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## Non-Timber Forest Products: Their Value to Rural Livelihoods

Christian Sloth, Khlok Bottra and Heov Kim Sreng discuss some of the initial findings of the research on assessment of the value of non-timber forest products (NTFPs) extracted from natural forests by rural people.\*

### Introduction

The objective of this research is to assess the economic consequences of forest conversion to other land uses. This is done by comparing the total economic value (TEV) of forests and relevant alternatives (e.g. sustainable forest management vs. oil palm plantation). As part of this economic analysis of land use options and changes, the natural resources and environment programme of CDRI has carried out a household survey in order to assess the value of non-timber forest products (NTFPs) extracted from natural forests by rural people.

This article summarises some of the initial findings of the research. The data analysis shows that the collection and use of NTFPs is very diverse and represents a considerable economic value to rural livelihoods.

We also briefly review other studies available on the collection, use and marketing of NTFPs. These confirm our findings that a majority of the rural population is using NTFPs as an important source of income and subsistence. Forest products are also considered to play a key role for food security in areas where seasonal food shortages occur, especially among poorer households. NTFPs therefore have particular significance for the poorest part of the population, and thus represent an important resource for the Cambodian economy.

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A *Dipterocarp* tree being tapped for resin near Snuol, Katie province

### Methods and Study Sites

The household survey was carried out in the provinces of Pursat, Kratie, Mondolkiri and Kompong Cham and involved 504 households in 16 villages. Data was collected using three different approaches. The first focused on overall village level socio-economic data using a short structured questionnaire. The second concentrated on assessing total household livelihood, including cash and non-cash income from both NTFPs and off-

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and on-farm employment. Values were assessed by recording observed market prices and amounts collected/produced over the past year. This led to the identification of total livelihood and the proportion made up by NTFPs. The third approach involved participatory ranking of NTFPs relative to the value of rice sufficiency for the household over a year.

The households were classified into three different income categories: poor, medium and rich. The classification was based on livestock, rice sufficiency (food security), land area and quality of house. Because only two households were classified as rich, this category was abandoned and those interviews are not included in the analysis. In total, 284 households (56.6 per cent) were classified as poor and 218 (43.4 per cent) as medium. All data presented here are based on reported market prices and actual amounts collected.

It should be noted that the field survey sites selected were not confined to areas where households are predominantly forest dependent. Data were also collected from areas with degraded and receding forest resources in order to increase the representativeness of the data.

### Rural Livelihoods and NTFPs

In general, we found that rural people use a variety of different NTFPs, including firewood, resin, medicinal plants, wild meat, food plants, herbs, fibres, oils, gums, dyes, rattan and bamboo. In Cambodia, it is estimated that approximately 1,300 different plants species are used for food, medicine and condiments, as well as a range of animal species (RUPP, no year; MOE, 2005).

The large number of different products and species calls for a classification of products into broad categories. The following six categories of NTFPs were identified during data analysis as major contributors to rural livelihoods. The classification is based on functional role and origin:

- Fuelwood (firewood and charcoal)** are the most important sources of fuel for cooking in Cambodia. In rural areas, approximately 97 percent of all households use firewood or charcoal as cooking fuel, and in urban areas the figure is 78 percent. This large-scale use of fuelwood in rural areas makes firewood and charcoal an important energy resource and income source for rural and peri-urban households with few alternatives for cash income (FAO, 1998; Heng, 2002). The data collected in the current study clearly support these findings, both in regard to the percentage of people using wood as fuel and to the value of wood as a source of energy.
- Resin** collection provides a significant income to many Cambodian households, particularly in the eastern region and in other parts with forests containing resin trees. Resin is primarily collected from species of Dipterocarp trees. *Dipterocarpacea* is a family of trees commonly found in most deciduous and semi-evergreen forests in Cambodia. The resin is primarily collected for cash income and is mostly sold directly to visiting traders who transport and resell it for processing (Meng and Martin, 2002; Evans *et al.*,

2003; Prom and McKenney, 2003). A smaller amount of resin is also used by the households themselves, particularly among the poorer segment of the population (see Figure 6). Resin is used for lighting, caulking boats, paint and varnishes.

- Wild meat (including fish)** represents a substantial value to rural households for both consumption and cash income. Other studies also mention the importance of wild game and fish (Desai and Lic, 1996; Lic and Martin, 2002). It should be underlined that protection of endangered species is a serious concern in connection with hunting wild animals.
- Wild plants for consumption and medicinal purposes** are valued in most Cambodian communities as an important supplement to the daily diet and as an alternative and supplement to the official health care system. The reliance on medicinal plants by local communities may be far more important than is generally believed. Approximately 600 different species are reported to be used for medical purposes, including epiphytes, ferns, herbs, grasses, sedges and vines (Meng and Martin, 2002; Kham, 2004; Linddal and Outey, 2004). Wild plants include vegetables, such as rattan shoots, edible leaves, nuts, roots, perennial herbs, ferns, palm core, mushrooms, bamboo shoots, nuts and young leaves of woody climbers and trees and a range of edible fruits. They are collected and consumed on a daily basis and provide an important supplement to villagers' diets.
- Construction materials (bamboo and wooden poles, small timber, leaves, grass, climbers)** are important contributions to many rural people's lives, supplying cheap and easily available building materials. Species of bamboo that are often used for construction include *Dendrocalamus giganteus*, *Dendrocalamus membranaceus*, *Bambusa vulgaris*, *Bambusa bambos* and *Bambusa arundinacea*. Bamboo is also used for making utensils such as farm and fishing tools, baskets, chopsticks, floor grating, and columns of cottages, carrying poles and others. Wooden poles are very commonly used to make gates and livestock cages, and are traded in many provinces. Building timber is used to make plywood for house walls and doors, while leaves and thatch are used to make roofs.
- Honey and beeswax** were identified as a small but distinctive category used by a significant proportion of households.

**Figure 1: Percentage of Poor and Medium Households that Collect Different Kinds of NTFPs**

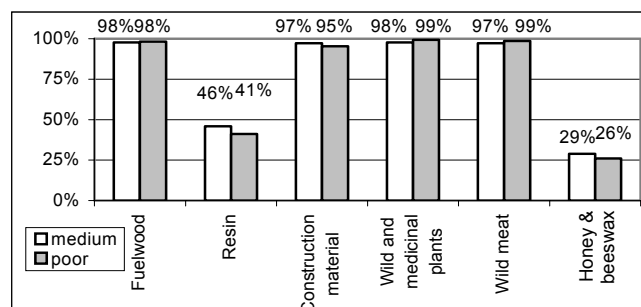


Figure 1 gives a clear indication of the scope of NTFP collection, demonstrating that a vast majority of the population in rural areas are involved in the collection of several different kinds of NTFPs.

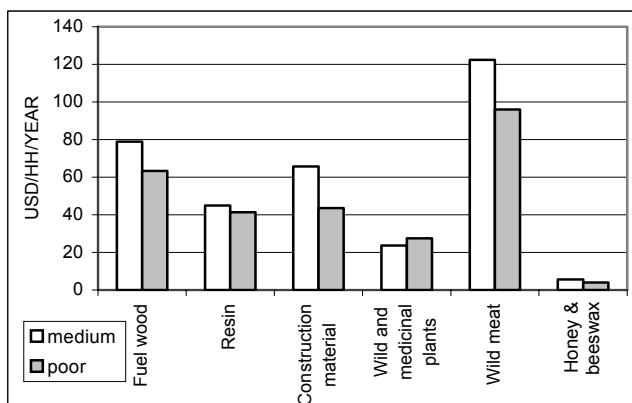
**The value of NTFPs to rural households**

The classification of NTFPs outlined above is used in the following analysis of data. The contribution of natural resources to rural household incomes is found to be highest among poor households, although the total value of NTFPs collected is lower than for better off households. This high rate of dependency on natural resources for income and subsistence could be expected to increase in the future if the development of non-agricultural employment opportunities does not catch up with the general population growth of 2.5 percent per annum. Thus, it can be expected that the number of poor rural households dependent on natural resources for sustenance will increase in the near future, unless drastic changes occur in rural and urban development.

Based on the data collected, we have calculated the economic value of NTFPs on a household basis, including cash and subsistence values.

The total values of different NTFP categories, illustrated above, give a picture of the importance of each category. As can be seen, wild meat scores highest for both poor and medium income households. It is interesting to note that medium income households generally gain a higher value from NTFPs (apart from wild and medicinal plants) than poor households.

**Figure 2: Total Values of Different NTFP Categories for Poor and Medium Income Households**



**Figure 3 (a) and (b): Distribution of Relative Values of the Different NTFP Categories, in Poor and Medium Income Households.**

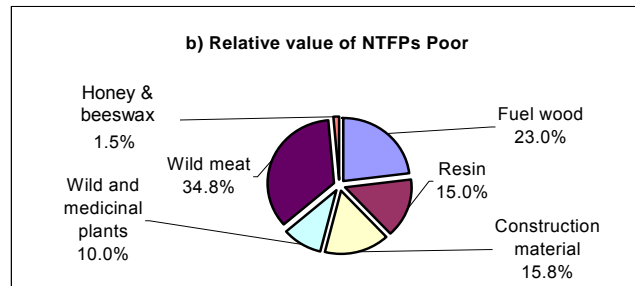
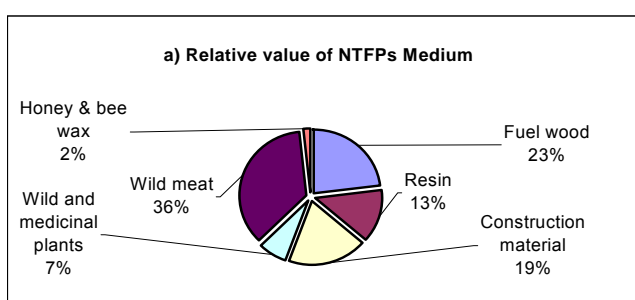
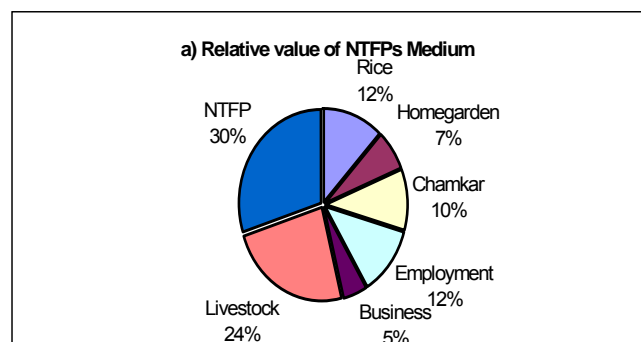


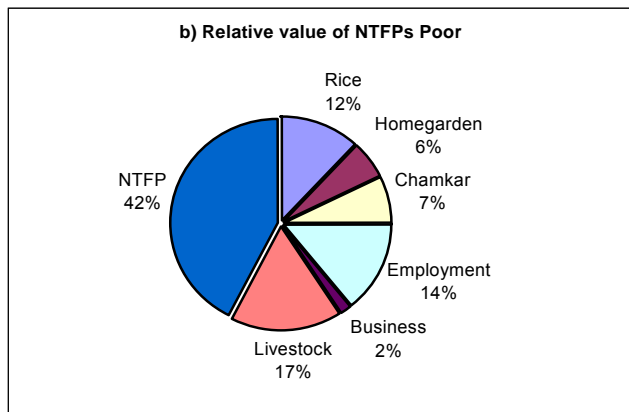
Figure 3 illustrates the relative importance of different NTFP categories for the two income categories. It can be seen that there is little difference in the distribution of collected products between poor and medium households. Again, it is evident that wild meat and fish constitute a significant percentage of the total value of all NTFPs collected (36 percent for both poor and medium households).

This picture changes somewhat when we look at the total household livelihood value, which is the combined value of all income and subsistence activities in the households, including off- and on-farm employment. We have divided farming and other income-generating activities into six different categories:

- 1. Rice farming**, including upland and paddy rice.
- 2. Home garden**, defined as the garden surrounding the house or residential area. The main crops of home gardens include fruits, vegetables and spices used in day-to-day housekeeping, such as lemons, papayas, mangoes, coconuts, pineapples, jackfruit and lemongrass.
- 3. Chamkar farming** is loosely defined as farming other than wet rice cultivation. Chamkar is usually found in more hilly locations and can be either permanently cropped or used under shifting cultivation. Some main crops of chamkar include soybeans, maize, cashews and cassava.
- 4. Employment**, defined as off-farm work, including seasonal and full-time employment.
- 5. Private business**, referring to small-scale home-based businesses such as retail stores, food stalls.
- 6. Livestock**, which includes all animals kept and consumed or sold by the household. Livestock thus re-

**Figure 4 (a) and (b): Distribution of Total Livelihood Values for Farming and Other Income Generating Activities and NTFP Collection in Poor and Medium Income Households**





fers to the chickens, cattle, buffalos and ducks that are consumed and sold, as well as kept for savings.

As is evident from Figure 4, there is a clear difference between the livelihood activities of poor and medium households. The largest differences are in the values of NTFP collection and livestock. Whereas medium households obtain 30 percent of their total livelihood from NTFPs, poor households obtain as much as 42 percent. The lower share of NTFP value in medium households is mainly offset by a higher value of livestock and private business. The reverse is observed in poor households, which generally obtain a smaller proportion of their livelihood value from livestock.

**Trade and Marketing**

Existing data on trade and marketing of NTFPs is scarce and basically consists of isolated case studies or limited statistics.

A few secondary sources are available on domestic trade of NTFPs (Dangal *et al.*, 2004; Linddal and Outey, 2004). An earlier study carried out by CDRI revealed that marketing of NTFPs is generally restricted by informal fee collection at different levels in the market chain (Prom and McKenney, 2003).

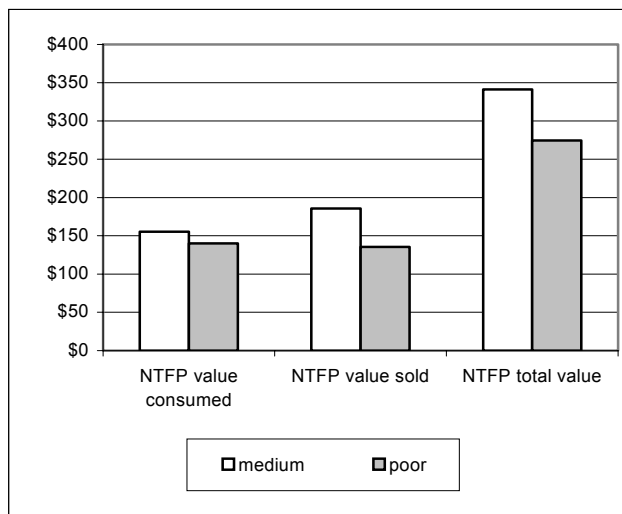
The most recent official statistics on external trade of NTFPs, from 2002, mention small amounts of mushrooms and rattan (DFW, 2003). Other products, such as resin, bamboo and medicinal plants, are known to be traded both domestically and internationally, but the actual size and potential of trade are still unknown (Prom and McKenney, 2003). Linddal and Outey (2004) suggest that exports of medicinal plants from Cambodia are significant, but no information is available on their size and character.

**NTFPs for Cash and Subsistence**

Although the current CDRI research does not include market research as such, information was collected on the proportion of NTFPs sold for cash and the proportion used for consumption. The data therefore create a picture of the importance of the sale of NTFPs, relative to subsistence uses.

As can be seen in figure 5, there are significant differences in the total value and the distribution of

**Figure 5: Comparison of Average Total Cash and Subsistence Values of NTFP in Poor and Medium Households**

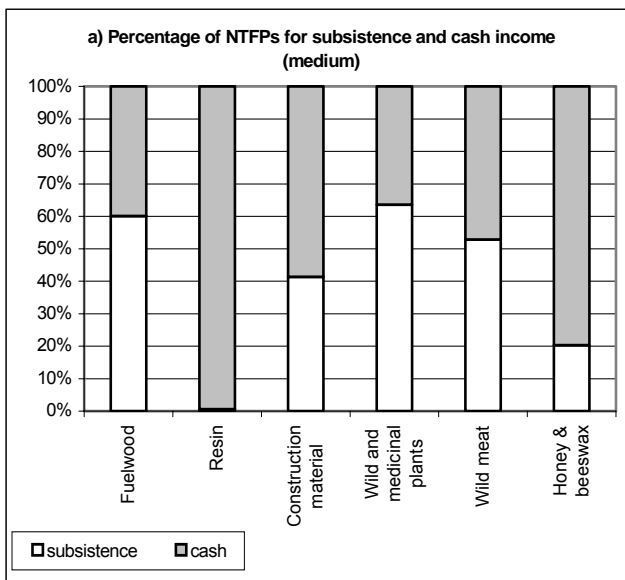


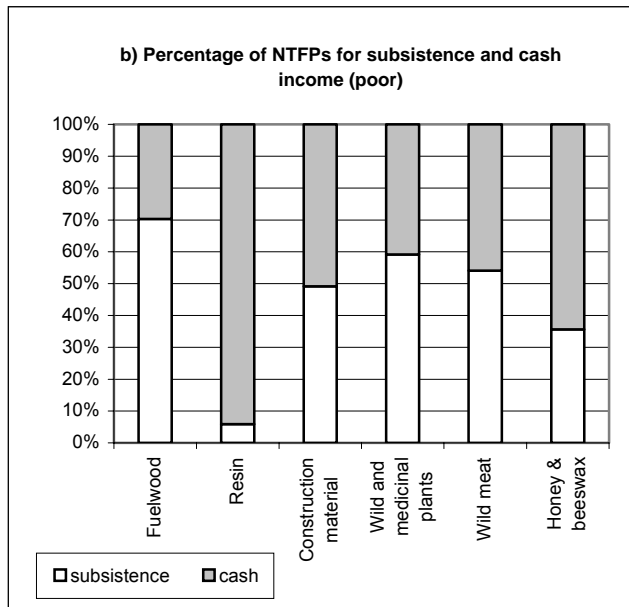
cash and subsistence values between the two income categories. Medium income households collect NTFPs with an average total value of \$345 per year. Poor households collect products with an average total value of \$280.

The two income categories also differ in the proportion of collected NTFPs that are sold or used for subsistence. Medium income households sell 55 percent of the total NTFP value, while poor households sell 50 percent.

These figures clearly indicate the importance for rural households of cash income from NTFPs, and thus the importance of sales and marketing. The proportion of products sold or directly consumed also depends on the nature of the product.

**Figure 6: Percentage of Different NTFP Categories Consumed or Sold by Medium (a) and Poor (b) Households**





In general, it is evident that all NTFP categories have a significant value for both sale and consumption. Figure 6 also underlines that poor household's use a larger proportion of collected produce for subsistence than do medium households. The most important products for cash income, resin and honey and beeswax, are mainly collected by a smaller number of people, pointing to a certain specialisation in collection and trade (Figure 1).

### Concluding remarks

As evident from the above data analysis, NTFPs constitute an important resource for rural households. Not only are NTFPs an important source of subsistence products; they also contribute significantly to cash income. It can therefore be concluded that NTFPs are not merely an "emergency resource" used in case of food shortages, but an integrated part of the livelihood strategies of rural households. The proportion of cash income points to the importance of trade and marketing of NTFPs, though little is known of the size and structure of these markets.

Although the consumption and sale of NTFPs might not be the answer to poverty reduction and development, there is no doubt that the contribution of these resources to the rural household economy is much larger than reflected in official statistics. This means that the value of NTFPs is real, and should be included as an economic parameter in policy and decision making along with agricultural production and timber harvesting.

The results of this survey will be analysed in more detail by CDRI and used in further modelling of economic consequences of forest conversion to other uses.

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## Trade Research Capacity-Building Needs of Research Institutions —Cambodia Case Study \*

Hing Vutha, Research Associate at CDRI, assesses the current trade research capacity and the need for building trade research capacity of research institutions in developing countries in the Asia Pacific region, and provides overview of linkage between research institutions and policymakers in Cambodia.

The proliferation of global, regional and bilateral economic interactions and integration has made the international trade environment increasingly complex. This challenges policy makers in developing countries and least developed countries (LDCs) to devise coherent trade policies that assure sustainable economic growth and development. Given human capacity limitations, policy makers in many countries operate at a great disadvantage in trying to ensure that their countries obtain favourable terms during technical negotiations. Many look to research institutions to provide the necessary analytical and technical support that is missing within the relevant government departments. Research institutions themselves also frequently face capacity constraints and are not able to play this role as effectively as would be desirable. Little research or information is available about the needs of these research institutions, their existing trade research capacity and how this differs across countries.

This article sets out to assess the need for building the trade research capacity of research institutions in LDCs and low-income developing countries in the Asia-Pacific region, and to identify innovative ways in which some countries or organisations in the region have addressed, or are addressing, these needs. Specifically, the article attempts to investigate the existing linkage between research institutions and policy makers in Cambodia.

### Trade Research Capacity Building: Rationale

Quality research and analysis are fundamental to effective trade policy making and negotiations. As Gloria Pasadilla (2005) of the Philippines Institute for Development Studies concludes in her recent ARTNeT Policy Brief: "If good preparation is key to successful trade ne-

gotiation, adequate research capacity is its locksmith." Pasadilla also identifies institutional capacity as one of three critical elements for efficient trade policies. This capacity includes (1) the ability to prepare technical backgrounds, research and analysis; (2) the capacity to carry out negotiations; and (3) adequate knowledge of the relevant trade laws. In summary, the policy brief argues three propositions that underpin the importance of trade research and the rationale for and design of a survey conducted by CDRI:

- (i) Effective trade policy and trade negotiations must begin with solid research and analysis.
- (ii) In developing countries, but particularly in LDCs, the major stakeholders, such as government and the private sector, often lack the capacity for either macro-level or sectoral trade-related research.
- (iii) If LDCs and developing countries are to participate in trade negotiations more actively on an equal basis, building national trade research capacity, both for government and for policy-oriented research institutes and think-tanks, needs particular attention from the governments of the Asia-Pacific region.

### Key Findings of the Survey on Trade Research Capacity Building Needs

CDRI surveyed twenty-four research institutions from 13 countries: Bangladesh, Bhutan, Cambodia, Fiji, Indonesia, Laos, Mongolia, Nepal, Papua New Guinea, the Philippines, Sri Lanka, Thailand and Vietnam. There were 12 from independent non-profit institute/centres, five from governmental institute/centres, two from university-affiliated institute/centres, four from academic institutes/centres, and one from an independent profit-making institute. The key findings can be summarised as follows:

- Research institutions in the Asia-Pacific have a high level of education, research experience, ability and skills (except modelling expertise). Research institutions in LDCs and in countries with lower GDP per capita tend to have a significantly lower capacity in trade research than those in developing countries and countries with higher GDP per capita.
- Almost all research institutions need to further develop their trade research capacity. Their needs include long-term trade research training programmes, long-term access to technical advisers and trade experts, and wider access to trade data and literature.
- The need for capacity development varies among research institutions. Those in LDCs and in countries with lower GDP have stronger needs to develop capacity than those in other developing countries and countries with higher GDP per capita.
- The key impediments for research institutions in conducting international trade research of relevance to policy makers are: (1) lack of funding, (2) lack of skills, (3) lack of access to trade data, (4) lack of

\* This article is based on the forthcoming study "Trade Research Institutions in Asia-Pacific: Capacity-Building Needs in Developing Countries", conducted by CDRI for the Asia-Pacific Research and Training Network on Trade 2005 for UNESCAP.

links with trade research institutions in other countries and (5) limited availability of relevant IT hardware.

- The solutions proposed by research institutions to address these needs include (1) long-term and ongoing trade research training programmes, (2) long-term provision of technical advisers and trade experts, (3) more financial assistance and support for trade-related research projects, (4) deepening partnership programmes with research institutions, international organizations and academia and (5) institutional facilitation and coordination to manage specialised research networks more dynamically.

## Linkages between Research Institutions and Trade Policy Makers in Cambodia

### *The Historical Development of Research Institutions in Cambodia*

Research institutions in Cambodia evolved only as recently as the early 1990s as Cambodia emerged from more than two decades of war and isolation from the international community. A few emerged initially as independent non-profit organisations with the primary objectives of strengthening the capacity of Cambodians to manage national development and economic reconstruction. The first of these, the Cambodia Development Resource Institute (CDRI), was established in 1990 to respond to the needs of Cambodia in making the transition from a centrally planned to a market economy and the normalisation of relations with the international donor community. It first operated as a training facility, located in the Ministry of Planning, for government officials to acquire English language and computer skills. In 1993, it was reconstituted as an independent development research and policy institute. The Cambodian Institute for Cooperation and Peace (CICP) was founded in 1994 as a non-government organisation working closely with the Ministry of Foreign Affairs to enhance the ability of government officials to promote regional and international cooperation.

Since the mid-1990s, in response to political and economic developments, institutions have turned their focus from training and capacity building to research and policy programmes. Their research findings and outputs are widely disseminated to inform government policy makers, development partners such as multilateral and bilateral development agencies, the private sector and civil society organisations. Since then, research institutions in Cambodia have functioned as an independent source of research output and policy options for policy makers and government. They also provide advice and support for development practitioners working with multilateral and bilateral development agencies and non-government organisations in areas such as macro-economics and trade, regional economic integration, globalisation and the WTO, governance and decentralisation, agriculture and rural development, poverty reduction, natural resources and environment and international cooperation.

Despite these positive developments, research institutions in Cambodia remain embryonic and relatively poorly equipped, with limited human and capital resources. The lack of skilled personnel with substantial research expertise and lack of research funds are still common constraints. Most research institutes depend on external financial assistance from international and bilateral development agencies, international foundations and international NGOs to support operations and to conduct research. This makes their research programmes more reactive than pro-active, or more supply/donor-driven than demand-driven, and means that very limited resources are available for effective longer term capacity development.

### *Trade-Related Research Institutions, Their Existing Capacities and Needs*

Trade is a relatively new research area for institutes in Cambodia, although CDRI has conducted trade-related research since the late 1990s. Trade issues have become a higher priority for the government and its development partners in recent years, particularly with Cambodia's accession to the WTO in 2004. The number of independent institutes that dedicate resources to trade research is still very limited, while government institutes that conduct policy-relevant trade research and analysis are virtually non-existent. Along with CDRI, there are currently two other independent research institutions undertaking trade-related research and associated activities: the Economic Institute of Cambodia (EIC), and CICP. There is also one high-level government body, the Supreme National Economic Council (SNEC), which dedicates some resources to trade policy making and research. The Department of International Trade within the Ministry of Commerce is responsible for government trade policy and its implementation, including WTO negotiations and compliance, but has a very limited research capacity and largely relies on the research and policy outputs of others.

Generally speaking, research institutions in Cambodia face severe human capacity limitations for trade research in terms of advanced education in trade, research experience and core skills. The typical educational level of trade researchers is master's degree, and the average research experience of trade researchers is less than two years. In research skills, it appears that most trade researchers are capable in qualitative analysis, research proposal writing and knowledge of international and national trade issues. However, there seems to be a crucial gap in quantitative analytical skills and modelling expertise such as simulation, Computable General Equilibrium (CGE) and Global Trade Analysis Project (GTAP), important tools used to quantify and assess social and economic impacts of trade policies.

It is generally agreed that there is an urgent need to build trade research capacity among research institutes in Cambodia. This means strengthening advanced education in trade, increasing research experience and improving research methodologies and related skills. The

most important and urgent needs are: (1) ongoing and long-term access to research skills training programmes, (2) access to technical advisers or trade experts, (3) research exchange programmes and fellowships, (4) access to experienced mentors and (5) advanced education in trade through short-term training courses (typically three to six months) and scholarships for postgraduate study.

### ***Links between Research Institutions and Trade Policy Makers***

Relationships between research institutions and trade policy makers in Cambodia exist at many levels, from top policy makers and senior management to middle and lower level officials and research staff, in both formal and informal ways. First, in some cases, senior policy makers are active members of the boards of directors of research institutes. This type of linkage is very useful in ensuring strategic directions consistent with the government's development strategies. Second, various senior management and research staff are involved in policy consultation mechanisms, such as technical working groups, to devise government policy and strategy and to provide comments on draft strategy and policy documents. Third, links exist through research institutes providing trade-related services to policy makers, ranging from trade research studies, fact-finding, surveys and trade policy briefs to trade policy dialogues or forums. Fourth, policy makers and senior government officials have regular interaction with research institutions through their participation in dissemination seminars and trade policy dialogues.

Although research institutes and policy makers are increasing their mutual interaction, there is still a considerable gap in linking research with policy, especially at middle and lower levels. The major factors causing this gap are (1) lack of effective mechanisms and institutional arrangements to facilitate communication between researchers and policy makers, (2) lack of regular formal consultation between top, middle and lower level officials and research staff and (3) capacity limitations among researchers and policy makers.

To bridge this gap, it is necessary to have ongoing joint capacity-building programmes designed and implemented to strengthen the capacities and skills of researchers and policy makers. There should also be regular formal meetings between middle and lower level trade officials and research staff in order to understand better emerging trade issues and challenges, as well as to find ways to work more cooperatively and effectively in dealing with these challenges. Institutionally, long-term partnership programmes between research institutions and high level and middle level government institutions should be further strengthened. Research institutions should be provided adequate access to policy consultation and dialogues on trade policy and legal and implementation challenges, as well as wider access to trade policy documentation and trade data.

### ***Cambodia Case Study: Key Findings***

- Trade plays a key role in Cambodia's economic development and, after its recent accession to the WTO, Cambodia is facing a very demanding compliance programme in policy and institutional reform.
- Public policy makers, particularly in the Ministry of Commerce, and policy influencers such as the private sector and civil society organisations, have an urgent need for access to ongoing reliable, high-quality policy-relevant research from institutions that can cooperate effectively with them.
- Existing trade-related research institutions have great potential, but very limited current capacity, to provide policy-relevant research to policy makers and influencers.
- For real mutual capacity to be built, research institutions and policy makers need deep, long-term, well-resourced programmes that are institutional and programme-based, rather than short term and project-based.

### **Conclusions**

It is obvious that research institutions in the Asia-Pacific have significant trade research capacity in terms of education, research experience and skills, but still need to develop further capacity. Their needs range from long-term trade research training programmes to long-term access to technical advisers and trade experts, and wider access to trade data and literature. Greater resources and policy interventions need to be directed to developing trade research capacity and to addressing impediments facing research institutions. International organisations, national governments, international and bilateral development agencies, well-established research institutions, international foundations and academia should all play a more dynamic and supportive role in this regard. Also, international organisations that are working with international trade policy and national governments should interact with research institutions on trade policy by providing them a regular presence in trade negotiations and high-level trade policy meetings. More importantly, more resources need to be allocated to support capacity development in trade research, especially for institutes in war-ravaged LDCs like Cambodia, where research institutions are inadequately equipped with human and capital resources, the capacities and skills of trade research institutions and of policy makers remain relatively weak and linkages between research and policy making are limited.

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- <http://www.undp.org/capacity>



## Development of Land Tenure Databases in Cambodia

CDRI recently prepared a Cambodia case study in conjunction with an FAO study linking land tenure data to policy-making for agricultural and rural development in developing countries. Dr. Brett Ballard summarises some of the main observations concerning the development of land tenure databases in Cambodia.\*

### Introduction

Land tenure refers to access to and control over land resources, including ownership and customary use rights, as well as leasing and other contractual arrangements. Information about land tenure is central to the design, implementation and monitoring of public policies governing agricultural and rural development in developing countries. In the case of post-conflict countries such as Cambodia,<sup>1</sup> the capacity of the state to mobilise sufficient human and financial resources to collect and house such data is often diminished. As a result, other institutions such as civil society organisations, international donors and private companies may fill information gaps by conducting research that is specific to their own needs. Such activities, however, provide data that may be contradictory and which is invariably difficult to reconcile or integrate, undermining the ability of policy makers and others to formulate and assess agricultural and rural development policies. Poorly organised land tenure databases may also promote socially disruptive practices, such as land grabbing and encroachments upon public land.

This article examines the role that land tenure data can play in policy making, and identifies potential venues for collecting and housing such information in Cambodia. The article concludes that an agricultural census represents the most suitable option over time, but will require donor support for capacity building in data collection design and implementation, as well as analysis.

### Land Tenure Records

Many problems associated with land tenure data collection in Cambodia can be traced to civil conflict, war and the radical collectivisation policies implemented by the Khmer Rouge regime of Democratic Kampuchea (DK) during 1975–79.

Such problems include the mass dislocation of both urban and rural populations, the destruction of cadastral records and maps and the death or flight of most land management professionals.

It is commonly believed that during the post-DK period in the 1980s, agricultural land was farmed collectively in small groups under the *krom samaki* system. The implementation of the system, however, varied from place to place. In some areas, people returned to their original land as early as 1979, while in other areas was farmed collectively for just a few years before being informally divided among villagers. Some villages recorded land distribution outcomes, but in many cases such records were not kept or were subsequently lost.

With the enactment of the 1992 Land Law, people were able to apply for land certificates that confirmed occupancy and use rights to agricultural land. Not more than 14 percent of the estimated 4.5 million applicants have received formal certificates of ownership since then (Chan and Acharya, 2001). In some parts of the country, security was also a significant factor, as fighting between Khmer Rouge insurgents and government forces continued up until 1998. Government offices at the district and commune level, and the homes of village chiefs, were sometimes attacked, and in some cases cadastral records were again destroyed.

Instead of certificates, most people use other documents to demonstrate ownership, such as receipts for land certificate applications and/or land surveys. This system may work well enough in many areas as long as the parties involved accept this kind of documentation. However, in the absence of accurate land tenure records and clearly defined administrative roles and legal procedures, different levels of the administration sometimes provide different types of documents to various claimants. As a result, certain land parcels at any one time may have two or more rival claimants—all producing some kind of documentation to legitimise their claim. Such cases tend to occur more frequently in areas where land use is changing (e.g., agricultural land converting to commercial or industrial uses) and land values are increasing.

### Land Tenure Data and Policy Making

In addition to serving as a potential guarantor for ownership and tenure security, there are several other areas in which the systematic collection of land tenure data can be useful to Cambodian policy makers.

### Monitoring Poverty and Food Security

Approximately 36 percent of Cambodians live below the poverty line. Most live in rural areas and depend on farming for a substantial part of their livelihoods. For this reason, access to and control over productive land assets is an important indicator for food security and progress toward the government's poverty reduction goals, including

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those set out in the National Strategic Development Plan (NSDP) for 2006–2010 and Cambodia's Millennium Development Goals (CMDG). Other indicators concern the availability of household labour and capital assets, as well as income levels broken down by gender of household head. The collection and maintenance of land tenure data, as well as production data, will enable government planners and donors to more accurately target resources to improve food security and poverty reduction.

### *State Land Management*

Two important components of state land management concern economic and social land concessions. One area in which land tenure and land use data may be relevant for the management of economic land concessions concerns local people's traditional access to and control over land resources, whether it is individual farming households claiming use and ownership rights, or indigenous communities claiming communal use and ownership rights. Many economic land concessions overlap with household or community claims to land. A land tenure database could be useful in planning and implementing economic land concessions, although only to the extent that it included data on potentially affected households and communities. The availability of such information could also help guide authorities in resolving fairly any ensuing conflicts.

Accurate land tenure and land use data are also required in order to plan and implement resettlements through social land concessions. Biddulph (2004), for example, has observed that there is a significant difference between "land being vacant and it being available and potentially desirable for social land concessions". In some cases involving urban resettlements, people were driven away by others who claimed the same land. In terms of desirability, some land that had been set aside was of poor quality and not fit for productive farming. Resettled people who could not develop sustainable incomes tended to return to their previous areas or migrated elsewhere.

### *Fiscal Decentralisation and Local Service Delivery*

The Law on the Administration and Management of Communes/Sangkats authorises commune councils to establish own-source revenues from tax revenues, non-tax revenues and service fees. Among other potential own-source revenues, Eng and Rusten (2004) have suggested that commune councils could collect an annual service levy from every household residence and business based on (a) the categories of land owned, (b) land size and (c) the types and sizes of structures on the land. They observe that communes "must have access to

reliable data and records on land and property in the communes".

### *Urban Planning and Development*

Land use planning and management in urban areas require accurate land tenure data. As a city's population grows and its area expands into rural and peri-urban regions, competition will increase among people, private companies and state institutions over access to and control over scarce land resources. The orderly and peaceful transfer of land from rural to urban land use, as well as from public to private uses, requires accurate and transparent data concerning land use and ownership. The capacity of local government to obtain revenues from such transfers through land transaction taxation also requires an accurate database. Another factor concerns the development of infrastructure for transport and other uses. This entails the use of state public land and in some cases the acquisition of private land. A just compensation for land acquisitions requires accurate data.

### *Research and Policy*

One of the most crucial aspects of policy formulation is research that links land tenure security to various aspects of the development process. For example, it is widely believed that land tenure security promotes investment in productive agriculture practices, including land improvements and capital inputs. Secure tenure is also believed to promote better access to formal credit. As a result, land tenure databases should have the capacity to be linked to other databases, such as agricultural production data, productive assets and capital mobilisation. Strong links of this sort will enable policy makers to target better the allocation of scarce resources.

### *Improving Land Tenure Data*

The improvement of land tenure data collection in Cambodia will depend on the supply of and demand for accurate, relevant and accessible data. The supply of land tenure data depends on the availability of financial resources and human capacities. The demand for land tenure data depends on user data literacy as well as the accessibility and utility of data in terms of the design, implementation and monitoring of public policy.

### *Financial and Human Resources*

As one of the poorest countries in the world, the Cambodian government is not yet able to generate sufficient revenue with which to collect, process and maintain land tenure data on a sustainable basis. Cambodia also continues to face serious constraints in technical skills and knowledge, as well as motivation

and incentives, especially in the public sector. Some of these problems can be addressed through short-term interventions, such as training for specific data collection purposes. Such training efforts are, however, often ad hoc in nature and may not fit within the general context of data collection requirements. They are also sometimes constrained by ineffective training methodologies and a lack of training materials. In fact, the problems associated with human resource constraints will require considerable time to address, and will no doubt be costly.

### ***Transparency and Sharing Information***

Public administration in Cambodia is vertically structured and often fragmented. There are few institutional mechanisms that facilitate inter-ministerial or inter-departmental coordination at the national and provincial levels. For a variety of reasons, government officials are often reluctant to share data, which impedes the ability to use data for policy-making purposes. It should be noted, though, that such concerns are now receiving more attention from government officials and a variety of donors. For example, the Statistics Law of 2005, which defines the roles and responsibilities of the National Institute of Statistics (NIS) and other government agencies, represents an important step towards making data more easily accessible.

### ***Inter-operability and Spatial Linkages***

Despite all the work that is being done to develop accurate and reliable databases, data collection continues to be project-specific with a single use, and cannot be easily integrated into a comprehensive information system. The National Department of Geography has established a comprehensive system for coding administrative units (i.e., provinces and municipalities, districts, communes) and village points. This system of common codes makes it possible to join data sets as long as each data set uses the spatial reference codes correctly. Unfortunately, land tenure data sets do not always include geographic reference codes, or they use their own coding systems, which impedes the ability to link one data set with another.

### ***User Data Literacy and Evidence-based Policy***

Data is often perceived to be of limited utility to those who collect it. This factor, combined with low salaries and low education, undermines incentives to collect data in an accurate and reliable fashion. Data collection efforts are rarely if ever monitored, and there are no incentives to promote accuracy. The capacity of policy makers to make effective use of data in the design and monitoring of policy is also inconsistent. Part of the difficulty concerns the uneven experience of policy makers. There is also not a tradition of evidence-based policy making in Cambodia. Recent efforts

concerning national development planning may, however, have some impact on data literacy. As noted earlier, planning efforts such as the NSDP and CMDG place great emphasis on identifying indicators by which progress toward development objectives can be measured.

### ***Institutional Venues for Land Tenure Data***

Some of the criteria for assessing the suitability of potential institutional venues for data housing include (1) inter-operability across and linkages with other data sets, (2) reliability (i.e., optimal accuracy), (3) maximum policy relevance (i.e., utility), (4) comparability across location and over time, (5) capacity for updating and (6) cost effectiveness (e.g., human resources, finances).<sup>2</sup>

#### ***Commune Council***

In the future, "own source" revenues will figure more prominently in decentralisation reforms that support greater authority and autonomy of commune councils. This suggests that a service levy system may become increasingly desirable, which would require an accurate land tenure database that could be regularly updated. In principle, then, the commune council may be a suitable institutional home for a land tenure database. This approach, however, is constrained by the lack of human and financial resources. Another shortcoming concerns the difficulty of standardising data collection and record keeping across all communes in a way that can be aggregated at upper levels of the administration. Commune-based land tenure data would probably also not be easily used in conjunction with other data, particularly at the local level, thus reducing its general utility. In this sense, then, the comparability and inter-operability of commune-based land tenure data may be low.

#### ***Cadastral Office***

In its National Cadastral Office, the Ministry of Land Management, Urban Planning, and Construction currently maintains the most extensive land tenure database. This database aggregates information from all provinces, thus representing a more or less national database. As the ministry's Land Management and Administration Project's (LMAP) systematic land titling progresses, this database will expand significantly. The LMAP, however, is not comprehensive in its geographical reach, and as a result there will continue to be significant gaps in the cadastral records. Also, the cadastral and LMAP data focus solely on land ownership, and as a result do not provide a good sense of leasing arrangements. Moreover, many people involved in land transactions tend to avoid the official registry for various reasons. As a result, such a database may not be easily or consistently updated. It may also not be easily accessible to policy makers or other stakeholders due to concerns about confidentiality and

political sensitivities. These and other problems associated with transparency will require some time to sort out.

### *Agricultural Census*

The Statistics Law of 2005 mandates the NIS to carry out an agricultural census once every 10 years. An agricultural census would represent a single source, one-stop venue for land tenure data that could be linked with other data sets, such as population census data, land use data and GIS maps. This data should include a wide range of factors, including comprehensive land tenure and land use information, as well as other productive assets, and certain demographic information concerning available household labour. An agricultural census would be national in scope and could provide data consistency across administrative boundaries, thus promoting comparability.

There are, however, several concerns regarding an agricultural census. One is timing. The Statistical Master Plan (SMP) observes that it is best to carry out the agricultural census as soon after the population census as possible. Therefore, the population census could help prepare for the agricultural census, perhaps by identifying those households that are engaged in agriculture. Given that the population census is now scheduled for 2008, the SMP suggests that an agriculture census could take place in the second half of 2009.

A second concern is the cost. The current estimate for such a census is approximately \$3.3 million, although this amount could increase during the next several years. While the donor community appears to fully support the population census, it is not yet clear to what degree an agricultural census would enjoy similar donor support.

A third concern is the reliability of data. While many households may be inclined to provide accurate information, there may be a tendency to underestimate land holdings and productive assets, as well as other factors. Presumably, the impact of such problems can be minimised with good training, rigorous pre-testing and comparisons with other data surveys that are considered reliable. For this, there will need to be close collaboration between NIS and the Ministry of Agriculture, Fisheries and Forestry (MAFF) in building capacity in survey design and sampling techniques.

### **Conclusion**

In Cambodia, the state's capacity to collect, maintain and use land tenure data effectively has been severely diminished by years of war and civil conflict. Nevertheless, the development of a reliable and accessible land tenure database is essential for

informing a variety of important public policy matters, including monitoring food security and poverty reduction, state land management and urban planning. In the supply of data, the most serious constraints are human capacities and financial resources. On the demand side, Cambodia lacks a tradition of evidence-based policy making. Important progress is under way in building a professional national statistics and data collection service, but there are significant information gaps in areas concerning land tenure and land use data. The most feasible institutional venue for land tenure and land use data at this point involves an agricultural census. Although Cambodia has never undertaken an agricultural census, the Statistics Law of 2005 now mandates the NIS to conduct such a census every 10 years. Such a census can and should include comprehensive sections on land tenure and land use data that can be linked to other demographic (i.e., household labour) and production (e.g., assets, yields) data. This will, however, require additional training for NIS and MAFF designers, enumerators and analysts. Given the lack of government resources, donors should be prepared to support this effort, including capacity development measures in data collection design, implementation and analysis.

### **Endnotes**

1. For example, the distribution and productive use of land are subject to fluctuations in prevailing socio-economic and political trends, as well as episodic events such as revolution and war. In this sense, the policy arrangements governing land tenure must be considered in the wider context of history.
2. See Wallace and Williamson (2004).

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## Economy Watch—External Environment

### World Economic Growth

During the second quarter of 2005, global economic developments were mixed. While the US and many east Asian countries experienced economic growth, economic activity in the euro area and Japan remained moderate.

US real GDP grew 3.3 percent in the year to the second quarter. The major contributors to growth in the second quarter were personal consumption expenditure, exports, equipment and software, residential fixed investment and government spending. The rate of annual growth declined from 3.5 percent in the previous quarter, primarily due to a deceleration in private inventory investment that was partly offset by a downturn in imports and acceleration in exports.

Real GDP of the euro zone in the second quarter was 1.2 percent higher than a year earlier and 0.3 percent higher than in the previous quarter. This moderate growth was due to weak growth in private consumption and investment. Household final consumption expenditure grew by 0.1 percent and investment by 0.5 percent. Japanese real GDP grew by 1.4 percent in the year to second quarter 2005 and by 0.8 percent from the previous quarter.

China's GDP in second quarter 2005 was up 9.5 percent for the 12 months. This high growth was primarily driven by industrial production, exports, investment and domestic consumption demand. The real GDP of South Korea grew 3.3 percent in the year to second quarter 2005, compared with 2.7 percent growth in the 12 months to first quarter 2005. The higher growth was due to positive growth in all industries. The real GDP of Hong Kong grew 6.8 percent in the year to second quarter 2005, compared with 6 percent growth in the year to first quarter 2005.

The real GDP of Malaysia in the year to second quarter 2005 grew 4.1 percent compared to 5.7 percent to first quarter 2005. The agriculture, manufacturing and service sectors recorded moderate growth, while expen-

diture was driven primarily by private consumption, which increased by 7.4 percent in the 12 months. The real GDP of Singapore and Thailand in the year to second quarter 2005 increased 5.2 percent and 4.4 percent respectively, an acceleration from 2.5 and 3.3 percent in the year to first quarter 2005. In Thailand, while domestic demand continued expanding in both consumption and investment, external demand plummeted further from the previous quarter.

### World Inflation and Exchange Rates in International Markets

In the second quarter of 2005, consumer inflation was contained in most high-income economies. In the US, it eased to 2.9 percent year-on-year, from 3.0 percent a quarter earlier, as energy costs and grocery prices declined. In Japan, it edged up to -0.1 percent from -0.2 percent in the first quarter, reflecting the improvement of the labour market as well as a drop in prices of fresh food. In the euro area, annual consumer inflation remained unchanged from the previous quarter, at 2.1 percent. During the same period, inflation was also basically unchanged in Asian economies.

The US dollar gained strength in the second quarter, after having depreciated against most major currencies in the previous quarter. Against the Japanese yen, it traded at 107.4, a 2.6 percent appreciation from the last quarter. Against the euro, it stood at 0.79, 3.9 percent above the level of the first quarter. Some other Asian currencies also experienced a slight depreciation against the dollar. The dollar appreciation was likely to be linked with a smaller than expected trade deficit, higher US interest rates and weaker growth prospects in other countries.

### Commodity Prices in World Markets

Prices of selected major commodities in international markets in the second quarter moved differently. The price of white rice, Thai 100 percent B second grade, in the Bangkok market was \$295.70/ton, almost the same

Table 1. Real GDP Growth of Selected Trading Partners, 2000–2005 (percentage increase over previous year)

	2000	2001	2002	2003	2004	Q3	Q4	2005	2005	2004
					Q2			Q1	Q2	
Selected ASEAN countries										
Cambodia	7.3	6.7	4.8	7	-	-	-	-	-	7.7
Indonesia	4.4	3.8	3.8	4.9	4.3	5.0	6.6	6.4	5.5	5.1
Malaysia	8.7	0.5	5.6	5.4	8.0	6.8	5.6	5.7	4.1	7
Singapore	9.5	-2.3	2.6	1.4	12.5	7.5	6.5	2.5	5.2	8.5
Thailand	4.4	1.9	6.1	6.9	6.3	6.0	5.0	3.3	4.4	6
Vietnam		6.0	6.7	7	-	-	-	-	-	7.5
Other selected Asian countries										
China	8.0	7.5	8.1	9.9	9.6	9.1	9.5	9.5	9.5	9.5
Hong Kong	10.2	0.5	5.0	3.2	12.1	7.2	7.1	2.7	6.8	8.3
South Korea	9.1	3.0	6.1	3	5.5	4.6	3.3	6	3.3	4.7
Taiwan	5.8	-2.2	4.2	3.1	7.7	5.3	3.3	2.7	-	5.7
Selected industrial countries										
Euro-12	3.5	1.4	0.7	0.5	2.2	1.9	1.6	1.3	1.2	1.8
Japan	2.8	0.4	0.4	2.6	4.4	2.6	0.8	1.3	1.4	3.4
United States	5.0	1.2	2.4	3.1	4.7	3.9	3.8	3.5	3.3	4.4

Sources: *Economist*, countries' national statistics offices and central banks, ADB's Asia Regional Information Centre

## Economy Watch—External Environment

as in the previous quarter. The price of maize fell slightly to \$96.50/ ton, from \$97.00/ton in the previous quarter, but declined around 25 percent from the same quarter last year. Soybeans sold at \$270.70/ton, a 26 percent increase from the first quarter, but an 18 percent decline from the second quarter last year. The prices of

crude oil and gasoline increased significantly, 12 percent and 15 percent respectively, from first quarter 2005. In the second quarter, crude oil sold at \$47.70/ barrel and gasoline at 39.7 cents/ litre.

by Hing Vutha and Phim Runsinarith

**Table 2. Inflation Rate of Selected Trading Partners, 2000–2005 (percentage increase over the previous year— period average)**

	2000	2001	2002	2003	2004			2005		2004
					Q2	Q3	Q4	Q1	Q2	
Selected ASEAN countries										
Cambodia	-0.8	-0.6	3.2	1.2	2.2	6.5	6.1	5.8		4.0
Indonesia	3.6	11.5	13.2	8.3	8.8	9.2	8.6	10.7	-	8.3
Malaysia	1.5	1.4	1.8	1.1	1.2	1.5	2.4	2.5	3.0	1.6
Singapore	1.4	1.0	-0.4	0.5	1.9	1.7	1.7	0.4	0.1	1.7
Thailand	1.5	1.7	0.6	1.8	2.6	3.3	3.1	2.8	5.3	2.7
Vietnam	-1.7	-0.4	3.8	3.2	7.6	10.3	10.7	-	-	8.3
Other selected Asian countries										
China	0.3	0.9	-0.7	1.2	4.4	5.2	3.2	2.8	1.7	3.9
Hong Kong	-3.6	-1.3	-3.0	-2.6	-0.8	0.8	0.2	0.4	0.8	-0.4
South Korea	2.3	4.4	2.7	3.5	3.3	4.4	3.4	3.2	3.2	3.5
Taiwan	1.3	-0.01	-0.2	-0.3	1.2	2.9	1.9	1.6	2.1	1.6
Selected industrial countries										
Euro-12	2.3	2.6	2.2	2.1	2.3	2.3	2.3	2.1	2.1	2.2
Japan	-0.7	-0.6	-0.9	-0.3	-0.3	-0.1	0.5	-0.2	-0.1	Nil
United States	3.3	2.8	1.6	2.3	2.9	2.7	3.3	3.0	2.9	2.7

Sources: International Monetary Fund, the *Economist* and national institutes of statistics

**Table 3. Exchange Rates of Selected Trading Partners against US Dollar, 2000–2005 (period averages)**

	2000	2001	2002	2003	2004			2005		2004
					Q2	Q3	Q4	Q1	Q2	
Selected ASEAN countries										
Cambodia (riel)	3,840.8	3,916.3	3,912.1	3,973	4,005.3	4,034.7	4,034.7	4,027.0	4054.3	4,016.3
Indonesia (rupiah)	8,421	10,261	9,311	8,577	9,001	9,156	9,128	9,274	-	8,938
Malaysia (ringgit)	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	-	3.80
Singapore (S\$)	1.72	1.79	1.79	1.74	1.70	1.70	1.65	1.63	1.66	1.69
Thailand (baht)	40.1	44.4	42.9	41.5	40.2	41.3	40.3	38.6	40.1	40.2
Vietnam (dong)	14,168	14,725	15,280	15,510	15,735	16,262	-	-	-	-
Other selected Asian countries										
China (yuan)	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	-	8.28
Hong Kong (HK\$)	7.80	7.80	7.80	7.78	7.80	7.80	7.78	7.80	7.79	7.79
South Korea (won)	1,131	1,291	1,251	1,192	1,162	1,155	1,093	1,022	1008	1,145
Taiwan (NT\$)	31.2	33.8	34.5	34.4	33.3	33.9	32.9	31.5	-	33.6
Selected industrial countries										
Euro-12 (euro)	1.09	1.12	1.06	0.89	0.83	0.82	0.77	0.76	0.79	0.80
Japan (yen)	107.8	121.5	125.4	115.9	109.7	109.9	105.9	104.7	107.4	108.2

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

**Table 4. Selected Commodity Prices on World Market, 2000–2005 (period averages)**

	2000	2001	2002	2003	2004			2005		2004
					Q2	Q3	Q4	Q1	Q2	
Maize (US No.2)—US (\$/ton)	88.4	89.5	99.21	105.2	128.8	102.3	94.4	97	96.5	122
Palm oil—north-west Europe (\$/ton)	310.2	285.7	390.2	443.25	497	432.3	429	413.3	421.7	471.3
Rubber—Malaysia (\$/ton)	720.8	602.0	768.3	1050	1,333.4	1,190.6	1238.2	-	-	1252.2
Rice (Thai 100% B)—Bangkok (\$/ton)	206.7	177.3	196.9	200.9	240.7	240.5	264.9	295.6	295.7	244.4
Soybeans (US No.1)—USA (\$/ton)	193	180.7	201.3	241.3	356.4	251.1	216.5	229.9	290.7	288.9
Crude oil—Dubai (\$/barrel)	26.1	22.8	23.9	26.8	33.3	36.09	35.5	42.6	47.7	33.5
Gasoline—US Gulf Coast (cents/litre)	21.1	19.5	19.1	23	32.1	32.1	31.8	34.4	39.7	30.9

Source: Food and Agriculture Organisation (FAO) and US Energy Information Administration

## Economy Watch—Domestic Performance

### Main Economic Activities

The main Cambodian economic activities, including investment, tourism, construction and external commodity trade, slowed in the second quarter of 2005, compared to the first quarter.

Private investment approvals amounted to \$96.1 million in value of registered fixed assets in the second quarter, according to provisional data from the CDC. Of this, about 44 percent was domestic investment, 27 percent was Chinese, and 18 percent was Thai. Investment in the industrial sector amounted to \$62.1 million in the second quarter, composed of garments (\$23.2 million), plastics (\$19.1 million), motorcycle and bicycle manufacture (\$6.5 million), tobacco and brewing (\$7.9 million), mining (\$3.7 million) and pharmaceuticals (\$1.7 million). The services sector received \$30 million investment in construction, while about \$4 million was invested in agro-industry. Total investment declined sharply from the preceding quarter, by about 80 percent, led by a decline in industrial investment. Compared to the second quarter of 2004, the fixed assets value of private investment approvals dropped by 15 percent. This was mainly due to slower investment in services and agriculture, while investment in industry increased.

The Ministry of Industry, Mines and Energy approved the new or continued operation of 127 small and medium enterprises in second quarter 2005, compared to 124 enterprises in the preceding quarter and 106 in second quarter 2004. Still, SMEs, especially in rural areas, face some constraints. In the World Bank report *Cambodia Rural Sector Strategy Note: Towards a Strategy for Rural Growth and Poverty Reduction* (June 2005), governance issues, weak marketing systems, including transport infrastructure and transportation services, and a large unmet demand for credit for productive purposes, particularly in villages, are identified as severe constraints on formal SME business in rural parts of the country. Economic policy uncertainty and anti-competitive or unfair practices are also mentioned as critical constraints. Marketing systems in rural areas are characterised by low levels of integration, and competition in specific sectors is often fragmented, with a risk of local monopolies. Land issues are also a major concern for both local and foreign investors.

Following a seasonal trend since 1994, the number of foreign visitors to Cambodia declined in the second quarter. In second quarter 2005, 293,761 visitors arrived in Cambodia, representing 86,838 (22.8 percent) fewer arrivals than in the preceding quarter. Of this, foreign arrivals visiting Siem Reap province at some time during their visit to Cambodia in the second quarter accounted for about 42 percent, a decrease of 43 percent from the first quarter. The number of visitors who came to Cambodia from Asia and Oceania, Europe, the Americas, and the Middle East and Africa declined moderately during this period, except for those from ASEAN countries. Visitors from Asia and Oceania, which had the highest number of total arrivals to Cambodia, declined by 23 percent. Visitors from Europe, the

Americas, and the Middle East and Africa decreased by 38.7 percent, 23.4 percent and 17.4 percent respectively. Visitors from ASEAN countries, however, rose by about 8 percent. However, compared to the second quarter of 2004, the total number of foreign visitors increased sharply, by 51.6 percent.

Cambodian visitors also made a major contribution to the Cambodia's tourism sector. A total of 93,030 Cambodians visited Siem Reap province in the second quarter, 30 percent more than in the first quarter. Of total domestic visitors in the second quarter, arrivals by land amounted to 93.4 percent, by boat 4.3 percent and by air 2.3 percent. Compared to the second quarter last year, Cambodian visitors to Siem Reap province declined by 38 percent.

Construction activities in Phnom Penh in the second quarter of 2005 declined slightly. Construction project approvals were valued at \$104.4 million, a 1.6 percent decrease compared to the first quarter. There was a sharp decrease in villa and house and other construction, offsetting a significant increase in flat construction. However, the value of construction project approvals doubled from the second quarter of 2004. Flat and other construction more than doubled, while villa and house construction decreased about 30 percent. Commercial banks had loans of around \$36.4 million to construction businesses at the end of June 2005, representing about 7 percent of total credit to all types of business and 33 percent more than at the end of March. Loans to this sector at the end of June 2005 were more than twice the figure at the end of June 2004, while the total value of construction project approvals during that period also doubled.

Cambodia's external trade deficit increased in the second quarter, rising to \$152 million, compared with \$58 million in the first quarter. Imports generally grew rapidly, although exports also increased from the first quarter. Cambodia's total exports increased by 11.2 percent, to \$515 million, in contrast to a decrease of about 15 percent in the first quarter. Among major export products, garments made a significant contribution with an 11.8 percent surge—from \$445 million to \$497.6 million, while exports of rubber fell by 15 percent to \$6.2 million, of wood by 12 percent to \$2.9 million and of fish by 26.7 percent to \$1.1 million. Compared to the second quarter 2004, Cambodia's total exports recorded an increase of 4.1 percent from \$494.7 million.

Total imports rose by 28 percent to \$667 million in the second quarter, from \$520.9 million in the first quarter. The most substantial rise was in textiles, apparel and footwear products (by 60 percent to \$240.1 million), followed by food, beverages and tobacco products (by 23.4 percent to \$45.5 million). Imports of construction materials also showed an increase, by 14.8 percent to \$37.1 million. Total imports increased by nearly 10 percent from \$607 million in the second quarter a year ago.

### Public Finance

Fiscal performance seemed to improve in the second quarter. The overall budget exhibited a surplus on a cash

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basis of 17.7 billion riels, the first surplus recorded since the first quarter of 1995, and in contrast to a deficit of 95 billion riels in the first quarter and 222 billion riels in second quarter 2004.

In the April-June quarter, total budget revenues reached 711.4 billion riels, rising by 29 percent from the January-March quarter. This mostly reflected an increase in capital revenue, from 0.3 billion riels to slightly under 100 billion riels. According to the Ministry of Economy and Finance, the increase in capital revenue during the second quarter was primarily due to an increase in revenue from privatisation. Compared to the second quarter of 2004, total domestic revenues increased sharply, by 45.6 percent. Besides the big increase in capital revenue, current revenue also revealed an increase of 28.6 percent (to 611.5 billion riels) between second quarters in 2004 and 2005. Tax revenue increased by about 34 percent (to about 466 billion riels), thanks to a surge of 68 percent (to 147.6 billion riels) in revenue from domestic tax, and a 22.2 percent rise (to 318.4 billion riels) in revenue from import and export taxes. Revenue from profit tax contributed significantly to the increase in domestic tax at nearly 51 billion riels, more than double the figure in second quarter 2004. Non-tax revenue increased by 14.5 percent to 145.5 billion riels, primarily because of an increase in revenue from civil aviation, which rose from 0.3 billion to 14.4 billion riels.

Total budget expenditure on a cash basis amounted to 693.7 billion riels in the second quarter, 7.3 percent more than in the first quarter, but 2.4 percent lower than in the same quarter of 2004. The decrease since the same quarter last year was due to a drop in capital expenditure (by 21.3 percent to 265.3 billion riels); current expenditure increased by 14.7 percent to 428.4 billion riels.

### Inflation and Foreign Exchange Rates

The increase in transportation costs slowed in the second quarter, prices being 11.1 percent higher than a year earlier, while in the first quarter prices were 12.3 percent higher than in the first quarter of 2004. Food prices were 9.8 percent higher than a year earlier, compared to 7.9 percent higher in the first quarter. Overall consumer prices in Phnom Penh continued to rise, the year-on-year increase in the second quarter being 6.4 percent, compared to 5.6 percent in the first quarter.

In the second quarter, the riel lost value against the US dollar, trading at 4,054.3 riels/dollar, down from 4,027 in the first quarter. The riel depreciation can be attributed to the recovery of the US dollar against other currencies. Compared to the second quarter last year, the riel was down against the US dollar by 1.2 percent, from 4,005.3. Against the Vietnamese dong in the second quarter, the riel lost 0.8 percent, from 25.1 riels per 100 dong to 25.3. However, the riel gained about 3 percent against the Thai baht, going from 104.4 riels/baht to 101.3. A year ago, the exchange rate between the riel and the dong was almost the same, while against the baht the riel was 1.7 percent higher, at 99.6 riels/baht.

### Monetary Developments

According to the National Bank of Cambodia, the money supply in second quarter 2005 continued to rise, albeit more slowly than in the first quarter. It expanded by 3 percent to 4,629 billion riels at the end of the quarter, compared with a 4 percent increase in the first quarter. The increases in riel and foreign currency deposits slowed simultaneously, a 2 percent and 1.4 percent increase respectively in the second quarter, compared to a 4.6 percent and 3.6 percent rise in the first. Compared to the second quarter last year, the money supply had grown by 20.4 percent.

### Poverty Situation—Real Daily Earnings of Vulnerable Workers (Survey 1—20 August 2005)

A regular survey conducted by the Cambodia Development Resource Institute (CDRI) produced mixed trends for the daily earnings of vulnerable workers in August. The survey revealed that real daily earnings of six vulnerable groups including garment workers, small vegetable traders, porters, unskilled construction workers, skilled construction workers and scavengers declined in the year to August 2005. This was mainly due to the increasing numbers of workers in these groups. During the same period the real daily earnings of cyclo-drivers and moto-taxi drivers rose thanks to a rise in the number of tourists.

Despite the increase in garment exports, the real average daily earnings of garment workers, who have contributed significantly to rural poverty reduction, declined by 4.9 percent to 8,750 riels in August from 9,211 riels in the same month last year. This was attributable to an increase in the number of job-hunters in this sector, which provided an opportunity for employers to hire additional workers at lower wages. According to the survey, the majority of the interviewed garment workers perceived an increase in the number of workers over the last three months and said that the new entrants were mostly temporary and received lower wages than permanent workers. The survey revealed that their average monthly spending increased from \$20–25 to \$26–30 due to an increase in commodity prices.

The real earnings of scavengers averaged 4,335 riels per day, a 9 percent slide from a year earlier and a 15 percent drop from May. The declining income of this very impoverished group was apparently related to the increasing number of rubbish collectors, mostly children during their school holiday from August to September. More children were found employed in scavenging because they need money to purchase school supplies for the coming year and their parents earn enough only to live from hand to mouth. In general, these children now spend the whole day scavenging and earn around 4,000 riels, twice as much as in the previous quarter.

The income of small vegetable traders also decreased in the August survey. Their real daily earnings dropped to about 6,000 riels, 11 percent less than a year earlier and their lowest earnings since August 2003. This downward trend can be accounted for by higher trans-



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portation costs resulting from the rise of gasoline prices, combined with an increase in the number of traders. During the survey, most of the small vegetable traders complained that consumers are sensitive to price changes, reducing the amounts they buy when vegetable prices rise. Although this argument seems to contradict the demand theory that basic goods like vegetables are price-inelastic, it is what really happens in a poor country like Cambodia. The traders also found that their businesses became less and less profitable as more new traders entered the market.

The average skilled construction worker earned 10,273 riels per day in August, a 24 percent decline from last year. The drop in real daily earnings of all the skilled construction workers interviewed largely reflected the fact that the number of skilled workers had increased while construction activity had decreased in the rainy season. According to the survey, skilled construction workers can be divided into new workers and veterans. In general, the former earn 8,000–10,000 riels per day, 30 to 40 percent less than the latter, even though they all work eight hours a day, 26 days a month.

The real daily earnings of unskilled construction workers edged down slightly, to 6,069 riels from 6,095 a year earlier. Sixty percent of the unskilled construction workers interviewed stated that their number has increased in the last three months, and that the newcomers were mostly from the provinces. Despite the relatively small decline in their daily earnings, most of them complained that their unstable employment generates only a small amount of income, which can not support their families.

During the same period, porters' average daily earnings were around 6,000 riels, about 10 per cent lower than last year. Similarly, this can be explained by an increase in the number of porters over the last year, which was revealed by the survey. Most of the newcomers were fresh school drop-outs from poor families and aged between 15 and 20. Porters are usually temporary workers, so their earning were not enough to support their families.

The survey found that the earnings of cyclo drivers increased slightly, by 3 per cent to 7,900 riels, from 7,600 riels a year earlier. Some cyclo drivers said that their earnings increased during this period because they had permanent clients (traders in the markets). The daily spending of cyclo drivers was about 4,300 riels in August, 23 percent more than a year earlier. Most cyclo drivers migrate from rural areas and generally spend six to eight months per year in Phnom Penh.

The real daily earnings of motorcycle-taxi drivers increased, rising by 7 percent to 9,400 riels per day in August from 8,800s riel a year earlier. The survey revealed that moto-taxi drivers worked longer than in the previous year—10–14 hours per day in August 2005, compared to 8–10 hours in August 2004. However, this was not the only reason for higher earnings. The drivers also benefited from the increased numbers of foreign tourists. Recent data from the Ministry of Tourism indicate that tourist arrivals in second quarter are around 51 percent higher compared to the same quarter last year. Despite their higher income, most moto-taxi drivers are unsatisfied and complained that inflation had made their difficult lives more miserable.

*by Ouch Chandarany and Pon Dorina*

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## Economy Watch—Indicators

**Table 1. Private Investment Projects Approved, 1997–2005**

	1997*	1998	1999	2000	2001	2002	2003	2004			2005	
								Q2	Q3	Q4	Q1	Q2*
	Fixed Assets (millions of dollars)											
Agriculture	65.6	51.6	63.9	9.8	5.6	38.9	3.7	9.4	2.9	0.0	3.2	4.0
Industry	512.4	650.5	162.6	109.4	99.8	57.4	142.6	28.0	72.7	16.4	418.8	62.1
<i>. Garment</i>	97.0	126.5	67.7	35.2	23.0	18.0	74.8	10.1	44.0	12.7	44.9	23.2
Services	166.5	154.7	222.6	150.0	111.4	143.3	167.7	75.9	6.4	0.0	53.3	30.0
<i>. Hotels and tourism</i>	41.5	112.0	171.8	79.8	71.9	45.1	118.6	49.5	6.4	0.0	46.4	0.0
Total	744.5	856.8	449.1	269.2	216.8	239.6	314.1	113.3	82.0	16.4	475.3	96.1
Total	-	-	-	-	-	-	-	79.0	-27.6	-80.0	2,798.2	-79.8
Total	-	15.0	-47.6	-40.0	-19.5	10.5	31.1	134.6	-13.8	-73.6	650.8	-15.2

Source: Cambodian Investment Board. \*Excluding expansion project approvals.

**Table 2. Value of Construction Project Approvals in Phnom Penh, 1997–2005**

	1997	1998	1999	2000	2001	2002	2003	2004			2005	
								Q2	Q3	Q4	Q1	Q2
	Millions of dollars											
Villas and houses	17.2	21.2	20.0	16.4	15.9	23.4	20.0	9.3	7.5	5.5	14.3	6.6
Flats	19.3	227.3	290.5	174.8	167.8	179.9	91.6	28.5	44.3	46.3	48.6	69.1
Other	221.2	27.0	16.4	14.2	12.6	16.6	87.3	10.8	26.1	12.4	43.1	28.6
Total	257.7	275.4	326.8	205.4	196.2	219.8	198.9	48.6	77.9	64.1	106.1	104.4
Total	-	-	-	-	-	-	-	-33.4	60.3	-17.7	65.5	-1.6
Total	-	6.9	18.7	-37.2	-4.5	12.0	-9.5	-23.4	56.4	28.6	45.5	114.8

Source: Department of Cadastre and Geography of Phnom Penh municipality

**Table 3. Exports and Imports, 1997–2005**

	1997	1998	1999	2000	2001	2002	2003	2004			2005	
								Q2	Q3	Q4	Q1	Q2
	Millions of dollars											
Total exports	493.4	784.4	941.1	1,056.2	1,268.2	1,453.2	1,708.1	494.7	668.8	545.1	463.0	515.0
Of which: Garment	227.2	378.0	554.0	962.1	1,202.2	1,355.8	1,628.4	479.4	643.7	520.3	444.9	497.6
<i>To U S</i>	107.2	74.1	486.0	714.1	840.9	943.4	1,099.8	306.3	387.6	321.2	312.5	335.9
<i>To EU</i>	-	-	-	228.1	323.3	356.3	414.7	135.7	200.9	159.1	89.2	106.0
<i>To rest of the world</i>	120.0	82.0	68.0	19.9	38.0	56.1	113.8	37.3	55.2	40.0	43.1	55.7
Agriculture	-	-	-	94.2	66.0	97.3	79.7	15.3	25.1	24.8	18.1	17.3
<i>Rubber</i>	-	-	-	29.6	25.9	29.7	35.1	6.6	11.6	12.0	7.3	6.2
<i>Wood</i>	-	-	-	32.9	22.3	16.0	10.2	2.8	4.2	2.4	3.3	2.9
<i>Fish</i>	-	-	-	5.4	6.0	4.3	2.8	1.2	4.3	4.4	1.5	1.1
<i>Other</i>	-	-	-	26.2	11.8	47.4	31.6	4.8	5.0	6.0	6.0	7.1
Total imports	1,094.5	1,112.2	1,237.4	1,417.7	1,501.4	1,674.1	1,824.9	607.0	528.2	548.5	520.9	667.0
Of which: Gasoline	-	-	-	-	-	26.0	33.2	8.6	6.6	7.8	10.3	9.3
Diesel	-	-	-	-	-	102.0	109.6	27.7	27.4	23.6	21.6	25.8
Construction materials	-	-	-	-	-	97.4	80.8	27.0	21.3	26.5	32.3	37.1
Other	-	-	-	-	-	1,448.7	1,601.3	543.6	472.9	490.6	456.7	594.8
Trade balance	-601.2	-327.8	-296.3	-361.5	-233.2	-220.9	-116.8	-112.3	140.6	-3.4	-58.0	-152.0
Total garment exports	-	-	-	-	-	-	-	25.0	34.3	-19.2	-14.5	11.8
Total exports	-	-	-	-	-	-	-	23.8	35.2	-18.5	-15.1	11.2
Total imports	-	-	-	-	-	-	-	32.3	-13.0	3.8	-5.0	28.0
Total garment exports	188.0	66.4	47.0	74.0	24.9	12.8	20.1	22.9	35.4	16.0	16.0	3.8
Total exports	27.5	59.0	20.0	12.2	20.1	14.6	17.5	21.1	35.9	14.6	15.9	4.1
Total imports	-1.8	1.6	11.3	14.6	5.9	11.5	9.0	19.6	21.1	12.5	13.5	9.9

Sources: Department of Trade Preferences Systems, MOC and Customs and Excise Department, MEF. Import data include tax exemption imports.

**Table 4. Foreign Visitor Arrivals in Cambodia, 1997–2005**

	1997	1998	1999	2000	2001	2002	2003	2004			2005	
								Q2	Q3	Q4	Q1	Q2
	Thousands of passengers											
Total by air	-	186.3	262.9	351.7	408.4	523.0	456.0	122.8	143.9	201.5	231.7	169.8
Total by land and boat	-	100.2	104.8	114.7	196.5	263.5	245.0	71.0	84.2	177.3	148.9	124.0
Grand total	218.8	286.5	367.7	466.4	604.9	786.5	701.0	193.8	228.1	378.8	380.6	293.8
Grand total	-	-	-	-	-	-	-	-23.8	17.7	66.1	0.5	-22.8
Grand total	-16.0	30.9	28.3	26.8	29.7	30.0	-10.9	74.5	44.0	70.1	49.6	51.6

Source: Ministry of Tourism

Table 5. Consumer Price Index (CPI), Exchange Rates and Gold Prices, 1997–2005 (period averages)

	1997	1998	1999	2000	2001	2002	2003	2004			2005	
								Q2	Q3	Q4	Q1	Q2
	Consumer price index (percentage change over previous year)											
Provinces*	-	-	5.8	5.4	-0.1	0.9	4.4	7.9	22.1	23.0	20.7	21.5
Phnom Penh - All Items	8.0	14.8	4.0	-0.8	-0.6	3.3	1.2	2.2	6.7	5.8	5.6	6.4
- Foods	6.7	14.1	7.6	-3.3	-2.8	1.8	1.5	3.4	12.2	9.1	7.9	9.8
- Transportation	20.0	15.1	3.5	6.6	-1.1	0.3	4.9	8.1	11.5	14.5	12.3	11.1
	Exchange rates, gold and oil prices (Phnom Penh market rates)											
Riels per US dollar*	-	-	-	3,840.8	3,916.3	3,912.1	3,973.3	4,005.3	4,034.7	4,034.7	4,027	4054.3
Riels per Thai baht*	-	-	-	95.8	88.2	91.1	95.8	99.6	97.7	100.1	104.4	101.3
Riels per 100 Vietnamese dong*	-	-	-	27.1	26.6	25.6	25.6	25.4	24.8	25.3	25.1	25.3
Gold prices (US dollars per chi)	46.3	40.4	36.0	34.0	33.3	32.7	36.8	46.0	46.0	46.3	47.0	52.5
Price of diesel (riels/litre)	779	883	1,065	1,105	1,329	1,521	1,508	1,867	1,983	2,150	2,350	2,500
Price of gasoline (riels/litre)	1,118	1,378	1,613	1,760	2,113	2,084	2,150	2,567	2,767	2,950	3,050	3,300

Sources: CDRI, IMF, NIS, Ministry of Planning, Ministry of Economy and Finance. \* Revised.

Table 6. Monetary Survey, 1997–2005 (end of period)

	1997	1998	1999	2000	2001	2002	2003	2004			2005	
								Q2	Q3	Q4	Q1	Q2
	Billions of riels											
Net foreign assets	1,177	1,726	2,019	2,589	3,080	3,737	4,027	4,337	4,524	4,797	4,883	5,084
Net domestic assets	-114	-496	-576	-759	-876	-849	-698	-493	-354	-467	-385	-455
Net claims on government	54	178	103	3	-75	-119	-128	-130	-96	-209	-252	-343
Credit to private sector	637	655	763	898	936	1,059	1,337	1,499	1,673	1,817	1,983	2,166
Total liquidity	1,063	1,230	1,443	1,831	2,204	2,888	3,328	3,844	4,169	4,329	4,498	4,629
Money	385	543	531	540	609	813	937	1,040	1,078	1,153	1,198	1,215
Quasi-money	678	687	911	1,291	1,594	2,075	2,391	2,804	3,091	3,176	3,300	3,414
	Percentage change over previous year											
Total liquidity	16.6	15.7	17.3	26.9	20.4	31.0	15.2	30.2	38.7	30.0	22.9	20.4
Money	17	41	-2.2	1.7	12.8	33.5	15.3	17.4	21.7	23.0	19.0	16.8
Quasi-money	16.3	1.3	32.6	41.7	23.5	30.2	15.2	36.7	45.8	32.8	20.3	21.7

Source: National Bank of Cambodia.

Table 7. National Budget Operations on Cash Basis, 1997–2005 (billions of riels)

	1997	1998	1999	2000	2001	2002	2003	2004			2005	
								Q2	Q3	Q4	Q1	Q2
Total revenue	880	920	1326	1,528	1,529	1,744	1,765	488.5	452.1	662.2	551.6	711.4
Current revenue	-	-	-	-	1,521	1,728	1,733	475.5	450.8	657.7	551.3	611.5
Tax revenue	596	676	956	1,096	1,096	1,227	1,220	348.4	334.1	485.7	455.1	466.0
Customs duties	348	376	432	376	376	424	395	108.4	99.9	168.0	129.4	129.7
Non-tax revenue	272	204	348	424	424	501	513	127.1	116.7	172.1	96.2	145.5
Forest exploitation	36	20	36	28	29	15	7.0	0.3	0.2	0.5	1.3	1.5
Post & telecommunications	84	88	108	124	122	123	120	23.1	28.8	26.3	21.9	32.0
Capital revenue	12	36	12	8	9	16	31	13.0	1.3	4.5	0.3	99.9
Total expenditure (on cash basis)	1,260	1,296	1,792	2,332	2,332	2,948	2,757	710.6	703.4	909.3	646.6	693.7
Capital expenditure	452	368	624	976	977	1,388	1,171	337.1	277.3	293.5	250.7	265.3
Current expenditure (on cash basis)	808	980	1,164	1,356	1,355	1,560	1,586	373.4	426.0	615.8	395.8	428.4
Education and Health	128	132	280	344	343	454	473	80.6	116.0	290.0	52.5	92.3
Defence and Security	420	448	464	404	405	438	411	66.0	91.5	197.8	74.9	73.8
Other ministries	260	332	412	636	637	668	702	226.8	218.6	130.6	150.4	200.0
Overall deficit	-380	-380	-476	-804	-803	-1,204	-992	-222.0	-251.2	-247.1	-95.0	17.7
Foreign financing	444	268	416	768	766	1,249	886	238.5	216.6	238.7	190.7	202.7
Domestic financing	-64	112	60	36	37	-45	106	-16.5	34.6	8.4	-95.7	-220.4

Source: Ministry of Economy and Finance. Q1–Q4 2004 revised. Provisional for Q1–Q4 2004 and Q1–Q2 2005.

Table 8. Real Terms of Daily Average Earnings of Vulnerable Workers (constant November 2000 prices)

	Daily earnings (riels)									Percentage change over previous year		
	2000			2003			2004			2005		
	Nov	Nov	Feb	May	Aug	Nov	Feb	May	Aug	Feb	May	Aug
Cyclo drivers	7,594	9,494	9,153	8,000	7,631	5,670	8,529	7,726	7,857	-6.8	-3.4	3.0
Porters	6,233	6,286	8,383	7,451	6,625	5,121	6,933	7,056	6,000	-17.3	-5.3	-9.4
Small vegetable sellers	5,256	6,480	7,130	7,240	6,650	6,767	6,385	8,574	5,938	-10.4	18.4	-10.7
Scavengers	2,718	3,772	4,625	4,368	4,769	4,024	5,382	5,270	4,335	16.4	20.6	-9.1
Waitresses*	2,111	4,289	4,721	4,273	4,591	4,207	4,470	4,287	4,648	-5.3	0.3	1.2
Rice-field workers	4,198	4,947	5,190	4,038	3,628	3,788	3,997	3,822	4,009	-7.3	-5.3	10.5
Garment workers	6,701	9,671	9,322	9,249	9,211	9,328	9,213	7,235	8,756	-1.2	-21.8	-4.9
Motorcycle-taxi drivers	8,610	9,671	10,791	8,546	8,791	8,688	11,767	11,130	9,406	9.0	33.8	7.0
Unskilled construction workers	5,399	5,996	6,937	6,552	6,095	5,944	5,747	8,130	6,069	-17.2	24.1	-0.4
Skilled construction workers	13,127	16,344	13,297	11,822	13,527	12,071	14,367	12,320	10,273	8.0	4.3	-24.1

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

## CDRI Update

### Management

The final quarter of 2005 saw an intensive process of consultation and drafting of CDRI's new 2006-10 Strategic Plan and an associated Institutional Model to guide CDRI's development for the next five years and beyond. These directions will be considered by CDRI's Board at its annual meeting on 9-10 December 2005. In early November CDRI held a three day management-staff retreat in Sihanoukville to promote understanding and ownership of the draft new Strategic Plan, and team-building and trust-building within CDRI as it moves forward. The new Strategic Plan will be finalised and published on CDRI's website in early 2006.

In November 2005 CDRI participated in a mid-term review of its core funding support from the Swedish International Development Agency (Sida). The findings of this review, which will assist CDRI in enhancing its future effectiveness, will also be considered by CDRI's Board at its December meeting. An Annual Financial Audit by PriceWaterhouseCoopers was also commenced in December 2005 and will be completed during January 2006.

A proposal for the establishment of a Learning Resource Centre for the Tonle Sap Initiative, to be housed at the CDRI Library, was submitted to the ADB. Work on the establishment of this multi-faceted centre is expected to commence in January 2006.

Discussions were held between CDRI and the Department of Industrial Standards of the Ministry of Industry, Mines and Energy with a view to planning for CDRI's accreditation and certification by the International Standards Organization at ISO level 9000. A final decision on this will be taken by the CDRI Board in December 2005.

### Research

CDRI has begun fieldwork on the Urban Phase of the Baseline Survey Project for Land Titling in Phnom Penh, Siem Reap, and Banteay Mean Chey under the auspices of the Ministry of Land Management, Urban Planning, and Construction (MLMUPC). CDRI is also collaborating with the National Institute of Statistics (NIS) and ADB in a study to assess the poverty impact of regional economic integration in the greater Mekong sub-region (RETA). With support from Oxfam America, CDRI is also undertaking a study to assess the impact of agricultural trade between China and Cambodia on Cambodian producers within the context of the Early Harvest Programme (EHP) component of the China-ASEAN Free Trade Agreement.

Two of CDRI's largest research projects completed fieldwork during the second half of the year. The Moving Out of Poverty Study (MOPS) team is now processing qualitative and quantitative data from 9 villages and preparing a final report. The Tonle Sap Participatory Poverty Assessment (PPA) team is now preparing to analyze qualitative data from 24 villages, and will begin writing the final report soon. CDRI's Natural Resource and Environment (NRE) programme is developing a research project concerning Water Resource Management in collaboration with the University of Sydney and the Royal University of Phnom Penh. CDRI's Governance and Decentralization programme has also commenced fieldwork on two ambitious new research initiatives. One study focuses on public sector accountability at the provincial level, while the other concerns public sector responsiveness. Ms. Jenny Knowles has begun working as a technical advisor for capacity building for the governance and decentralization team at CDRI.

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