quality data.

Since this survey drew on participants' recall of their income from the forest as well as other forest products for consumption for each quarter of the year, there was also a risk of villagers citing information outside the quarter under review, leading to double reporting. To ensure that only the

income generated within the quarter under review was recorded, the research team cross referenced and validated information collected in the new round with that collected in the previous round.

Estimating the Product Price

The study aims to value all collected forestry products in monetary terms. Therefore, it was important to get the prices of the products from the sample households. The research team prepared three methods to gauge the product prices: local market price, substitute and time value. Local market price was based on farm gate prices i.e. the prices products were sold for: the substitute method used information from the nearby market; while the value of time method was based on the time spent collecting products multiplied by the opportunity cost of local labour.

Results

Forest Product Pricing

Only the local market and substitute techniques could be used to estimate the prices of all forest products (processed and unprocessed). The value of time method, though commonly used to value agricultural practice, was not practical for valuing forestry products in our study sites. The local market technique was used most often to value 71 percent of total forest goods, while the substitute technique was used for the remaining 29 percent (Table 1). Findings show that many different forest (processed and unprocessed) products are collected by the sample households, confirming the very important role of forests in providing and sustaining local livelihoods. Some products such as poles and game-mammals show very high standard deviations. This is because for some items, the product genre is divided into sub-groups to account for differences in quality such as size, species or plant part.

Table 2: Quarterly Household Income by Source (riels)

Income from each environment	Q1		Q2		Q3		Q4	
	Average	%	Average	%	Average	%	Average	%
Forest	74928	13	157948	26	139908	31	117791	30
Agriculture	302468	51	185814	30	41777	9	77279	20
Other environment	21021	4	22961	4	44888	10	41671	11
Other (wages)	198130	33	243034	40	228950	50	150774	39
Total	596547	100	609757	100	455523	100	387516	100

Some products were popular in a particular area only, while others were common in all areas. The top five products most frequently reported were fuel wood, bamboo shoots, charcoal, logs, and sawn timber. Fuel wood and bamboo shoots were commonly collected in all three study sites. Charcoal production and bamboo harvesting for *bang orng* (a special ladder for climbing sugar palm trees) were frequently found in Sangke Satob commune, Kampong Speu province and logs and sawn timber were observed mainly in Tumring commune, Kampong Thom province.

Average Household Income

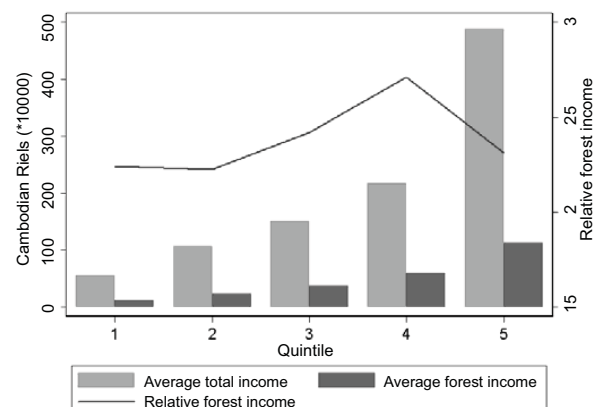
The results show that the annual income of the surveyed households was 2,049,000 riels (USD506). Bruce *et al.* (2004) report similar average annual household incomes of 2,177,824 riels (USD538)² in Kompong Thom and 2,019,952 riels (USD499) in Mondulkiri. However, our research team found that household income fluctuated from quarter to quarter and by season. Households have almost the same earnings of 600,000 riels (USD148) in the first two quarters, which represent the dry season (Figure 2). But income decreased to only 455,000 riels (USD112) in the third and 387,000 riels (USD96) in the fourth quarters, which mostly span the rainy season. Income was low in the third and fourth quarters because farmers spent their time mostly cultivating their own rice, such as preparing the soil, transplanting seedlings, tending their growing crop as well as harvesting. Their activities during this period, however, contribute to their higher income in the first and second quarters.

Forest Income Share of Average Household Income

Total income is obtained from different sources and can be grouped into four main categories: forest, agriculture (crops and livestock), other environment and other (mostly wage labour) (Table 2). Income from agriculture (rice) was the main contributor to total income in the first quarter, accounting for 302,468 riels or 51 percent of the total quarterly income. However, it was found that income from wage labour, with the exception of the first quarter, was the main income source. Income from forest goods was the third main source for all quarters, again confirming the value of forests in income earning and thus their contribution to poverty alleviation. The share of forestry resources to villagers' total income in each quarter ranged from 13 percent in the first quarter to 31 percent in the third quarter.

Analysis of the household income was also done by quintile, with quintile 1 representing the lowest income group. As Figure 3 shows, relative forest income contributed 24 percent to low income households' total income. Medium income households acquired up to 26 percent of their total income from the forest, suggesting this household group is more reliant on income from

Figure 3: Forest Income Share of Total Household Income by Quintile



2 USD1 = 4048 riels (average exchange rate over the time of study, 2008)

forest resources than the lower income group. This may be because medium income households have better tools and means for harvesting and transporting forest goods, such as logging equipment, ox or buffalo cart, which enable them to collect larger quantities of forest resources.

The fifth quintile (or the highest income group) and the lowest income group attained almost the same proportion of their total income, around 24 percent, from forest products. The small contribution of forest income to the lowest income households' total income is mainly due to their lack of tools and means of transportation which restricts them to collecting just small amounts of forest products.

Although the highest income group earns almost the same share (percentage) of total income from forest income, in monetary terms, the actual extent to which these households benefit from the forest is greater than the low and medium income household groups. This is because the highest income households have many income sources. These households also have better means of transportation, harvesting tools, and other assets which allow them to benefit more from forest resources.

Compared to Hansen and Neth's study findings in 2006, this study found that households are getting less in terms of value from the forests. Hansen and Neth (*ibid*) report that medium income households were generating about 30 percent of their total livelihood value from non-timber forest products (NTFP), while poor households were getting 42 percent. This could be due to many factors, including changing income sources or declining forest resources.

Conclusion

The value of forest products can be estimated through farm-gate prices and substitute methods. Using farm-gate prices provided a more accurate estimate of the value of forest products while the substitute method gave a rougher estimate.

Valuing the forest resources utilised (selling and consumption) by villagers in monetary income terms is essential if we are to better understand the importance of forest resources for local livelihoods. However, a thorough evaluation would require more time so as to refine the information and data collected by the substitute method. Furthermore, the valuation of forest products through reported local market prices allows us to see the broader picture of

forest value that contributes to household incomes, thereby allowing us to estimate the contribution of forest resources to poverty alleviation.

Income from forest resources is a very important source. In this study, forest resources contribute 26 percent of total household income for the medium income household group and 24 percent for the low income group. High income households also acquire around 24 percent of total income from forest resources; however, in terms of actual amount, households in this group gain the greatest amount of benefit from the forest.

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Accountability in Cambodia: Relevant Concepts and Their Application¹

Introduction

This paper discusses the concept and application of accountability within Cambodian governance. Based on personal observations of the author, while important and often used, accountability as a concept has been little understood by many Cambodians, including those in policy-making positions of the government. This is because the term is new and its application has been largely influenced by Western concepts of good governance and has not been well contextualised in Cambodia.

As an international concept, accountability is complicated, ever expanding and understood differently by different people. This paper does not intend to provide a sophisticated, one-size-fits-all definition of the term. Instead, it wishes to (1) discuss some of the key governance concepts shaping the different understandings about accountability, (2) provoke thought by presenting its own arguments about the limitations in the application and understanding of accountability in Cambodia and (3) make some suggestions for future research.

There are two important notes on how this paper is produced. Firstly, the paper is a summary and updated version of the CDRI working paper Pak *et al.* (2007), *Accountability and neo-patrimonialism in Cambodia: A critical literature review*. While a significant part of it is still relevant, the working paper needs to be updated to reflect the current debates about accountability and related concepts as well as policy developments in Cambodia. Secondly, the paper aims at a Cambodian audience. It is thus written to be understood by practitioners and Cambodian students interested in accountability (including a Khmer version).

What Exactly Is “Accountability”?

The concept of accountability has a long tradition in political science and financial accounting (Lindberg 2009). However, the term has been extended to mean different things, from “being responsible” to institutions that control public official behaviour to standards used in financial

management. The result is increasing confusion about what the term means, let alone how best to apply it (Mulgan 2000). This has led to continual needs for clarification of the meaning of the term in particular contexts (*ibid.*).

In Cambodia, the increasing importance of the “good governance” agenda has made accountability a key theme in policy documents of the government and donors. Despite its frequent use, the term is poorly understood by Cambodian audiences. When translated into Khmer as *kanakney-pheap*² people do not understand it, confuse it with “accounting” or at best think that it means “responsibility”. To help reduce such confusion, this paper offers the following clarifications.

One needs to distinguish the basic characteristics, types and systems or structures used to ensure accountability. Accountability is said to have the following characteristics (Lindberg 2009):

1. an agent or institution who is to give an account (the agent)
2. an area, responsibilities or domain subject to accountability (the domain)
3. an agent or institution to whom the agent is to give account (the principal)
4. the right of the principal to require the agent to inform and explain and justify decisions with regard to the domain and
5. the right of the principal to sanction the agent if the agent fails to inform and justify decisions regarding the domain of responsibility.

First, accountability can be political, social, professional, legal, financial and several others types. Each type of accountability implies different rules or standards used to define how the agent should be accountable to the principal and for what domain. Such rules do not need to be formal but can also be informal or personal.

Second, accountability implies some mechanisms to ensure (1) that the agent is answerable and provides justifications to the principal of how his or her authority has been exercised (i.e. answerability) and (2) that the principal can reward or sanction the agent for what he or she had done (enforceability). Accountability is considered “without teeth” if there is no

¹ This paper is prepared by Pak Kimchoeun, a researcher at CDRI.

² A check in Archbishop Choun Nat’s most referred to Khmer-Khmer Dictionary (published in 1967) indicates that the translated Khmer term did not even exist.

enforceability (Brinkerhoff 2001; Schedler 1999).

From personal observations of the author, when accountability is used in policy dialogues in Cambodia, clear indications are rarely provided as to the types of accountability being discussed, who is accountable to whom, for what, what rules or norms are being applied and what systems are being used to ensure answerability and enforceability.

However, clarity on these specific points can be much more difficult to provide than it seems, especially in the public sector. In government, it is not always clear which types of accountability and rules apply. Even more challenging, a person in the public sector is often accountable for, not one, but many domains and to many individuals at the same time.

In the following sections, concepts are discussed to provide clarification to such complexity. These are big concepts, and this paper has no intention to go into their details. Instead, it will mention the key points and what they mean for accountability.

Promoting Accountability in the Public Sector

Accountability in the public sector refers broadly to the way state institutions respond to people's needs. In a democracy, the people elect and give authority to government, which in turn needs to serve the people. This creates an accountability relationship between the two, the government being the agent and people being the principal. This is called political accountability (March & Olsen 1995).

Elected politicians, however, cannot perform all the tasks needed to respond to people's needs. Therefore, a bureaucracy is established to deliver services and perform other tasks required of the state. In this arrangement, bureaucrats need to be accountable to elected officials. This is bureaucratic accountability (Brinkerhoff & Goldsmith 2002).

Whether it is political or bureaucratic accountability, the five core characteristics and the key questions mentioned earlier still apply. However, complexity starts to creep in when discussing *how* to ensure accountability and why one governance system is better than another for that purpose. The following discusses some of the key theories regarding this "how".

The first theory is that of traditional public administration (TPA), first developed by Max Weber in the early 20th century. This argues that, to serve its people, a state needs to have "legal, rational bureaucracy". In that bureaucratic system, there is a strict separation between political and administrative aspects of governance, with politically neutral officials enacting policy "without fear or favour".

Weber proposed that administration, including financial and personnel management, should be governed by universal laws and procedures.

According to TPA, accountability exists between a bureaucratic boss and subordinates as defined by bureaucratic rules. In other words, accountability exists to the extent that an agent is called to account by his/her supervisor, who in turn can reward and punish accordingly (Weber 1978). TPA emphasises accountability for compliance.

TPA has been criticised as too rigid and centralised. Therefore, the theory of new public management (NPM) was created in 1950s and 1960s. Favouring decentralisation, NPM argues that public managers should be given discretion and resources so that they can respond more flexibly to the needs of those they are supposed to serve. NPM has been used to promote public sector reforms including privatisation, contracting out and performance-based management.

According to NPM, accountability exists when a public manager or contractor is able to achieve the result expected of him/her, using the resources and discretion given. NPM focuses especially on the incentives for those who perform a job, together with preventive measures to ensure that they do not misuse their discretion or resources (Minogue 2001).

In the early 1980s emerged a theory called "new institutionalism" (NI). It argues that institutions matter, and getting the institutions right can lead to economic growth and poverty reduction. Institutions are in this case defined as rules and norms that constrain human behaviour (North 1990) or as organisational entities, procedural devices and regulatory frameworks (Jutting 2003). Institutions are not only formal state rules and regulations but also informal norms and practices.

NI has been criticised for the lack of consistent definition of institutions and insufficient explanation on the causal mechanisms between institutions and development. It is also not clear either how NI defines accountability. But NI has become very influential within development thinking, particularly the concept of good governance, which has been increasingly advocated by international donors.

NI has contributed to the emergence of some new ideas about the roles of the state in a developing country. One influential idea was called "capable state" in World Bank (1997). During the 1980s and 1990s, most donor agencies were arguing that the state was a problem for development and therefore should be downsized, paving the way for the market. The capable state view argued for a greater role for

the state in development in order to complement, not replace, the market. This approach focuses mainly on accountability of the state to the people, arguing that the state has some minimum roles in ensuring basic public services, regardless of who actually delivers them (World Bank 1997).

For that, three building blocks are required: first, the state must have the capacity to formulate policy that reflects people's needs; second, there need to be effective management structures and competent civil servants to implement such policies; third, there needs to be participation from the people, who voice their preference and concerns about the policies and their implementation (World Bank 1997).

The notion of capable state, especially in relation to service delivery, was further refined in the 2004 World Development Report's idea of "triangle accountability". Its three accountabilities are (1) between the people and service providers, (2) between service providers and policy makers or politicians and (3) between policy makers or politicians and the people. The first relationship, called the "short route", focuses narrowly on how well state service providers respond to the needs of the poor. The second and third relationships together constitute the long route, where pressures for accountability flow from the people to policy makers or politicians and then to service providers (World Bank 2004).

Running through these three interrelated accountability relationships are five key elements: delegation, finance, performance, information about performance and enforceability (*ibid.*). This definition adds emphasis on the ex-ante aspects of accountability. It argues that before there are answerability and enforceability, it is only fair that the actor to be held accountable receive clear assignments of roles and responsibility, adequate and predictable funding and capacity to perform the tasks (*ibid.*).

Triangle accountability is a good broad framework in which other concepts about promoting accountability can be explained. One is decentralisation. Proponents of decentralisation argue that transferring more political, administrative and fiscal authority and responsibility to sub-national and local governments will bring government closer to the people (Cheema & Rondinelli 2007). In the triangle accountability framework, this means shortening the long route by having policy makers and politicians at not just the central but also lower levels.

The five elements of accountability also play out well in decentralisation. In addition to establishing

locally elected councils, decentralisation also emphasises the importance of assignment of functions, then of authority over own source revenue generation, inter-governmental transfers and a system to ensure that sub-national governments are accountable to the central government (upward) and to the people (downward) and accountability between service providers and elected councils (horizontally) (World Bank 2005a).

Another relevant concept is social accountability, which is defined as civic engagement in which ordinary citizens and/or civil society organisations participate directly or indirectly in exacting accountability from the state. Proponents argue that government can behave more accountably if the people and society are more ready to demand it. Such readiness requires people to be more organised and equipped with tools and channels through which their voices and complaints can be heard (World Bank 2005b). The World Bank describes such tools as "strong demand" institutions, such as ombudsman offices to assist people in articulating their demands of the state (*ibid.*).

The key concepts just discussed come mainly from Western countries through their donor agencies. They have been changing and expanding over time, reflecting the lessons that these countries have learned from giving aid since the Cold War period. First, they focused on the state and its bureaucracy, then changed to the private sector, then to finding the right balance between the two. In the last two decades, the focus on the role of the state has increased, together with the rising popularity of the good governance agenda (Pak *et al.* 2007). However, good governance reforms (civil service reforms, public financial reforms, judicial reforms) have not been particularly successful. Less than satisfactory results are argued by some to stem from too vague and too ambitious objectives. Based on this experience, some argue that perhaps reforms should aim for only "good enough governance" (Grindle 2004).

Given the slow governance reform in most developing countries and the newly perceived links between bad governance and international insecurity, a new paradigm called "fragile state" has emerged. Fragile states are defined as those that have been unable to meet basic needs of their people, including security, social services and the rule of law. The fragile state agenda, although just begun, has already come under the criticism that its objective of combining security and development is too ambitious and unrealistic. Proponents of the concept, however, argue that a smooth transition from conflict

to peace and stability, while challenging, is critical for development to take hold (McLoughlin 2010).

The Concepts and Their Application in Cambodia

All the concepts discussed earlier have been applied in Cambodia. For example, the legacy of the French system, which is a form of traditional public administration, is still apparent in the structure of the current government, including ministries, their roles and responsibilities and personnel and financial management. All these reflect partly the TPA model of Weber. The application of NPM in Cambodia includes privatisation of many state enterprises and the contracting out of local services such as health and agricultural extension to private firms or NGOs, the move to performance-based pay and programme-based budgeting.

The capable state approach, triangle accountability, decentralisation and social accountability have been more common and well known in Cambodia than TPA and NPM mainly because they have been advocated by donor agencies in electoral, civil service and public financial management reforms, decentralisation and civic engagement.

From personal observations, despite their common uses, these concepts have not been well understood by Cambodian audiences, particularly when they are linked to accountability. There are at least for two reasons for this lack of understanding. The first is the lack of a clear distinction between the “what is” and “how to promote” parts of accountability. From my personal experience and observations in public forums, a large part of the Cambodian audience perceives accountability as a quality or result to be achieved, whereas, in international literature, the term implies both the results and the process by which the result is achieved. To avoid confusion, in this paper, it should be emphasized that the various concepts discussed in the previous section are about governance systems to achieve accountability in the public sector. Regardless of the concepts being applied, the core characteristics of accountability still apply.

The second reason is the lack of clarity about the types of accountability being discussed. In a democratic system, the ultimate accountability is that between the state and the people. But accountability also exists in a much more narrow sense, such as between the executive and legislative branches, between a bureaucratic boss and his or her subordinates or between a school and students’ parents. It is true that in the public sector,

these different types of accountability are mixed together. However, if the intention is to have more Cambodians understand the concept and be able to apply it, clarity and specificity about the types of accountability are needed.

Even when these confusions are dealt with, Cambodian audiences will still have difficulty understanding accountability in terms of these concepts. This is because the concepts are drawn from examples of Western countries whose political and economic contexts are vastly different from those of Cambodia. Underlying these concepts is an assumption that, to achieve accountability, developing countries need to follow the examples of the West. Consequently, most reforms driven by donor agencies have targeted improving the formal and technical governance systems.

Such an approach tends to view improving governance as a matter of getting the right technical bits and pieces in place. This is unrealistic, for strengthening governance systems and accountability is not a purely technical matter, but directly involves political decisions and manoeuvres. These political questions, moreover, involves not only what is stated in the constitution or formal political arrangements but also to informal rules and practices deeply embedded in a society. Therefore, really to understand accountability in the public sector, a different concept is needed. That concept is neo-patrimonialism, discussed in the following.

Accountability, Patronage and Neo-Patrimonialism

As other studies make clear, accountability is shaped not merely by formal but also by informal rules and practices, including customs, traditions and personal relationships (Lindberg 2009). One important informal factor is patronage, which is defined by Scott (1977) as “a special case of dyadic (two person) ties involving a largely instrumental friendship in which an individual of higher social-economic status (patron) uses his influence and resources to provide protection or benefits, or both, for a person of lower status (client) who, for his part, reciprocates by offering general support and assistance, including personal services to [the] patron”.

Patronage takes different forms. It can be small groups or clusters of people who work to help each other. This patronage often has affection-based dimensions such as kinship, friendship or other personal relationships. But patronage can also take the form of a much larger pyramid-like network in which a person is patron to a group of people

but a client to another patron situated at a higher level. Thus, people in patronage arrangements can be simultaneously in a big pyramid and a smaller cluster that is part of a large patronage network.

Although not subject to any written rules and structures, patronage creates a form of accountability between patrons and their clients. Such accountability is influenced by the nature of the incentives, choices and resources available to a patron, and by his/her relationships with clients. Usually, patronage is instrumental (i.e. mutually beneficial) for all, although it generally benefits the patrons disproportionately (Pak & Craig 2008).

From the foregoing discussion, it seems that patronage is not always associated with something undesirable. On the contrary, it is a common form of human interaction (Scott 1977). However, in the literature about public sector governance and reform, patronage has often been viewed negatively by proponents of legal, rational states, who argue that patronage has been the source of weak governance in the developing world. For these critics, when rules are not adequately and appropriately stipulated and enforced, patronage leads to abuse of public power and hence corruption.

In many developing countries, patronage has become mixed with the formal rules and structures of the state. This mixing gives rise to a “neo-patrimonial state”. Neo-patrimonialism is defined as a political system in which “the chief executive maintains authority through personal patronage, rather than through ideology or law... relationships of loyalty and dependence pervade a formal politics and administrative system... leaders occupy bureaucratic offices less to perform public service than to acquire personal wealth and status. The distinction between private and public interests is purposely blurred ... In return for material rewards, clients mobilize political support and refer all decisions upwards as a mark of deference to patrons” (Bratton & van de Walle 1994).

While the neo-patrimonial concept has been used more commonly to explain weak governance in many African states, according to Pak *et al.* (2007), a number of characteristics of Cambodia state fit well with the neo-patrimonial state definition. First, it found that, like other neo-patrimonial states, Cambodia has a strong tendency towards centralism, within which power and control over resources have been accumulated by a small group of people. This centralised power has been supported by vast rural networks.

Second, patronage networks in Cambodia penetrate the state. This has allowed rent seeking to

flourish, at the expense of effective functioning of formal state institutions and service delivery. Rents have been systematically accumulated and shared in pyramidal networks where a larger share is passed on to those higher in the pyramid (*ibid.*).

Consequently, it was concluded that neo-patrimonialism in Cambodia is deeply institutionalised, making it very difficult to reform. For instance, in public expenditure management, because of firmly established patronage interests, improving the effectiveness of public spending would require not only reforming the formal budgeting process and institutions but also broader anti-corruption measures and more active participation from civil society and the people (Pak & Craig 2008). Similar conclusions were found for human resource management (Eng & Craig 2008) and planning (Horng & Craig 2008).

Based on the above findings, it can be concluded that public officials in Cambodia’s public administration are less subject to accountability in formal rules, but more subject to the unwritten rules and operation of patronage. These patronage accountability lines, moreover, have been so powerful and dominating that they overshadow the formal accountability structures.

Compared to the Western concepts of governance, that of neo-patrimonialism is useful in Cambodia because it guides us to look beyond what is written on paper and focus on less obvious but important variables such as patronage, rent-seeking and power relationships and how those relationships affect resource bases.

Neo-patrimonialism, however, has been criticised on a number of grounds. First, by showing that patronage-based accountability is in complete contrast to accountability based on legal, rational bureaucratic systems, the concept tends to view all forms of patronage as negative. This is contrary to the original idea proposed by Weber, who talked of patrimony not in negative terms but as a way in which a leader can establish legitimacy and command obedience from followers (Pitcher *et al.* 2009). Neo-patrimonial concept seems to also see all forms of patronage in negative ways, although such relationships are common in all societies.

Second, while the concept is helpful in providing a snapshot of how patronage-based accountability comes to mix and dominate formal, legal and rational accountability, it seems to downplay the importance of context in the shaping of such hybrid political and governance systems. This prevents rigorous application of the concept to a country like

Cambodia, whose history, culture and social values are less similar to those of Africa.

For instance, studies indicate that neo-patrimonialism in Cambodia cannot be understood without recognising its specific historical and cultural context. In addition to social values such as hierarchy, conflict avoidance and saving face, Buddhist values such as benevolence, merit-making and *karma* are considered very influential on patronage practices in Cambodia. Even more importantly, the legacy of war and genocide has also shaped attitudes towards patronage relations (Pak *et al.* 2007). Neo-patrimonialism, on its own, cannot capture these contextual factors.

As another shortcoming, neo-patrimonialism also tells us little about the evolution of the neo-patrimonial state. Only recently have proponents of neo-patrimonialism such as van de Walle started to recognise and give more attention to such evolutionary dynamics (van de Walle 2007). Understanding how and why a neo-patrimonial state evolves is particularly helpful to understanding how its accountability relationships evolve. Such understanding is undoubtedly very useful for the formulation and implementation of policies aimed at strengthening accountability within a state. Because evolution is a very contextual phenomenon, applying neo-patrimonialism requires proper contextualisation and support by empirical data.

Applying neo-patrimonialism, moreover, requires constant caution not to be over-focused on the predatory and rent-seeking nature of patrons and their clients. This does not imply that such undesirable features do not exist. Instead, it is raised to make two related points. First, neo-patrimonial states do not exist as a result of individuals reinforcing their personal mutual accountability. Instead, they have been made possible and persistent because such accountability is supported by a vast shadowy political and economic system, in which many actors interact to reinforce their interests and strengthen their power bases.

Second, while patronage and rent seeking can be undesirable, their existence will not always prevent a country from developing. Khan and Jomo (2000) have pointed out that some Asian countries (South Korea, Taiwan and, to a lesser extent, Thailand, Indonesia and Malaysia) have been able to develop despite patronage and rent seeking. These scholars argue that there is no historical evidence to show that elimination of rents, corruption and rent seeking is a precondition for development. Instead, these good governance qualities tend to emerge as economic well-being of the people improves.

The key is whether leaders are able to transform and use such rent-seeking activities in ways that are conducive to long-run economic growth. For instance, in some African countries, corruption money is usually transferred out of the country and deposited in a rich country, whereas in some Asian countries, corruption money has been re-invested in the local economy. This implies that building pro-poor accountability is not a matter of switching from patronage to the rule of law overnight, but a long-term and complicated transformation (*ibid.*).

Conclusions and Suggestions for Future Research

The most common source of confusion about the accountability among Cambodia audiences is the frequent lack of clarity about what accountability is and how it can be shaped and promoted. While international literature tends to define accountability in term of both “what is” and “how to”, Cambodian audiences find this rather confusing. This paper makes explicit what accountability is, referring to the five key characteristics. While accountability by nature is rather straightforward and neutral, how it is shaped and promoted is complicated. Various concepts were developed to shed lights on the complexity.

These concepts have their own strengths and limitations. The ones that come from Western donors (such as such as TPA, NRM, NI, Capable State approach, and Triangle Accountability), while emphasising the importance of state capacity and accountability, tend to focus more on the technical and formal aspects of governance. This limitation is addressed by the neo-patrimonialism concept, which focuses on explaining patronage elements that are found in many developing countries.

The main limitation of these concepts is their lack of contextualisation. In Cambodia they have been used more as a benchmark to see what is still wrong about accountability and governance, rather than to understand better the underlying dynamics of the governance system of this country. On this, this paper puts forward two specific suggestions.

First, more research should be done about patronage practice in Cambodia, observing it through the broader political, social and economic context, to answer some of the most basic questions, e.g. how has patronage in the public sector evolved as result of economic development and the growing dominance of the ruling party in the last decade? How has patronage been expanded to include people from the business world?

This paper argues that these questions cannot be examined using the current literature on neo-patrimonialism alone. This is partly because neo-patrimonialism tends to conclude that a weak state like Cambodia is nothing but predatory and thus would not contribute anything to economic development and good governance. Such findings make neo-patrimonialism a less suitable analytical framework to explain Cambodia, where patronage co-exists with notable economic growth and the rising popularity (at least as measured by votes) of the ruling party (Blue *et al.* 2009; Pak forthcoming).

Second, to better understand accountability and governance in Cambodia and what this means for development, lessons from other south-east Asian countries such as Indonesia, Thailand or even Vietnam should be learnt. While these countries are at different stages of economic development than Cambodia, they can be good choices for comparative purposes for a number of points. As argued by many south-east Asian scholars, besides their level of modernisation, some countries in south-east Asia share features including elitist cultures, Buddhism and quiescence of the people toward the rulers (Pye 1985).

Literature on patronage in these southeast Asian countries has focused more on the cultural dimension and legitimacy among ruling elite and between elites and the mass, rather than focusing on its predatory nature (Vatikiotis 1998; Case 2006). These frameworks, if properly applied to Cambodia, hold the promise of moving beyond the debates about good governance in broad terms and starting to contextualise such sensitive issues in the broader discussion about economic development and political change. Such regional comparison will also bring Cambodia into south-east Asian literature, helping researchers to look beyond the post-conflict nature of this country.

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Using Propensity Score Matching to Construct Comparable Samples in Evaluation Studies: A Case Study of a Road Transport Project¹

Introduction

The Asian Development Bank has supported the Greater Mekong Sub-region (GMS) since its establishment in 1992 by Cambodia, China, Laos, Myanmar, Thailand and Vietnam in order to strengthen economic linkages among them. The countries adopted the GMS Strategic Framework 2002–12 in 2002. The framework outlines a comprehensive development agenda, underscoring the need to supplement infrastructure linkage with cooperation on policies and programmes to promote equitable and environmentally sustainable growth.

Improvement and rehabilitation of the transport system among GMS countries has been identified as one of nine priority cooperation areas.² The GMS Southern Coastal Corridor (GMS-SCC) project assists in the rehabilitation of National Road 33 in Cambodia and another section in southern Vietnam. This project is expected to have substantial impact on economic development, regional cooperation and better access to employment opportunities, markets and social services.

The GMS-SCC project has made significant progress. However, the mid-term review of the strategic framework reveals that the precise scale and scope of the project's contribution to poverty reduction and other socio-economic indicators may not be determined without comprehensive project baseline information to aid monitoring and

evaluation. A naive estimate of intervention impacts would be to compare the relevant outcomes between participants (treatment group) and non-participants (comparison group). However, a difference in the outcomes between the two groups would not be reliable if any biases had not been eliminated (Ravallion 2001). Propensity score matching (PSM) is a statistical technique that allows investigators to account for biases in two groups and subsequently eliminate them.

This study aims at assessing the socio-economic effects of the GMS-SCC project in Cambodia, with the specific objectives: (1) design and construct a complete benchmark data set and description with relevant indicators; (2) assess and provide comprehensive baseline and evaluation data in the project areas (treatment group) and a few selected non-project areas (comparison group); and (3) construct comparable treatment and control groups using PSM.

Research Methodology

A household survey was used to construct baseline indicators. The household samples were classified into geographically similar treatment and control areas. The treatment area was selected within 5 km of both sides of the road, and the control area was selected from beyond 5 km of both sides of the road. Four hundred and fifty households were randomly selected for the treatment area and 360 for the control area. The household survey was used for a descriptive analysis of the current socio-economic and transport indicators in both treatment and control groups. Since this baseline data will be used for project monitoring and evaluation, PSM was used to determine similar characteristics of the two samples, reducing biases caused by sample selection error. Households that did not match a given set of characteristics were dropped from the samples, balancing the observed variables between the treatment and control groups.³

1 This article is prepared by Dr Theng Vuthy, programme coordinator, Mr Kem Sothorn, research associate and Mr Chhim Chhun and Ms Khiev Pirom, research assistants, at CDRI. It is a summary of the empirical findings of a CDRI project, Assessing the Socio-economic Effects of GMS-Southern Coastal Corridor, in 2009–10, funded by the Asian Development Bank.

2 The nine priority sectors are: transport, telecommunications, energy, environment, tourism, trade facilitation, investment, human resource development and agriculture.

3 Further details on the research method can be found in Theng and Kem (forthcoming) and Hing et al (forthcoming).

Empirical Key Findings

Descriptive Statistics

Table 1 summarises the differences between treatment and control groups, with their t-values. The t-values suggest that there are some significant differences between the groups in demographic and welfare characteristics. There appear to be significant differences in gender of household head, age, marital status, education level of household head and number of years settled in the area. There are also significant differences in income of household heads, small businesses of household head, wealth index and durable goods and house values. In addition, per capita income, per capita consumption and other agricultural expenditure and

gross margin show significant differences between treatment and comparison groups (Table 1). Only a few demographic and livelihood indicators show no statistically significant differences. These results suggest that there are some biases in sampling selection, even though sampling was random.

Matching Households

To reduce biases and to construct similar characteristics of treatment and control groups for the future impact evaluation study, PSM was used (Ravallion 2001; Caliendo & Kopeinig 2008; World Bank 2002). Table 2 presents the estimates from the logit model used to match households in the GMS-SCC project area with the control area. The

Table 1: Description and Differences of Variables (sample mean)

Variable	Treatment	Control	Difference	T-value
<i>Dependent variable</i> (Asian Development Bank project)	1	0		
<i>Control variables</i>				
Household size	5.34	5.18	0.16	1.2
Number of women aged 15-45 years	1.36	1.33	0.03	0.4
Household labour power	4.15	3.96	0.19	1.6
Number of years in the village	4.53	3.39	1.14*	1.8
Gender of household head (dummy 1=male, 0=female)	0.76	0.84	-0.08***	-2.7
Age of household head	50.80	46.69	4.12***	4.3
Age of household head_squared	2763.1	2358.2	404.9***	4.1
Marital status of household head (1=married, 0=otherwise)	0.76	0.82	-0.06**	-2.0
Educational level of household head (number of years)	3.64	4.20	-0.56**	-2.5
Household head's income from non-farming activities	100.96	67.50	33.46***	3.9
Household head's income from non-farming_squared	27460.4	15691.6	11768.8**	2.2
Unemployment (dummy, 1: unemployed; 0: employed)	0.29	0.35	-0.05	-1.6
Civil servant as household head (dummy)	0.063	0.056	0.008	0.5
Farm worker as household head (dummy)	0.079	0.095	-0.016	-0.8
Small business of household head (dummy)	0.33	0.26	0.07**	2.3
Number of non-farming activities of household head	0.85	0.81	0.04	0.9
Index of all household assets	0.85	-1.04	1.89***	14.8
Total value of household assets	377.5	440.4	-62.9**	-2.0
Total value of household assets_squared	359788.1	343831.0	15957.1	0.2
Value of house	1014.4	424.7	589.7***	4.4
Value of house_squared	7409425.0	395630.6	7013794.0	1.6
<i>Outcome variables (expected impact of road projects)</i>				
Per capita daily income (riels)	3801.8	3218.9	582.9***	3.1
Per capita daily food consumption (riels)	2518.4	2372.0	146.4	1.6
Per capita daily non-food consumption (riels)	1770.2	1503.2	267.0**	2.0
Per capita daily total consumption (riels)	4288.6	3875.2	413.3**	2.2
Rice production cost per ha ('0000 riels)	180.4	148.7	31.8***	2.7
Rice gross margin per ha ('0000 riels)	52.9	71.1	-18.2*	-1.7
Non-rice gross margin per ha ('0000 riels)	90.84	153.5	-62.7	-1.4

Level of significance * at 10 percent; ** at 5 percent; *** at 1 percent.

Source: Household Survey, December 2009

Table 2: Propensity Score for Household Matching (logit estimation)

Control Variables	Coef.	Std. Err.	z
Household size	-0.0125	0.1243	-0.10
Number of women aged 15-45 years	0.0189	0.1294	0.15
Household labour power	-0.0496	0.1725	-0.29
Number of year in the village	0.0107	0.0129	0.82
Gender of household head (dummy 1=male, 0=female)	-0.3322	0.3406	-0.98
Age of household head	0.1027	0.0547	1.88
Age of household head_squared	-0.0007	0.0005	-1.35
Marital status of household head (1=married, 0=otherwise)	0.5167	0.3415	1.51
Education level of household head (number of year)	-0.0857	0.0332	-2.58**
Household head's income from non-farming activities	0.0024	0.0021	1.11
Household head's income from non-farming activities_squared	0.0000	0.0000	-1.42
Unemployment (dummy, 1: unemployed; 0: employed)	0.0122	0.3557	0.03
Civil servant (dummy)	-0.5475	0.4511	-1.21
Farm worker (dummy)	-0.1324	0.3437	-0.39
Small business (dummy)	-0.0465	0.2379	-0.20
Number of non-farming activities of household head	0.2633	0.2506	1.05
Index of all household assets	0.8939	0.0880	10.15***
Total value of household assets	-0.0024	0.0006	-3.96***
Total value of household assets_squared	0.0000	0.0000	2.04**
Value of house	0.0003	0.0003	0.85
Value of house_squared	0.0000	0.0000	0.35
Constant	-2.0159	1.3431	-1.50
Number of observations	801	-	-
Pseudo-R ²	0.29	-	-

Level of significance * at 10 percent; ** at 5 percent; *** at 1 percent.

results were that only a few variables (household head education level and assets) are statistically significant, suggesting a similarity between matched households in treatment and control areas.

After the matching process, common on-support and off-support⁴ households were identified; 98 households in the treatment area fell into off-support, and 344 individual households in the treatment area matched well with 359 households in the control area. The characteristics of households that could not find a suitable match, most of which are located in villages near the border and district town areas, may have more access to electricity, tap water or energy sources for cooking, which households in the control areas could not afford.

⁴ Common support indicates the individuals in the treatment area who find a suitable match, whereas off-support indicates the individuals in the treatment area who did not find a suitable match with control area.

The results from the household matching in Table 3 generally suggest that the differences between the expected outcome indicators were significantly reduced, and more balance was obtained. Differences in per capita income, per capita non-food and total consumption, including both production expenditure and gross income from rice, were statistically non-significant after matching; per capita food consumption and non-rice gross margin differences were largely balanced after matching.

The matching has to be checked since we did not condition all variables, but rather used propensity scores, to see whether the matching procedure is able to balance the distribution of the relevant variables in control and treatment groups. Standardised bias, pseudo-R² and t-statistics before and after matching are suggested as important indications for checking matching quality (Caliendo & Kopeinig 2008). The median and mean absolute standardised biases

Table 3: Comparison of Outcome Variables after Matching
(riels at December 2009 prices)

Outcome variables	Difference (Unmatched)		Difference (Matched)	
	Unmatched	T-stat	Matched	T-stat
Per capita income	582.87	3.08***	-86.53	-0.40
Per capita food consumption	146.37	1.65	64.52	0.63
Per capita non-food consumption	266.98	1.95**	43.22	0.25
Per capita total consumption	413.34	2.2**	107.74	0.48
Rice production cost per ha ('0000)	31.77	2.74***	15.94	1.22
Rice gross margin per ha ('0000)	-18.24	-1.75*	-7.10	-0.51
Non-rice gross margin per ha ('0000)	-62.67	-1.35	-39.01	-0.73

Level of significance * at 10 percent; ** at 5 percent; *** at 1 percent.

show substantial reduction, at 2.7 and 3.8 percent, respectively, after matching. Caliendo and Kopeinig (2008) suggest that median and mean of standardised bias below 3 and 5 percent after matching are sufficiently creditable. The pseudo-R² from the estimation of propensity score after matching was very low (0.03), compared to that before matching (0.29), and the P-value of the likelihood ratio test is non-significant after matching, indicating there are no systematic differences in the distribution of relevant variables between groups. These results suggest that a significant reduction in selection bias is obtained through household matching and that two similar study samples have been constructed for monitoring and evaluation. Therefore, the 98 households in the treatment area that fell into off-support were dropped, giving a total sample of 703 observations after matching.

Conclusions

This report presents baseline indicators of a potential longitudinal study area of the GMS-SCC project in Cambodia. It also provides indications of similarities and differences in the treatment and control areas before matching and significantly reduces the differences after matching. Before matching there were some statistically significant differences in household demographic and welfare indicators, indicating some biases in household sampling selection.

Matched households have similar characteristics in variables from demographics to socio-economic indicators and transport means indicators. Two

sample groups with similar characteristics have been constructed by PSM, comprising 344 and 359 households in the treatment and control groups, respectively. Ninety-eight households have been dropped from the treatment sample because no matching partners could be found in the comparison group. This should save costs and time and estimate the project impact for the monitoring and evaluation.

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Economy Watch—External Environment

This section focuses on the major world economies and economies in east Asia during the third quarter of 2010.

World Economic Growth

In the third quarter of 2010, real GDP growth in Indonesia was 5.8 percent year on year, following growth of 6.2 percent in the second quarter. Malaysia's GDP growth went down to 5.3 percent, and growth in Singapore dropped to 10.5 percent. Net exports in this quarter contributed only 11.4 percentage points to the Singapore's GDP. Domestic demand, which was still weak, contributed only 0.4 percentage points to growth. In addition, a slowdown in growth in personal consumption also lowered the rate of GDP growth in Singapore. Thailand's GDP growth contracted to 6.7 percent. The slowdown was due to the rapid appreciation of the baht, making Thai products more expensive in foreign markets. Growth in exports went down but imports grew by 24.9 percent year on year. Thus the trade balance in this quarter was in deficit. Inventories grew significantly in this quarter. The rebuilding of inventories and restocking boosted overall GDP growth.

Year-on-year growth in China dropped to 9.7 percent from 10.3 percent in the second quarter. Year-on-year growth in Hong Kong increased to 6.8 percent from 6.5 percent in the previous quarter. South Korea dropped to 4.5 percent and Taiwan to 9.8 percent. Fixed capital formation contributed 4.2 percentage points to GDP growth in Taiwan. Private consumption, fuelled by consumer confidence and declining unemployment, also continued to grow, expanding by 4.5 percent year on year and contributing 2.5 percentage points to GDP growth. Overall domestic demand contributed 8.4 percentage points to GDP growth. Growth in exports also contributed significantly to Taiwan's GDP growth. Japan's growth increased to 5.0 percent, while in the US, year-on-year growth contracted to 2.3 percent.

World Inflation and Exchange Rates

This was the third quarter of deflationary pressures in Japan in 2010, while inflation increased in many countries. In Indonesia, the inflation rate was 6.2 percent, accelerating from 4.4 percent in the second quarter; the prices of clothing and transportation tended to rise ahead of Ramadan. Unstable food prices and government-administered prices also contributed to inflationary pressure. Inflation in Malaysia remained low at 1.9 percent, and in Singapore it was 3.4 percent. Consumer inflation in Thailand was stable at 3.3 percent. In Vietnam it was 8.4, lower than in the previous quarter by 0.6 percent. Inflation in China was 3.3 percent. The year-on-year consumer price increase in Hong Kong dropped to 2.3 percent. In South Korea, inflation was 2.6 percent, compared with 2.9 percent in the second quarter, and in Taiwan 0.4 percent. In Japan it remained negative at -0.9 percent. US inflation was 1.2 percent.

During the same period, the rupiah appreciated against the US dollar by 1.5 percent from the preceding quarter. The ringgit appreciated by 2.8 percent. The Singapore dollar, yuan and Taiwan dollar were stable and the Thai baht appreciated by 2.2 percent, while the Vietnamese dong depreciated by 2.6 percent. The Hong Kong dollar appreciated against the US dollar by 0.1 percent, while the South Korean won depreciated by 1.4 percent. The euro appreciated 2.5 percent and the yen 7.0 percent.

Commodity Prices in World Markets

During the third quarter, maize (US No. 2) rose by 12 percent from the previous quarter to USD176/tonne. The price of soybeans rose 10 percent to USD407/tonne. Rubber SMR 5 went up by 3.0 percent to USD3176/tonne, rice (Thai 100%) by 1.5 percent to USD468/tonne. Crude oil declined by 2.7 percent to USD75/barrel, gasoline 2.7 percent to USD0.51/ℓ and diesel fuel by 5.3 percent to USD0.54/ℓ.

Prepared by Sry Bopharath

Economy Watch—External Environment

Table 1. Real GDP Growth of Selected Trading Partners, 2004–10 (percentage increase over previous year)

	2004	2005	2006	2007	2008	2009	2009	2009	2009	2010	2010	2010
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Selected ASEAN countries												
Cambodia	7.7	13.4	10.6	10.2	6.8	-	-	-	-	-	-	-
Indonesia	5.1	5.6	5.4	6.3	6.1	4.4	3.9	4.2	5.4	5.7	6.2	5.8
Malaysia	7	5.2	5.9	6.3	4.6	-6.2	-3.9	-1.2	4.5	16.9	8.9	5.3
Singapore	8.5	5.7	7.7	7.7	1.1	-10.1	-3.5	0.8	4.0	17.4	18.7	10.5
Thailand	6	4.5	4.8	4.9	2.6	-7.1	-4.9	-2.8	5.8	12.0	9.2	6.7
Vietnam	7.5	8.4	8.1	8.5	6.2	-	-	-	-	5.8	6.4	-
Selected other Asian countries												
China	9.5	9.6	10.5	11.9	9.0	6.1	7.9	9.1	10.7	11.9	10.3	9.7
Hong Kong	8.3	6.5	6.6	6.4	2.4	-7.8	-3.8	-2.2	2.6	8.0	6.5	6.8
South Korea	4.7	4.7	5.0	4.9	2.2	-4.4	-2.2	0.4	6.1	8.1	7.1	4.5
Taiwan	5.7	4.1	4.6	5.2	0.1	-10.2	-7.5	-1.3	8.4	14.6	12.9*	9.8
Selected industrial countries												
Euro-12	1.8	1.5	2.7	2.9	0.9	-2.5	-4.8	-4.7	0.1	-	-	-
Japan	3.4	2.5	2.1	2.0	-0.7	-9.1	0.6	-4.7	-1.4	5.5*	3.5*	5.0
United States	4.4	3.7	3.3	2.2	1.1	-2.6	-3.9	-2.5	2.6*	2.8*	2.9*	2.3

Sources: International Monetary Fund, Economist and countries' statistic offices. * Updated data

Table 2. Inflation Rate of Selected Trading Partners, 2004–10 (percentage price increase over previous year—period averages)

	2004	2005	2006	2007	2008	2009	2009	2009	2009	2010	2010	2010
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Selected ASEAN countries												
Cambodia	4.0	5.8	4.7	10.5	19.7	4.3	-4.8	-3.0	1.7	7.0	4.1	1.8
Indonesia	8.3	10.5	13.4	6.4	10.1	8.5	5.6	2.78	2.6	3.6	4.4	6.2
Malaysia	1.6	3.1	3.7	2.0	5.3	3.7	1.3	-2.23	-0.2	1.3	1.6*	1.9
Singapore	1.7	0.5	1.0	2.1	6.5	2.1	-0.5	-0.4	-0.3	0.9	3.1*	3.4
Thailand	2.7	4.5	4.7	2.2	5.5	-0.2	-2.8	-2.1	1.9	3.7	3.3*	3.3
Vietnam	7.8	8.2	7.7	8.3	23.3	15.1	6.2	2.6	4.6	7.5	9.0	8.4
Selected other Asian countries												
China	3.9	1.8	1.5	4.8	5.9	-0.6	1.5	-1.26	0.7	2.1	2.7	3.3
Hong Kong	-0.4	1.1	2.2	2.0	4.3	1.7	-0.1	-0.9	1.3	1.9	2.6	2.3
South Korea	3.5	2.8	2.4	2.5	4.6	3.9	2.8	2.0	2.4	2.7	2.6	2.9
Taiwan	1.6	2.3	0.6	1.8	3.2	0.0	-0.8	-1.3	-1.3*	1.3	1.1	0.4
Selected industrial countries												
Euro-12	2.2	2.2	2.1	2.1	3.3	1.0	0.9	-0.34	0.4	1.1	1.5	-
Japan	Nil	-0.3	0.5	0.1	1.4	-0.1	-1.0	-2.2	-2.0	-1.2	-0.9	-0.9
United States	2.7	3.4	3.2	2.9	3.8	-0.2	-0.9	-1.6	1.4	2.3	1.8	1.2

Sources: International Monetary Fund, Economist and National Institute of Statistics. * Updated data

Table 3. Exchange Rates against US Dollar of Selected Trading Partners, 2004–10 (period averages)

	2004	2005	2006	2007	2008	2009	2009	2009	2009	2010	2010	2010
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Selected ASEAN countries												
Cambodia (riel)	4016.30	4092.50	4103.20	4062.70	4054.20	4108.00	4128.60	4164.40	4163.10	4180.11	4209.02	4236.69
Indonesia (rupiah)	8938.00	9705.00	9134.00	9419.00	9699.00	11,630.80	10,225.00	9887.00	9472.44	9266.93	9,132.00	8995.11
Malaysia (ringgit)	3.80	3.80	3.70	3.30	3.30	3.60	3.50	3.50	3.40	3.37	3.24	3.15
Singapore (S\$)	1.69	1.66	1.59	1.51	4.58	1.51	1.45	1.44	1.39	1.40	1.36	1.36
Thailand (baht)	40.20	40.20	37.90	32.22	33.36	35.29	33.98	33.96	33.30	32.90	32.33	31.63
Vietnam (dong)	15,777.00	15,859.00	15,994.00	16,030.00	16,382.00	16,954.00	17,801.00	17,841.00	18,472.00	18,825.67	18,993.00	19,485.00
Selected other Asian countries												
China (yuan)	8.28	8.19	7.97	8.03	6.94	6.84	6.83	6.83	6.83	6.83	6.77	6.77
Hong Kong (HK\$)	7.79	7.78	7.77	7.80	7.78	7.75	7.75	7.75	7.75	7.76	7.78	7.77
South Korea (won)	1145.00	1024.00	955.00	929.04	1137.23	1412.50	1273.90	1239.04	1167.77	1143.97	1166.04	1182.41
Taiwan (NT\$)	33.60	32.10	32.50	32.85	31.54	34.00	33.10	32.77	32.29	31.93	31.90	31.90
Selected industrial countries												
Euro-12 (euro)	0.80	0.80	0.80	0.70	0.84	0.76	0.71	0.70	0.68	0.72	0.79	0.77
Japan (yen)	108.20	110.20	116.40	117.80	102.46	93.72	95.95	93.58	89.78	90.73	92.20	85.74

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

Table 4. Selected Commodity Prices on World Market, 2004–10 (period averages)

	2004	2005	2006	2007	2008	2009	2009	2009	2009	2010	2010	2010
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Maize (USNo.2)—USA (USD/tonne)	110.65	89.19	111.04	149.08	218.15	183.12	171.16	146.85	168.13	162.88	157.41	176.13
Palm oil—north-west Europe (USD/tonne)	427.47	381.32	433.85	707.68	912.23	636.53	719.35	659.16	732.33	N/A	N/A	N/A
Rice (Thai 100% B)—Bangkok (USD/tonne)	221.67	262.88	282.00	305.36	615.32	522.13	499.45	307.31	569.00	565.67	461.33	468.33
Soybeans (US No.1)—USA (USD/tonne)	262.03	224.25	213.88	294.59	460.41	434.40	420.10	411.18	390.43	372.68	370.95	406.88
Crude oil—OPEC spot (USD/barrel)	33.50	50.14	61.58	69.25	95.44	42.34	57.46	68.32	73.86	75.73	77.00	74.91
Gasoline—US Gulf Coast (cents/litre)	30.90	42.19	47.70	53.58	62.22	31.97	43.11	46.92	49.64	53.87	54.43	51.54
Diesel(low sulphur No.2)—US Gulf Coast (cents/litre)	29.48	44.35	51.35	55.51	76.20	34.17	40.51	46.46	51.03	53.87	55.13	53.64

Sources: Food and Agriculture Organisation and US Energy Information Administration

Economy Watch—Domestic Performance

Main Economic Activities

In the third quarter of 2010, fixed asset investment approvals increased by 48 percent compared with the preceding quarter. This was due to agricultural approvals escalating by 571 percent to USD278.0 m. Four agro-industry projects were approved, accounting for USD176.9 m. Rubber plantation approvals increased to six projects amounting to USD101.1 m. Industry approvals declined by 19 percent to USD44.3 m. However, garment approvals rose by 47 percent to USD31.4 m. There were no services approvals in this quarter.

In the third quarter, visitor arrivals increased by 8.3 percent from the preceding month, to 582,024. Arrivals by air grew 11 percent to 288,254 and arrivals by land and water expanded by 6.2 percent to 293,770. The most arrivals from ASEAN countries and Asia and the Pacific were from Vietnam at 125,617, Korea at 63,335 and China at 43,494.

Total exports in this quarter increased by 57 percent compared with the preceding quarter, to USD903.9 m. Garments accounted for 89.2 percent of total exports. Exports to the US rose by 57 percent to USD134 m, to the EU by 43.7 percent to USD167 m, to Japan by 39 percent to USD214 m and to the rest of the world by 48 percent to USD165 m. Exports to ASEAN escalated by 235 percent to USD126 m. Agricultural exports grew by 40 percent to USD98 m. This was due to rubber exports expanding by 84 percent and wood by 96 percent, while fish exports dropped 11 percent. Other exports increased 24 percent. Total imports were up 8.0 percent. Gasoline imports rose by 23 percent, while diesel shrank by 14 percent. Construction material imports increased by 21 percent; other imports rose 108 percent.

Public Finance

Current revenue rose by 7.5 percent compared with the previous month, to KHR1431 bn. An increase of domestic tax by 3.0 percent and taxes on international trade by 22 percent resulted in the expansion of tax revenue by 7.1 percent. Non-tax revenue rose by 10 percent, while capital revenue declined by 53 percent. Capital expenditure fell 2.8 percent, while current expenditure increased

29 percent. Foreign financing of the budget in this quarter dropped 45 percent, but domestic financing went up by 77 percent.

Inflation and Foreign Exchange Rates

In the third quarter, the consumer price index rose 1.8 percent year on year, food and non-alcoholic beverages 1.9 percent and transportation 3.2 percent. Against the US dollar, the riel depreciated by 0.7 percent to 4236.7, and against the Thai baht it depreciated 6.5 percent. The riel appreciated 3.2 percent against the Vietnamese dong. The price of gold increased by 5.0 percent to USD150 per chi. Diesel and gasoline increased by 2.6 percent and 1.3 percent respectively compared with the previous quarter.

Monetary Developments

Total liquidity (M2) in the third quarter rose by 3.4 percent to KHR18,888 bn. Riels in circulation dropped to KHR2917 bn, and riel deposits declined to KHR145 bn. During the same period, foreign currency deposits rose to KHR15,395 bn. Net foreign assets increased 34 percent to KHR16,903 bn due to an increase in foreign assets to KHR18,995 bn and an increase of foreign liabilities to KHR2092 bn. Net domestic assets increased 11 percent to KHR1985 bn. Domestic credit rose to KHR10,361 bn and other liabilities to KHR8377 bn.

Poverty

In November, real daily earnings of nine of 10 vulnerable worker groups increased moderately compared with the same month in 2009. One group, skilled construction workers, experienced a decrease in their earnings.

Forty cyclo drivers selected for interviews on their daily living conditions reported an increase of 24 percent in their earnings compared with the same month in the previous year, to KHR8942/day. However, their overall real daily spending also went up, by 25 percent to KHR5092/day. Of the cyclo drivers interviewed, only 13 percent rented accommodation, while the rest stayed on the road

or in pagodas, in the cyclo owner’s house, with relatives and so forth.

Real earnings of vegetable traders in November rose to KHR9006/day, 22 percent higher than in the same month of 2009. Forty-five percent of the respondents said that they could increase their incomes if they had enough capital to invest in their business. Their real daily expenditure was a slight rise of only 0.4 percent, to KHR4183/day. Twenty-seven percent of the interviewees from Phnom Penh, 20 percent each from Prey Veng and Svay Rieng and 13 percent from Kandal.

Scavengers’ earnings rose sharply, by 49 percent from 2009, reaching KHR6766/day. This resulted from an increase in rubbish prices offsetting a rise in the number of rubbish collectors and a decrease in the source of rubbish. Only 20 percent had their own shelters, while the others were from the provinces, renting accommodation in Phnom Penh. They spent on average KHR3846/day, a sharp increase

of 83 percent from the previous year. Ninety-seven percent saved no money.

Earnings of garment workers in turn rose by 6.2 percent to KHR7944/day. Eighty-nine percent of respondents worked six days per week, plus a frequent provided overtime. The workers spent an average KHR4634/day, a fall of 0.5 percent from November 2009. However, 64 percent could not save much.

There was a contrasting trend in the earnings of skilled construction workers. They earned KHR12376/day, 1.6 percent less than in the same month of the previous year. This stemmed from a rise of the number of the workers more than offsetting an increase in construction activities. Their daily expenditure was down by 8.6 percent to KHR3484/day. Still, 24 percent could not save.

*Prepared by
Sry Bopharath & Pon Dorina*

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Economy Watch—Domestic Performance

Table 1. Private Investment Projects Approved, 2004–10

	2004	2005	2006	2007	2008	2009				2010		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
	Fixed Assets (USD m)											
Agriculture	12.3	26.8	498.0	135.6	92	175.3	0.0	176.1	94.4	165.7	41.4	278.0
Industry	187.9	914.6	365.3	709.1	724.9	257.7	39.4	60.6	685.5	247.7	54.5	44.3
. Garments	132.6	174.4	89.4	170.7	142.8	16.4	35.0	21.9	14.2	13.1	21.3	29.3
Services	91.8	155.5	2939.1	1742.5	10,003.2	495.6	0.0	150.2	3475.8	89.5	121.6	0
. Hotels and tourism	55.9	102.6	345.0	1048.3	8758.1	254.1	0.0	150.2	0.0	3.78	14.0	0
Total	292.0	1096.9	3802.4	2587.2	10570.9	928.6	39.4	386.3	4255.7	502.9	217.5	322.3
	Percentage change from previous quarter											
Total	-	-	-	-	-	-41.2	-95.7	882.0	1001.7	-91.2	-56.8	48.2
	Percentage change from previous year											
Total	-5.6	275.6	246.6	-32.0	308.6	266.5	-99.0	-91.5	169.3	-59.8	452.0	-16.6

Including expansion project approvals. Source: Cambodian Investment Board

Table 2. Value of Construction Project Approvals in Phnom Penh, 2004–10

	2004	2005	2006	2007	2008	2009				2010		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
	USD m											
Villas and houses	30.3	45.5	33.1	79.1	154.7	32.1	6.7	2.2	9.8	5.1	7.5	14.13
Flats	167.6	204.2	213.3	297.2	221.6	95.2	18.9	6.3	28.0	11.1	127.2	25.32
Other	65.6	109.1	76.8	259.6	740.9	53.7	36.7	12.2	29.0	35.2	67.4	38.90
Total	263.5	358.8	323.3	635.8	1117.0	181.1	62.3	20.7	66.8	51.4	202.1	78.35
	Percentage change from previous quarter											
Total	-	-	-	-	-	-48.5	-65.6	-66.8	222.7	-23.1	293.2	3776.8
	Percentage change from previous year											
Total	32.5	36.2	-9.9	96.7	75.7	31.9	-55.8	-95.7	-81.0	-71.6	224.4	37750.2

Source: Department of Cadastre and Geography of Phnom Penh municipality

Table 3. Foreign Visitor Arrivals, 2004–10

	2004	2005	2006	2007	2008	2009				2010		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
	Thousands											
By air	626.1	856.5	1029.0	1296.5	1239.4	335.2	221.2	247.2	308.1	371.5	260.9	288.3
By land and water	428.9	565.1	672.9	718.6	881.9	287.1	243.0	240.2	279.5	312.2	276.6	293.8
Total	1055.0	1421.6	1701.9	2015.1	2121.3	622.3	464.2	487.4	587.6	683.7	537.5	582.0
	Percentage change from previous quarter											
Total	-	-	-	-	-	7.7	-25.4	5.0	20.6	16.4	-21.4	8.3
	Percentage change from previous year											
Total	50.5	34.7	19.7	28.4	5.3	-3.4	2.2	9.4	1.7	9.9	15.8	19.4

Source: Ministry of Tourism

Table 4. Exports and Imports, 2004–10

	2004	2005	2006	2007	2008	2009				2010		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
	USD m											
Total exports	2189.4	2452.5	2920.4	3160.1	3206.9	568.94	558.11	618.84	648.87	496.06	575.40*	903.90
Of which: Garments	2108.1	2352.8	2810.8	3050.2	3097.8	462.2	492.4	535.5	579.3	433.3	505.4	806.0
. To US	1281.7	1555.6	1851.7	1959.9	1913.0	88.0	88.1	89.3	80.1	76.7	85.2	134.1
. To EU	593.1	506.9	603.0	660.9	693.4	108.6	128.3	125.7	113.8	102.5	115.9	166.6
. To ASEAN	55.4	70.7	80.4	90.3	99.6	51.0	55.1	62.1	152.1	42.7	37.5	125.7
. To Japan	23.0	25.0	40.6	30.1	26.5	110.9	112.8	149.3	128.3	124.1	154.8	214.4
. To rest of the world	154.9	194.6	235.1	309.0	365.3	103.7	108.1	109.1	105.0	87.3	112.0	165.2
Agriculture	81.3	99.7	109.6	109.9	109.1	106.74	65.71	83.34	69.57	62.76	70.00*	97.9
. Rubber	38.3	36.7	41.5	41.0	35.8	11.79	8.27	15.08	16.49	11.94	13.81	25.4
. Wood	11.1	10.3	8.6	8.7	3.4	0.55	0.5	0.64	1.83	2.75	4.48	8.8
. Fish	10.6	10.1	5.9	3.2	2.3	0.83	0.85	1.11	1.2	0.81	0.56	0.5
. Other	21.3	42.6	53.6	57.0	67.6	93.57	56.09	66.51	50.05	47.26	51.15	63.2
Total imports	2148.9	2513	512.2	554.8	1010.9	173	177.8	148.8	133.2	139.3	174.8	188.7
Of which: Gasoline	30.2	40.2	38.8	58.7	70.1	16.8	15.6	19.3	19.4	22.0	17.3	21.2
Diesel	109.4	93.1	113.0	122.8	113.5	34.2	40.0	46.0	43.1	44.7	49.6	42.6
Construction materials	95.3	134.7	56.5	69.0	77.8	13.8	14.8	15.7	13.3	14.5	13.5	16.3
Other	1914.0	2245	303.9	304.3	749.5	108.2	107.4	67.8	57.4	58.1	94.4	108.6
Trade balance	40.5	-60.5	2408.2	2605.3	2196	395.94	380.31	470.04	515.67	356.76	344.41	715.2
	Percentage change from previous quarter											
Total garment exports	-	-	-	-	-	-16.0	6.5	8.8	8.2	-25.2	16.6	59.5
Total exports	-	-	-	-	-	-1.7	-1.9	10.9	4.9	-23.6	4.7	57.1
Total imports	-	-	-	-	-	-6.5	2.8	-16.3	-10.5	4.6	25.5	8.0
	Percentage change from previous year											
Total garment exports	23.4	11.6	19.5	8.5	1.6	-5.4	-7.0	-11.4	5.3	-6.3	2.6	50.5
Total exports	22.5	12.0	19.1	8.2	1.5	12.1	-5.5	-3.0	12.1	-12.8	-7.0	46.1
Total imports	17.8	16.9	-79.6	8.3	82.2	30.9	-67.5	0.0	-28.0	-19.5	-1.7	26.8

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

Table 5. National Budget Operations on Cash Basis, 2004–10 (billion riels)

	2004	2005	2006	2007	2008	2009				2010		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
Total revenue	2126.0	2625.0	3259.2	1146.1	5290.0	1101.7	1252.7	1184.7	1346.1	1536.8	1341.1	1436.0
Current revenue	2107.0	2474.0	2881.8	1141.6	5210.7	1097.7	1245.7	1174.9	1337.7	1526.4	1330.9	1431.2
Tax revenue	1577.0	1911.0	2270.9	965.2	4409.9	947.4	1096.5	999.5	1224.1	1094.1	1143.8	1225.5
Domestic tax	-	-	-	661.8	3248.4	712.0	838.7	731.8	808.5	820.3	890.9	916.9
Taxes on international trade	-	-	-	303.5	1161.5	235.4	257.8	268.0	303.4	273.7	253.0	308.6
Non-tax revenue	530.0	563.0	610.9	176.4	800.8	150.3	149.2	176.1	225.7	432.4	187.1	205.7
Property income	-	-	-	13.6	78.0	13.1	9.7	27.5	14.3	237.0	20.2	19.5
Sale of goods and services	-	-	-	124.3	424.7	93.5	100.9	91.7	121.9	108.4	102.9	127.0
Other non-tax revenue	-	-	-	38.5	298.2	43.7	38.6	56.5	89.5	84.0	61.0	59.2
Capital revenue	19.0	152.0	377.4	4.5	79.3	4.0	7.0	9.8	8.4	10.4	10.2	4.8
Total expenditure	2932.0	3295.0	4174.7	1689.7	6297.8	1650.6	1766.1	2089.5	1877.1	2129.4	2154.8	2390.3
Capital expenditure	1163.0	1328.0	1638.1	807.4	2574.4	693.6	607.1	759.2	634.9	-	913.0	887.0
Current expenditure	1769.0	1967.0	2536.8	882.3	3809.0	752.4	1064.7	1290.4	1332.3	831.8	1168.1	1503.3
Wages	640.0	711.0	822.0	362.6	1397.0	327.4	515.5	526.6	642.5	-	545.6	562.4
Subsidies and social assistance	-	-	-	194.2	927.1	217.3	185.9	272.6	195.6	213.3	253.2	401.5
Other current expenditure	-	-	-	325.5	1384.9	207.7	363.2	491.2	494.3	449.6	369.3	539.4
Overall balance	-806.0	-706.0	-915.6	-543.6	-1007.8	-548.9	-513.4	-904.8	90.2	-592.6	-813.7	-875.6
Foreign financing	864.0	1127.0	1360.7	741.5	2055.1	507.8	326.7	484.5	-531.0	270.8	746.0	409.1
Domestic financing	148.0	-396.0	-445.1	-185.8	-127	-310.3	236.5	316.4	406.4	422.8	194.1	343.3

Source: MEF web site.

Table 6. Consumer Price Index, Exchange Rates and Gold Prices (period averages), 2004–10

	2004	2005	2006	2007	2008	2009				2010		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
(October-December 2006:100)	Consumer price index (percentage change over previous year)											
Phnom Penh - All Items	3.9	5.8	4.7	5.8	19.7	4.3	-4.8	-3.0	1.7	7.0	4.1	1.8
- Food & non-alcoholic bev.	6.4	8.6	6.4	9.9	33.1	6.1	-5.2	-2.7	1.8	7.8	3.6	1.9
- Transportation	9.7	11.4	9.1	5.8	19.4	-13.0	-16.5	-13.8	2.4	12.9	8.7	3.2
	Exchange rates, gold and oil prices (Phnom Penh market rates)											
Riels per US dollar	4016.3	4119.7	4119.0	4062.7	4058.2	4111.6	4128.6	4164.4	4157.3	4180.1	4209.0	4236.7
Riels per Thai baht	99.9	102.6	108.7	122.8	123.5	116.6	119.2	122.9	126.0	127.0	129.9	138.3
Riels per 100 Vietnamese dong	25.5	25.8	25.1	25.0	24.8	23.6	23.3	23.5	23.0	22.3	22.1	21.4
Gold (US dollars per chi)	46.3	54.0	70.6	83.2	105.9	105.6	110.7	123.2	133.8	133.9	142.9	150.1
Diesel (riels/litre)	2088.0	2633.0	3140.0	3262.3	4555.2	2873.7	3056.9	3867.0	3381.9	3599.5	3835.1	3936.6
Gasoline (riels/litre)	2833.0	3442.0	4004.0	4005.0	4750.8	3112.6	3452.4	3371.1	3940.2	4163.0	4358.7	4415.5

Sources: NIS, NBC and CDRI

Table 7. Monetary Survey, 2003–10 (end of period)

	2004	2005	2006	2007	2008	2009				2010		
						Q1	Q2	Q3	Q4	Q1	Q2	Q3
	Billion riels											
Net foreign assets	4797.0	5475.0	7224.0	10,735.0	10,345.0	11,222.0	12,611.0	13,869.0	14,655.0	15,514.6	12,610.9	16,903.0
Net domestic assets	-467.0	-450.0	-282.0	576.0	1513.3	1266.0	1249.0	1042.0	1573.0	1720.0	1785.3	1984.8
Net claims on government	-209.0	-421.0	-953.0	-1816.0	-2987.0	-3048.0	-2889.0	-2463.0	-2252.0	-2484.8	-2362.7	-2,120.4
Credit to private sector	1817.0	2394.0	3630.0	6386.0	9894.0	9814.0	10,129.0	10,127.0	10,532.0	11,146.7	11,859.1	12,479.8
Total liquidity	4330.0	5025.0	6942.0	11,311.0	11,858.0	12,488.0	13,859.0	14,912.0	16,228.0	17,234.5	18,267.1	18,887.8
Money	1153.0	1323.0	1658.0	2052.0	2399.0	2545.0	2695.0	2773.0	3120.0	3148.5	3115.1	3,061.7
Quasi-money	3177.0	3702.0	5285.0	9259.0	9459.0	9942.0	11,164.0	12,139.0	13,108.0	14,086.0	15,152.0	15,826.1
	Percentage change from previous year											
Total liquidity	30.0	16.1	38.1	62.9	4.8	3.7	9.1	18.7	36.9	38.0	6.0	3.4
Money	23.0	14.7	25.3	23.8	16.9	6.5	9.2	18.7	30.1	23.7	-1.1	-1.7
Quasi-money	32.8	16.6	42.8	75.2	2.2	2.9	9.1	18.7	38.6	41.7	7.6	4.4

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		
	2007	2007	2008	2009	2010					2010		
		Nov	Nov	Aug	Nov	Feb	May	Aug	Nov	May	August	Nov
Cyclo drivers	8075	9675	12628	7738	7194	9413	9570	8393	8942	7.6	8.5	24.3
Porters	8588	9119	9005	8159	9243	9953	9340	10,500	10,174	-9.5	28.7	10.1
Small vegetable sellers	8220	8552	9926	8323	7388	7826	8062	8380	9006	-17.5	0.7	21.9
Scavengers	5422	5727	4652	7087	4535	6238	7407	6452	6766	11.6	-9.0	49.2
Waitresses*	4482	4643	4327	4574	5380	5131	5380	6418	5562	23.8	40.3	3.4
Rice-field workers	5516	6426	8697	5785	4834	5358	6260	6177	5015	-12.2	6.8	3.7
Garment workers	7568	7240	6554	7410	7484	7557	7491	8470	7944	12.0	14.3	6.2
Motorcycle-taxi drivers	10,634	11,872	15,691	9569	9369	11,302	10,274	10,544	10,494	-15.9	10.2	12
Unskilled construction workers	6155	7777	8779	9444	7857	7699	9013	11,722	9838	-9.5	-7.5	25.2
Skilled construction workers	11,154	11,286	12,710	11,918	12,571	11,924	11,928	11,722	12,376	-12.9	-1.6	-1.6

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

Continued from page 28 **CDRI Update**

- (i) To produce independent, objective, high quality policy-relevant development research, and to maximise the accessibility of this development knowledge to policy makers, influencers and stakeholders, and its policy impact;
- (ii) To make a significant contribution to Cambodia's national development research culture, capacity and institutions, and community awareness of development issues;
- (iii) To achieve best practice for research quality through continuous improvement of research management and support systems, and effective monitoring;
- (iv) To build a more sustainable future for CDRI as Cambodia's leading development policy research institution, through the strengthening of CDRI as an institution, the deepening of its 'Cambodianisation' agenda and the capacity development of its management and staff, and effective resource mobilisation.

Research

The following research and research-related activities took place at CDRI over the period January – March 2011.

Economy, Trade and Regional Cooperation Programme

Eight research projects are being carried out. The *Vulnerable Workers' Survey* and *Provincial Price Survey* are continuing and progressing well. The reports on *Poverty and Environment Links: A Case Study from Rural Cambodia*, the second component of the Poverty Network Project, *Major Challenges along the Growth Trajectory: Structural Transformation and the Role of Government* and *Search for Growth Potential and Evaluation of Growth Potential in Cambodia* were well accepted by the donors, (ADB and KDI). The first draft report for *Different Streams, Different Needs and Impact: Managing International Labour Migration in ASEAN* will be ready for review in late March 2011 and the research team attended the technical workshop held in Manila, the Philippines, in January. The first phase of the *Growth Diagnostic*

project – a technical report on growth diagnostic methodology – has been successfully completed and the second phase of the project is underway. The first draft report on the *Analysis of International Investment in the Agricultural Sector of Cambodia* has been submitted to FAO for further comment. Two manuscripts – *Costs and Benefits of Cross-Country Labour Migration in the GMS* and *Assessing China's Impact on Poverty Reduction in the Greater Mekong Sub-region*, comprising the sixth and the eighth series of GMS country studies by the Development Analysis Network (DAN), are being finalised for international publication by the Institute of South East Asian Studies (ISEAS). CDRI is currently identifying strategic partners to support DAN from 2011 onwards. Two additional villages for the *Global Financial Crisis and Vulnerability in Cambodia* project have been selected and the survey will be conducted in March. The contract for *Analysing Chronic Poverty in Rural Cambodia: Evidence from Panel Data*, funded by the East Asian Development Network, has been signed.

Democratic Governance and Public Sector Reform Programme

The programme is currently working on six projects. The *Cambodian Economic Transformation: A Critical Look into State Capacity* project seeks to debate, define and evaluate the state's current capacity and status, identify factors affecting state capacity and suggest ways to improve it; the team is collecting empirical information. The *Decentralisation and Deconcentration Analysis* identifies the trend and future of D&D reforms in the context of Cambodia's hybrid state and seeks answers to whether D&D enhances democracy in Cambodia; almost all the data has been collected and the zero draft will be ready by the end of March. *A Baseline Survey of Sub-national Governments* explores the perceptions and understanding of commune councillors towards district and provincial administration (councils and boards of governors); data collection will be finished by the second week of February. The project on *Public Sector Reform*

in Building Good Governance of Irrigation Water in Cambodia analyses the gaps between public sector reform policies and the real outcome from the perception of Farmer Water User Communities. The *Catchment Governance and Cooperation Dilemmas* project explores the cooperation between players in the context of D&D reform; the study is progressing well and data is being collected. The research on *Irrigation Governance Performance in Cambodia* investigates the degree of match between the governance arrangements and requirements imposed by the physical configuration of these schemes. The team has written two thirds of the paper and will make a few more field trips to collect the necessary data.

Poverty, Agriculture and Rural Development Programme

Four projects are ongoing. The field pilot assessment for the *Impact Assessment of Farmer Organisations on Food Security for the Rural Poor* project has been completed, and the survey questionnaires and qualitative field guide questions have been drafted for inclusion in the interim report on the preliminary findings from the pilot assessment. The team has finished the review of existing literature and national datasets in order to identify gaps and relevant indicators for the *Development of Impact Assessment Methodology for Mine Action Sector in Cambodia* project. The first draft of the progress report has been submitted to UNDP and the Cambodian Mine Action Authority (CMAA) for comment. Four in-depth case study reports have been completed and a synthesis report is being written for the project on *Policy Coherence for Agriculture and Rural Development*. Finally, the report on the *Poverty Dynamics Study (PDS)*, a joint project with the Economy, Trade and Regional Cooperation programme, is being consolidated based on final comments from the World Bank.

Natural Resources and the Environment Programme

Four main research projects are being carried out. To date, key outputs of the *Water Resources Management Research Capacity Development*

Programme, which consists of governance, physical and economic components, are: nine publications; five academic courses as part of the RUPP's Department of Environmental Sciences curriculum; two Masters degree graduates and a continuing doctoral degree student; on-the-job capacity building, including field trips and a study tour; participatory learning and action research, involving many local and sub-national stakeholders; seven Consultative Committee Meetings; and 12 provincial and two national workshops. The project *Tropical Forest for Poverty Alleviation- from Household Data to Global Analysis* seeks to advance understanding on the role of tropical forests in reducing poverty. The working paper has been drafted and the results presented to villagers in the surveyed villages in Kampong Thom, Kampong Speu and Kampot provinces. The project *Building Community for Poverty Reduction Initiatives in the Tonle Sap Basin (JFPR-9114-CAM)* aims to support capacity development of the communes and community organisations, and build the community's capacity to accelerate poverty reduction. The outputs are the Learning Resources Centre, including an online library and catalogue; a survey on commune council capacity and readiness in 97 communes, the report for which has been drafted; and five provincial workshops, including workshop reports and analysis.

The "Social Impact Monitoring and Vulnerability Assessment Baseline Survey" is being conducted to understand the socio-economic conditions and the extent of people's dependence on water resources along the Mekong Corridor.

Social Development Programme

The first project is the international publication of the book titled *Improving Health Sector Performance: Institutions, Motivations and Incentives*, funded by the University Research Co., LLC (URC). The final manuscript is presently being copy-edited by ISEAS. This publication is an attempt to document and disseminate health experts' local and international experiences of institutions, motivations and incentives in the

health sector. The second project is the EQUITAP¹ initiative, funded by AusAID and coordinated by the Institute for Health Policy, Sri Lanka. It aims to analyse available household survey data to estimate the impoverishing and catastrophic impacts, progressivity, differentials in healthcare utilisation and benefit incidence of government spending. The research team has submitted the preliminary results of the analysis to the project coordinators for feedback. Based on the results of the analysis, an article on “Assessing Household ‘Catastrophic’ Payments for Healthcare” has been written and will be published in the next CDRI Annual Development Review. The programme is soon to start work on a six-year research project *Building Pro-Poor Health Systems during the Recovery from Conflict “REBUILD”*, which is funded by DFID-UK. Led by the Liverpool School of Tropical Medicine, UK, the project seeks to produce high quality evidence

that contributes to improving the health of the poorest in developing countries. The other partner institutions in this research consortium include (1) Makerere University, Uganda; (2) College of Medicine and Allied Health Sciences, Sierra Leone; (3) Biomedical Research and Training Institute, Zimbabwe; and (4) Institute for International Health and Development, Queen Margaret University, Edinburgh, UK.

As for the Peace Building Training Programme, the team is now conducting three follow-up workshops for case study-based training on water conflict in Kompong Chhnang province, a specific training in Pursat province, and the training course on Roles of the Press in Peace Building in Phnom Penh. The team is also conducting another case study-based training on water conflict in Kompong Thom province.

¹ EQUITAP stands for Equity in Asia-Pacific Health Systems and is the collaborative effort of more than fifteen research teams in Asia and Europe engaged in examining equity in national health systems in the Asia-Pacific region. The collaboration involves the development of methodological tools, and actual assessment of the performance of national health systems.

Continued from page 13 **Accountability in Cambodia**

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CDRI UPDATE

Management

CDRI achieved a healthy financial result for 2010, with a further expansion of its resource base, both in finance and people, and a modest surplus generated as a contribution to reserves. However the challenge of longer term sustainability remains, and CDRI will be seeking to secure longer term resource partnerships with its international development partners, and a better balance of programme and project based resourcing over the life of the next 2011-15 Strategic Plan. CDRI's 2010-11 Annual Report is now available on the CDRI website.

On 24-25 January CDRI's Executive Director participated in the inception workshop of Asian Development Bank Institute/Asian Development Bank studies on *The Role of Key Emerging Economies – ASEAN, PRC and India (ACI) for a Balanced, Sustainable and Resilient Asia* and *ASEAN 2030: Growing Together for Shared Prosperity* at the ADBI in Tokyo. CDRI has been commissioned to prepare the Cambodia background paper for the *ASEAN 2030* study.

The 5th annual Cambodia Outlook Conference, a partnership of CDRI and ANZ Royal Bank, on the theme *Driving High Growth and Sustainable Development for Cambodia – Opportunities and Challenges* was held in Phnom Penh on 16 March 2011. The opening keynote address to

more than 300 participants was again presented by Cambodia's Prime Minister Hun Sen. The 2011 Cambodia Outlook Conference included session sub-themes on: *Indicators, Prospects and Policy Priorities; An Enabling Environment for High Growth and Sustainable Development – Key Factors; Positioning Cambodia for High Growth and Sustainable Development – Building on Successes, Removing Constraints; Policy Priorities and Action.*

On 17 March CDRI's Board endorsed CDRI's new Cambodia 2020 Research Strategy and related 2011-15 Strategic Plan. The research strategy has five priority development policy themes reflecting CDRI's five programmes - economy trade and regional cooperation; livelihoods, agriculture and rural development; democratic governance and public sector reform; natural resources management and environmental sustainability; social development - with four integrated cross-cutting themes that link the programmes: sustainability, poverty reduction, governance and institutional arrangements, gender equity, and conflict prevention and resolution. It includes priority research questions for each programme.

CDRI's 2011-15 Strategic Plan is designed around four objectives, with strategies and performance indicators for each objective:

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