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The World Bank's 2006 Cambodia Poverty Assessment: A CDRI Response

CDRI elaborates on some of the key components of the PA's analysis and policy recommendations concerning agricultural development and natural resource management.*

The World Bank's 2006 Cambodia Poverty Assessment (PA), launched in February 2006, shows that Cambodia has made significant progress in poverty reduction over the past decade, providing much needed optimism for development planners. At the same time, however, the assessment shows that the urban-rural divide is widening, along with the gap between the rich and the poor, with poverty rates highest in remote rural areas with limited access to roads, markets and basic services. Given that the majority of Cambodia's poor live in rural areas, the PA argues for developing agriculture as a third engine of economic growth with a strong poverty reduction capacity.¹



According to CDRI research, the rural poor are increasingly dependent on access to natural resources in order to maintain their livelihoods.

This argument supports the government's emphasis on promoting agricultural development as a key component of its Rectangular Strategy and 2006–10 National Strategic Development Plan (NSDP). As a policy research institute that studies agricultural and rural development, CDRI agrees with and supports this important policy direction.²

In this article, CDRI elaborates on some of the key components of the PA's analysis and policy recommendations concerning agricultural development and natural resource management. We argue that the PA's

policy prescriptions are necessary, but not sufficient, for achieving the desired poverty reduction in the rural sector. We believe that real progress in agricultural development and associated rural poverty reduction requires better targeting and sequencing of programmes and policies to stimulate increased productivity and generate employment. On the related challenge of natural resource management, CDRI argues that the rural poor rely greatly on access

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* In this article, CDRI expands upon the comments it made at the launch of the World Bank's 2006 Cambodia Poverty Assessment. These comments focus on the critical importance of agricultural development and natural resource management in the next stage of Cambodia's development, as well as the need for a new approach to support local capacity building through a Cambodian partnership for poverty monitoring, evaluation and research.

to natural resources, and that improved management of such resources is required to preserve access to and sustain the natural resource base. We conclude the article by proposing a new approach to capacity building for poverty reduction through the creation of a partnership of Cambodian government policy makers and planners, policy research institutions, civil society organisations and the private sector to work together on poverty monitoring, evaluation and research.

Agriculture

The strength of potential linkages between growth in the agricultural sector and poverty reduction will depend on the degree to which the government, its international development partners, civil society and the private sector can collaborate to better target support for small farmers. Such support includes (1) promoting secure land tenure and access to natural resources, (2) providing more effective water management, (3) removing barriers to efficient marketing, (4) making affordable credit more available and (5) establishing better extension services for both crop intensification and diversification, as well as for livestock production.

The PA emphasises the important role that secure land tenure, through land titles, can play in promoting small farmers' investment in land improvements and agricultural inputs. Recent CDRI research on the impact of land titling in the rural sector suggests that because land titles are a scarce resource, the poverty impact of land titling efforts should be optimised by better targeting aimed at areas with higher concentrations of poor, whose land rights may be threatened by stronger interests attracted to increasing land values. This study observes that the impact of land titles, which are a type of social contract, is also a function of good governance, in which the rights of titles holders are enforced neutrally and upheld in courts of law.

The PA also emphasises the critical role that improved infrastructure can play in promoting increased productivity, and argues that more public investments are needed to strengthen water management through more extensive irrigation and better management. Important decisions must be made in the near future concerning the most effective and efficient allocation of scarce resources to support small, medium and large-scale irrigation projects. Small-scale irrigation projects may be easier to implement and more efficiently managed at the local level, where social capital enables neighbouring farmers more easily to collaborate on water management. Large scale projects may also be effective in terms of stimulating increased production, but require large inputs of institutional capital in the form of government organisation and financial investment.

As significant as secure land tenure and better water management may be, CDRI research suggests that these

inputs will reduce poverty most when accompanied by affordable credit, farmer cooperatives, extension services and improved marketing. CDRI research shows that as much as 85–90 percent of investment in agricultural production and micro, small and medium enterprises is made with own resources, while much of the remainder is made with loans from family and friends. Among the poor, such types of financing limit the amount and range of investment, especially when interest rates remain high.

Farmer cooperatives can provide small farmers with good bargaining power over the price of their farm produce and therefore increase net profits. CDRI's Moving Out of Poverty study (MOPS) has shown that a large number of small farmers do not have enough financial capital. As a result, they are often trapped in marketing arrangements that force them to sell their produce to middlemen (traders or merchants) at prices lower than normal farm-gate prices.

More accessible and effective agricultural extension services are also critical, because many farmers lack the know-how to implement better farming strategies. In the absence of sound technical support, for example, many farmers mimic bad practices in the use of fertilisers and pesticides. Many farmers also lack basic information about markets and, as a result, end up producing things that do not sell for good prices. Many farmers do not have access to good quality and affordable preventive and curative veterinary services for their livestock. More locally managed extension services are therefore required to provide farmers with the knowledge and skills to diversify and intensify production.

CDRI's study on improving marketing of maize and soybeans shows that Cambodia has the geography, land fertility and land availability to develop the soybean and maize industries. This has been recognised and prioritised in major national plans such as the Socio-Economic Development Plan II (2001–2005) and the National Poverty Reduction Strategy (2002–2004). It also appears that Cambodia may have a potential cost advantage in soybean and maize production relative to Thailand and Vietnam.

This potential, however, is not being realised because of various production and marketing constraints. Production constraints include lack of quality seeds, technology, information and credit. Marketing constraints include lack of market information, high transportation costs and fees and poor relationships or mistrust between farmers and buyers. Most agricultural exports are raw products because Cambodia has limited agro-processing capacity, and exports are informal and subject to high informal fees at border crossings. In order for Cambodia to realise its potential in the soybean and maize industries, an agricultural development strategy should include (1) setting up cooperatives, (2) reforming road transport regulations, (3) creating special agricultural development

Table 1: Poverty indicators by main income source

Main income source	Population share (%)	Poverty rate (%)
Crops and animals	27.0	40.4
Self-employment	17.9	31.5
Wage income	27.4	53.4
CPR	22.7	55.2
Others	5.0	26.0
TOTAL	100.0	45.0

Source: 2004/05 data from 1005 household interviews in 7 provinces in MOPS. Poverty estimates are based on the national poverty line.

zones and (4) establishing a framework for joint ventures to bridge the technical and financial gaps.

Natural Resources and the Environment

The PA also rightly emphasises the crucial role of natural resources, particularly forest and fishery resources, in the livelihood strategies of many rural Cambodian households. CDRI's past and present work concerning the relationship between poverty and natural resources supports in many ways the findings of the PA.

Recent CDRI research from the MOPS shows that the poverty rate among rural households that depend on common property resources (CPR) as their main income source is higher than those households that are mainly engaged in other activities (see Table 1).

Qualitative research from the PPA also clearly shows that livelihoods of the rural poor are especially dependent on natural resources for income and coping strategies in times of crisis. In this sense, CPR constitute a crucial safety net for the poor. More effective governance and management of natural resources, at all levels, are therefore crucial for poverty alleviation in Cambodia.

Fishery Sector

Millions of Cambodians are fully or partly dependent on fisheries as their source of income and food consumption. The poor are the most vulnerable of all because they are mostly dependent on open access areas and able to employ only small-scale fishing techniques.

Recent policy reforms that have transferred fishery management to local communities have improved many of the communities' possibilities of better managing their resources. The distribution of benefits from such reforms, however, is not always even. In

some of the PPA villages, for example, the extreme poor report that the establishment of community fisheries has actually decreased their access to previously open access areas. Some villages report that some of the poorest households have not been included in the community fishery groups and, as a result, tend to be excluded from control of and access to better fishing areas.

Many villages included in recent CDRI research interviews and community meetings also report decreasing fishing resources per household (Table 2) and a sharp increase in the number of fishers and the intensity of fishing techniques. The trend of converting inundated forests (where fish spawn) around the Tonle Sap to agricultural uses also poses a serious challenge for community fisheries to manage these renewable resources sustainably.

Many poor people who rely on fishing for their livelihoods also rely on expensive private credit arrangements in order to sustain their living. They often borrow money or equipment from middlemen or rich neighbours on the condition that they sell their catch to them at fixed lower-than-average prices. As with poor farmers who sometimes rely on credit from traders or merchants, expensive private credit tends to prevent poor fishing households from making investments and improvements in their livelihoods.

Forestry Sector

Forest resources also play a significant role in the livelihoods of a large part of the population. For example, urban households still mainly use wood as cooking fuel, while rural households utilise forest products for a diverse range of consumption and income-generating activities. Although forests are still relatively widespread in Cambodia, many people included in recent CDRI studies report declines in the spread and quality of forest resources in their areas (Table 2).

Table 2: Local perceptions of trends in availability of selected products from CPR between 1998 and 2004/05 (in per cent)

CPR products	Dramatically Increased	Slightly increased	Same	Slightly decreased	Dramatically decreased
Firewood	0	1	22	26	51
Timber	0	1	4	9	86
Fish	0	1	1	15	83
Bamboo/cane	0	0	19	23	58
Fruits/vegetables	1	9	27	33	30
Wild animals	0	0	2	9	89
Resin	0	1	2	19	78

Source: 2004/05 data from 1005 household interviews in 7 provinces in MOPS

As mentioned above, recent CDRI research shows that the poor are most reliant on forest resources for sustaining their livelihoods. The poor and destitute, as well as other vulnerable groups, such as widows, often lack resources to farm or fish effectively. As a result, they routinely use forest resources as a last resort for food and other products. Without access to this safety net, these people would have few livelihood alternatives other than migration.

In this context, the question is how forests can contribute to reducing poverty in a sustainable way. At the moment, local forest management seems fairly casual; local people generally use forests as an open access resource, and there is little official management of resource extraction. The forest sector requires effective management and governance that involve local communities, not just large commercial operators. Local people must be directly involved in such decision making. Tenure and access rights to forests must also be clarified and made secure. CDRI research also shows that local people need improved market access and rights to trade in forest products. These issues should be addressed as a priority in implementing the NSDP and associated NRE programmes.

Capacity Building and a Local Partnership for Poverty Monitoring, Evaluation and Research

The PA includes a useful discussion of the importance of improved aid effectiveness and local capacity building for poverty reduction. After more than a decade of Cambodia's experience with international development assistance, CDRI believes that we need to address a fundamental question: What is capacity building, and what does it mean for programme development and the design, management and resourcing of specific projects? There needs to be an urgent rethink of this by the government and its development partners. The PA rightly emphasises the need for more political commitment to and efficiency in development strategies and better donor coordination. But a critical underlying issue is that there is not yet an agreed position on or commitment to what genuine local capacity development really means and how it is achieved. This is particularly so in the design and implementation of poverty reduction strategies.

Based on CDRI's recent poverty research and the experience of the development of the PA, CDRI proposes that a partnership of Cambodian institutions, both government and non-government, work together in an ongoing assessment, analysis and monitoring of poverty in Cambodia. Such a partnership would have direct input into poverty reduction strategies and policy making, while focusing on genuine local capacity development for poverty research and policy making. Among other things, this would require new thinking about the role of technical assistance involving deeper and longer term institutional

capacity building that would selectively utilise experts who have a demonstrated ability and commitment to transfer skills to and foster the talents of Cambodians.

Broad Objectives and Products

A Cambodian partnership for poverty monitoring, evaluation and research could play three important and inter-related roles:

- Monitoring progress in poverty reduction and related policy impacts against the broad strategic objectives and sectoral benchmarks of Cambodia's millennium development goals (CMDG) and the NSDP through the production of regular, reliable socio-economic data;
- Evaluating NSDP strategies, policy responses and impacts;
- Undertaking locally demand-driven policy-relevant research in key sectors and aspects of poverty reduction strategies under the NSDP (e.g., agricultural development, natural resource management, governance and D&D reforms, health and education, macro-economy, trade and private sector development).

Most importantly, within government and independent research institutions, it could be the vehicle for the long-term building of institutional expertise and capacity in poverty monitoring, evaluation and research. This approach could complement the work of government to ensure access to reliable socio-economic data and to design sectoral policy-relevant research to support national poverty reduction strategies.

Roles and Processes

The specific roles and functions of the partnership and its individual institutions would require careful consideration to ensure that they are both appropriate and feasible. Some of these roles, for example those of the Ministry of Planning and its National Institute of Statistics (NIS), are already being filled effectively and are clear through the provisions of the 2005 Statistics Law, the associated Statistics Master Plan (SMP) and the 2004 Cambodia Socio-Economic Survey (CSES) and the NSDP. Even here, however, the PA concludes that if these roles are to be played more effectively, there must be full funding for the development of core statistical capacity and specific key data collection processes as laid out in the SMP to ensure a regular flow of reliable socio-economic data.

The range of partners and their specific roles could, however, be determined only once the priorities for CMDG and NSDP monitoring, evaluation and research have been clearly established. One priority would of course be the ongoing collection and assessment of statistical data, which will largely be determined by the types of meaningful indicators identified. In some sectors, such as health and

education, the identification of meaningful indicators may be more feasible, and potentially well-equipped monitoring agencies already exist.

CDRI could play a more useful role in the analytical aspects of poverty monitoring, one linked to a longer term research agenda with periodic reporting. For example, as a result of its recent work on the MOPS, Tonle Sap PPA and land titling projects, CDRI could identify a number of villages or neighbourhoods in rural and urban areas as the basis for a good household baseline survey. Such a survey could employ quantitative methods and a sound qualitative baseline assessment (e.g. MOPS) using participatory techniques (e.g. PPA). Once the baseline was established, research teams could return periodically, perhaps once every one or two years, to repeat the process. In many respects, this approach would represent a more streamlined and efficient MOPS-style methodology that would be locally designed in concert with the monitoring partnership.

In this scenario, the NIS could do the household survey very well, perhaps with design inputs from CDRI and other institutions, if needed, in ways that promoted useful results, as well as helping to build design and analysis capacity at NIS. CDRI could also work with other institutions on the design, conduct and analysis of the qualitative baseline work. It might be possible, for example, to choose several of the MOPS and PPA villages as a starting point, perhaps with different institutions responsible for the ongoing survey work in different groups of villages but using a shared methodology and appropriate quality controls. An agreed choice of priority indicators would be a fundamental threshold for this approach, and would have the advantage of being a long-term capacity-building exercise for the partner institutions, utilising external expertise only as necessary.

Another issue that should be addressed in designing such a partnership is that of costing poverty reduction, including achievement of the CMDG. Put simply, how much does it cost to achieve a certain level of progress on key poverty indicators? And once costs have been credibly established, are there more efficient ways of reaching these goals, and what are the implications of this for the NSDP in the allocation of scarce resources? This is an area where research institutes like CDRI and others could work together with the partnership for mutual capacity building. The specific roles of other partners, such as the Technical Working Group on Poverty Reduction and Planning (TWGPRP) and other organisations with the capacity to contribute, would require clarification to ensure that they are both accepted and effective as partners.

Management and Resources

The partnership should be accountable to the Ministry of Planning and related government agencies, including the Council for the Development of Cambodia (CDC).

Partnership management and design would be undertaken by the local partners in consultation with development agencies and their poverty specialists, using their expertise as required. The Technical Working Group for Planning and Poverty Reduction (TWGPPR)'s core working group could act as an advisory committee to the partnership. It might also be useful to establish an expert technical advisory group of poverty monitoring, evaluation and research specialists to provide ongoing advice and support.

The partnership should be resourced by a multi-donor resource facility, established specifically for this purpose, perhaps as a trust fund, or through utilisation of an existing trust fund. The management of allocations would then be the responsibility of individual partner institutions, with appropriate financial accountability mechanisms.

Basic Principles for Design and Implementation

The partnership should relate to Cambodian needs and conditions and be designed around principles of local ownership, commitment and accountability. It should be a long-term programme with long-term objectives, short- and medium-term products and the flexibility to respond to changing national priorities. It should be designed as an institutionalised ongoing partnership for the CMDG and the current and future NSDPs. It should have a sufficiently extended inception phase to build genuine partnership and ownership, clarify roles and build trust and collaboration.

The programme should have a strong focus, in both content and human and financial resources, on local institutional capacity building or development. The need for and character of foreign expertise to achieve the programme's objectives should be determined by the local partnership in consultation with providers of such expertise. The partnership, its operation, activities and outputs should be regularly reviewed in a constructive and participatory way by independent evaluators, its advisory committee and major resource providers, with outcomes reported to the government, the TWGPRP and Consultative Group meetings.

Such a partnership would be a long-term investment in Cambodia's capacity to conduct its own high-quality poverty assessments and develop associated poverty reduction strategies.

Endnotes

1. The other two so-called engines of growth are the garment and tourism industries.
2. The World Bank's 2006 Cambodia PA utilised the preliminary findings of two major studies currently being concluded by CDRI—the Moving Out of Poverty Study (MOPS), with the World Bank, and the Tonle Sap Participatory Poverty Assessment (PPA) with the Asian Development Bank.

Economics of Land Use Changes in Cambodia

*Kasper Hansen and Dr Top Neth describe the basic principles of a model developed by the Natural Resource and Environment (NRE) unit at CDRI to analyse economic consequences of forest conversion in Cambodia.**

The objective of this part of the NRE unit's 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 natural forests and relevant alternatives (e.g. sustainable forest management vs. cashew nut plantation). As part of this economic analysis of changes in land use, the natural resources and environment (NRE) programme of CDRI has developed a model to compare different land use changes in a consistent manner.

This article takes a closer look at what the current model can and can not do, and points out some of the trade-offs between a static model and a more dynamic and complex model that can be adapted continuously as more data become available.

The analysis is based on two kinds of models. One analyses the financial yield of different land use options and converts potential production into expected cost and benefit flows. The second model compiles the economic cash flows from different land use templates and analyses the net present value of different land use changes.

Cost-Benefit Analysis

The main analytical tool used in the model to analyse the economics of different land uses is cost-benefit analysis (CBA). CBA is one of the most commonly used tools in environmental economics and is also used to evaluate the economic viability of investment projects. It calculates the present value of a stream of costs and benefits in a project, and adds this up to a total net present value (NPV). The NPV can be described as the difference between the present discounted value of benefits and the present discounted value of costs. A project is generally considered profitable if the NPV is positive. An important factor in the analysis is the discount rate, which is used to convert all costs and benefits to a comparable present

value. Discounting incorporates the time value of money into the analysis in order to make calculations comparable. It assumes that a person would rather have one dollar today than one dollar in one year since today's dollar can be invested into an alternative project and hence be worth $1 +$ the interest rate of that project in one year. Choosing an appropriate discount rate is therefore one of the most important factors in the CBA, as it affects how much value is put on present flows compared to future flows. The general formula for the NPV is:

$$NPV = \sum_{t=0}^n \frac{B_t}{(1+r)^t} - \sum_{t=0}^n \frac{C_t}{(1+r)^t}$$

where n is life span of the project, t is the time in years, B_t is benefit at time t , C_t is cost at time t , r is the discount rate, $1/(1+r)^t$ is the discount factor at time t , and \sum is sum of flows.

Another important concept in environmental economics and economic CBA is externalities. Land use systems have positive and/or negative short or long-term effects on their surroundings that provide additional benefits and costs to the society. These values are not included in a financial CBA, which includes cost and benefits only from a private point of view. An important part of the economic analysis is to value all services provided by forests and other land uses, such as local use of minor products, watershed protection and erosion control. This is included in the model using a TEV approach, in which both direct and indirect values are included in the valuation of forests and other land uses (e.g. Gregersen et al. 1995).

Basic Principles of the Model

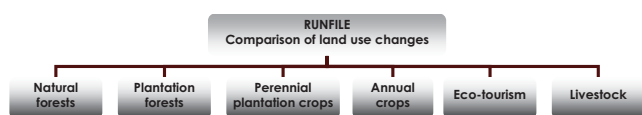
The model developed for the project is essentially a collection of connected spreadsheets in Microsoft Excel 2003. The user can choose from among six different land use categories: natural forests, plantation forests, perennial plantation crops, annual crops, eco-tourism and livestock. Each land use category has a template in which data can be entered and yields modelled based on the characteristics of a given land use system (Figure 1).

The yield modelling is more or less complex depending on the land use system. Modelling of sustainable yields from natural forests is, for example, very complex, involving a mix of species in uneven age classes. The natural forest part of the model is therefore not easily understood by a standard user, as technical knowledge on forestry is needed to grasp the concepts of forest growth modelling. It should also be noted that the yield modelling is based on the very limited data available from permanent sample plots in Cambodian natural forests (MAFF 2004). An important feature of the model, however, is that input data can be changed over time as

* This article is based on the preliminary findings of ongoing research carried out by CDRI with funding from the Danish International Development Agency (Danida). Kasper Hansen is the Research Advisor and Dr Top Neth is the Research Manager for the NRE Programme at CDRI.

more data become available. The model should in this sense not be viewed as static because it can be adjusted to fit local conditions and improved over time.

Figure 1: Basic principle of how different components in the model are linked to a central RUNFILE, in which different land use changes can be defined and analysed.



In other sheets of the template, costs of inputs and prices of products and by-products (including indirect values) can be entered, and the output of cost and benefit flows over a defined period is summarised in a sheet for each land use. Each summary sheet is then linked to a central file in which different land uses can be defined and the associated NPV calculated based on the data from the land use sheets. The analysis of different scenarios in the central file is based on a comparison of a user-defined baseline and a user-defined alternative. It should be noted that this is not an optimisation model, which tells the user which land use system is optimal. It can only predict how much is lost or gained in a given user-defined land use change.

Baseline and Alternative Scenarios in NRE Research

The baseline chosen for the analysis in the ongoing research at the NRE programme at CDRI covers natural forests, including evergreen, semi-evergreen and deciduous forest types valued for:

Direct values: Non-timber forest products are assessed in market prices based on actual consumption revealed in household surveys, converted to per hectare values.

Indirect values: Forests provide many local, national and global indirect values. Important local factors include watershed protection, soil conservation, animal habitat and cultural values. Globally, forests provide important functions such as carbon storage, mitigating global warming, as well as conserving biodiversity and genetic material for future generations. Most of these values are not well studied in Cambodia. Carbon sequestration and watershed protection, including soil conservation, are valued based on studies undertaken elsewhere in the region (e.g. Brown 1997; Gou 2001).

Option values: In the analysis, it is assumed that in addition to direct and indirect values, the natural forest also represents a potential value in the form of sustainable timber harvesting. This is, however, not practised at present, and the value is therefore included as an option value.

Different types of plantation forest (acacia, eucalyptus and teak), perennial crop plantations (rubber, cashew nuts, oil palm) and agriculture (rice, soy bean, cassava, maize) represent the alternative land uses that will be compared to the baseline using different discount rates (r) while applying a 50-year time frame (n).

Example of Application of the Model

Table 1 illustrates the difference between financial and economic analysis of converting one hectare of deciduous forest to eucalyptus plantations. If only private costs and benefits are included, it seems like a viable option to convert deciduous forests to eucalyptus plantations, assuming a growth rate of 15 m³/ha/year and no changes in costs and prices. However, when lost values from local collection of non-timber forest products, and other non-use values, are included in the analysis, the same project turns negative. This underlines the importance of including externalities in calculations evaluating whether land use changes are viable for Cambodia as a whole.

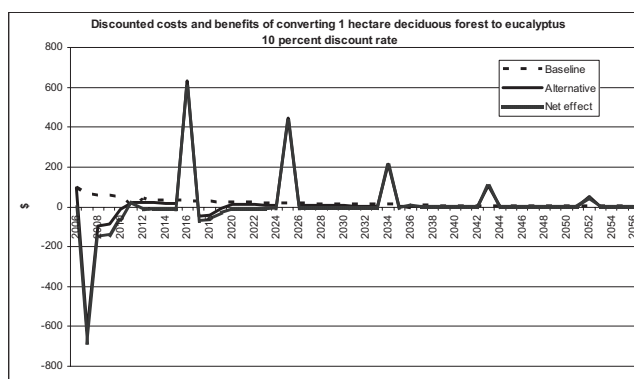
Table 1: Results of converting 1 ha. deciduous forest to eucalyptus*

CBA	NPV
Financial analysis	US\$ 395
Economic analysis - including lost values from natural forest	US\$ -197

*Based on a 10 percent discount rate

The principle of the calculations in the model is illustrated in Figure 2, where the discounted flows of costs and benefits over a 50-year cycle are shown. In the analysis, both land uses are valued for their TEV, and the model attempts to calculate the net changes in use and non-use values when converting from one land use to another.

Figure 2: Flow of discounted costs and benefits in a scenario in which one hectare of deciduous forest is converted to eucalyptus plantation (growth of 15m³/ha/year) applying a 10 percent discount rate.



The example illustrates that the initial costs of establishing eucalyptus plantations create a large negative net effect in the beginning of the period and that the present value of benefits from harvesting eucalyptus decline in each cycle due to discounting. Altogether, these discounted cash flows add up to a NPV of US\$ -197, as listed in Table 1.

Testing the Model and Sensitivity Analysis

It is important to note that models always reflect the quality of the data entered into them. Much effort has therefore been put into cross-checking data, but currently only very limited data are available on production parameters, prices and costs. The results generated by the model are therefore very sensitive to yield predictions and assumptions about costs and prices. An important part of working with any CBA model is, therefore, to test the model's sensitivity to changes in the main parameters. This is included in the model through a sensitivity analysis, which can analyse how sensitive the overall results are to changes in different parameters.

A word of caution should also be included in relation to scaling up the results. Costs and benefits will differ significantly between locations according to factors such as local growth conditions and different transportation costs depending on distances to sawmills, ports or markets. It is therefore not recommended that results be scaled up to a national level, as they will be valid only within a smaller defined area.

Current Gaps in Economic Data for Natural Resource Planning

During data collection and modelling, many data constraints were identified in terms of the yields that can be expected from different land use systems as well as studies on non-use values. Some of the main observations and suggestions for future research areas are summarised below.

Natural forests: Data describing growth in Cambodia's natural forests are limited to those from permanent sample plots in Kompong Thom. Only a few growth data, based on measurements in 1998 and 2000, have been published by the Forest Administration (FA, 2003). The data, however, are analysed only at an overall forest level, which complicates adapting the data to local distribution of tree species. The raw data behind the results are also not published, and it is not possible to analyse growth separately for different species in different forest types. The usefulness of the published data is therefore limited. The planning of forest utilisation at local and national level would benefit greatly if additional data from the plots were analysed and published.

Plantation forests: Data on the growth of fast-growing exotic species, such as Eucalyptus spp. and Acacia spp., in

different locations or growth zones of Cambodia are also lacking. Current decisions on establishing plantations are therefore based on very questionable assumptions about growth. Growth of these species is normally fast, but often not as fast as expected due to poor soil quality, poor management practices, low planting densities and poor quality of planting material (see e.g. Barr 2004). Field measurements of the actual production of different exotic species in already established plantations at different locations could be an easy way to get an indication of what realistically can be expected from these plantations.

Perennial crops: Data on yields from perennial crops are also often limited to estimates by companies. These data often represent an optimal situation in order to attract investors and, as a result, the numbers should be interpreted with caution. Data on non-use values of different systems are also lacking. Rubber plantations, for example, have a great deal of positive non-use values from the standing trees through carbon sequestration, erosion control and other services. These values also require more attention from environmental economic researchers.

Indirect values: Environmental valuation in Cambodia is still in its infancy and, consequently, there is still a lack of studies looking at indirect values of different land uses. A few studies provide a description of non-use values of forests or protected areas (Bann 1997; Lopez 2003), but very little research has been conducted on an actual valuation of such areas. A next step in environmental economics in Cambodia would be to conduct more research on valuation of indirect uses to provide decision makers with some more precise numbers of what long-term values they can expect to lose when converting natural forest to other land uses.

Current Target Group and Future Applications of the Model

Due to the complexity of yield modelling and the many constraints on data availability, the model is currently in a very flexible form that tries to make the best of the available data. It is primarily designed to be used by researchers with appropriate technical knowledge on growth parameters and an understanding of environmental economics and the use of Excel. The model could be more user friendly, but this would render it somewhat static, and the possibility of adapting the model to local conditions over time would be lost. A simple model should be based on reliable research data to make appropriate assumptions on main factors, such as growth and yields. Such data are, as mentioned above, currently not available for Cambodia, and there is a high risk that a simple model would lose its accuracy. The current model

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Financing SMEs in Cambodia: Why Do Banks Find it So Difficult?¹

*Dr Keith Carpenter, with assistance from OUCH Chandarany, discusses a 2003 Mekong Project Development Facility (MPDF) paper on bank lending in Cambodia.**

A CDR article in 2003² summarised the MPDF paper. The present article looks at the MPDF study from a practical banking perspective to offer an alternative view on the lack of bank lending in Cambodia, while conceding that significant institutional changes are also required. This article concludes that a key reason for a lack of lending to small and medium enterprises (SMEs) is within the control of banks.

The MPDF paper gives a comprehensive overview of the issues facing banks and SMEs in Cambodia. It suggests 15 reasons why banks do not lend to SMEs and makes eight recommendations, mostly related to the need to change institutional conditions. The recommendations, if implemented, would help banks to finance SMEs in the longer term. Based on the results presented in the MPDF study, this article argues that banks do not lend to SMEs in Cambodia primarily because banks do not see lending as their main focus, not simply because of any institutional weaknesses in Cambodia. This outcome probably results from a perception by banks that they can make sufficient income from their other (non-lending) activities without needing to be involved in SME lending.

This lack of focus on lending by Cambodian banks is very clearly demonstrated by an issue noted in the MPDF study: a shortage of bank lending officers (§3.13, p. 32). Some banks had only two or three people to cover lending, and these people often had other additional duties. In most economies, lending is the key function of banks and a major source of their income, yet in Cambodia banks do not appear to devote the resources required to generate loan assets and hence lending income. Banking is about lending, and lending requires risk assessments in order to charge appropriately for the credit risk that a bank takes on to its balance sheet as a result of making loans.

A recent informal survey of some of the larger banks in Phnom Penh on changes in the number of their lending

or credit officers since 2002 revealed an increase in credit staff. There had also been an increase in lending activity. These increases may indicate that a more positive attitude towards lending is now emerging in banks.

Study Results

The MPDF study identifies 15 problems that constrain lending to SMEs. For the purposes of the analysis in this article, the issues have been categorised into five types:

1. Legal: requires a new law or legal framework.
2. Administrative: requires a change in the way an existing law is administered, rather than a new law.
3. Market: a result of the way the Cambodian financial system is organised or operates.
4. Credit policy: a policy or procedure that would be followed by most well-managed banks internationally in their approach to lending.
5. Bank: matters that are directly under the influence of local banks.

This article argues that the fifth category, matters within the control of local banks, is the main constraint on bank lending in Cambodia.

The problems identified by the MPDF, using the above categories, are listed in the following table.

Table 1: Reasons for Lack of Bank Lending to SMEs

No	Issue	Type
3.1	Inadequate laws	Legal
3.2	Weak judicial system	Administrative
3.3	Inadequately trained bank staff	Bank
3.4	Inappropriate risk pricing by banks	Credit policy
3.5	Banks accessible only in major centres	Bank
3.6	Incentive structure in banks	Credit policy
3.7	Bank's minimum lending criteria	Credit policy
3.8	Bank's lending processes	Credit policy
3.9	"Informal" credit market more efficient	Market/bank
3.10	Shortage of long-term funding	Administrative
3.11	High cost of long-term borrowing	Market
3.12	Preference to lend to individuals	Credit policy
3.13	Shortage of lending officers	Bank
3.14	Lack of specialised lending institutions	Market
3.15	Withholding tax on offshore funds	Administrative

The key problems within the power of the banks to change are: "bank staff are inadequately trained to analyse

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and manage risks of long-term lending to SMEs” (§3.3, p. 27) and “shortage of lending officers in banks” (§3.13, p. 32). Another issue within the control of banks is: “SMEs are unable to approach banks outside of major cities” (§3.5, p.28). While this latter point is a constraint on lending, it is a lesser constraint than the initial two. Banks presumably do not operate outside the major cities because they do not perceive a necessity to do so. This suggests that banks can gather sufficient deposits in the main population centres to fund their existing lending needs and that they do not see a market for their lending in the smaller centres, with the result that they do not expand their services to those centres.

A comment on a point listed above as a credit policy issue is appropriate. A lack of an incentive structure in Cambodian banks is thought to discourage credit officers from actively making loans. This is highly unlikely to be a constraint. Most well-managed banks would not provide business volume incentives for credit officers. Long experience suggests that paying credit officers an incentive according to the volume of loans that they write or approve is a sure way for a bank to get itself into lending difficulties.

The recommendations of the MPDF study can be similarly categorised using the list above.

Table 2: Recommendations of MPDF Study

No.	Recommendation	Type
4.1	Commercial court	Legal
4.2	Amend privacy legislation	Legal
4.3	Liquidity requirements	Administrative
4.4	Asset registry	Administrative
4.5	Risk training	Bank
4.6	Consulting services	Market
4.7	Specialised lending institutions	Market
4.8	Withholding tax	Administrative

The only recommendation within the power of the banks to change relates to training staff in risk assessment. This relates to the finding on inadequately trained bank staff. If banks are to increase their lending volumes, they will need to improve their risk assessment skills, and this is a matter that banks can control, as the study clearly states.

Lending margins in Cambodia are extremely high by international standards; the study suggests funding costs of up to 6 percent per annum and lending rates of around 19 per cent, which translates into a lending margin of about 13 per cent. Such a margin should be more than sufficient to cover all lending costs, provide a reasonable profit margin and provide an adequate loan loss reserve. Inadequate lending margins are unlikely to be the main reason for a lack of lending by banks to SMEs.

The Business of Banking

Banks are financial intermediaries; they borrow funds from economic agents with surplus funds and lend these funds to other economic agents needing to finance their activities. Banks charge the borrowers a fee for providing this service. This fee covers (1) the costs of collecting the funds from those with surplus funds, (2) the transaction costs involved in lending, (3) a margin to cover any losses if the borrower does not repay the loan and (4) a profit for the bank for risking its capital. The bank attracts deposits from those with surplus funds by undertaking to repay any deposits on demand, so that depositors are always assured of immediate access to their funds. Banks manage their balance sheets so that they are always able to meet any call on their funds on demand. To fail to repay depositors on demand would immediately cause a bank’s source of funds to dry up, and the bank would go out of business.

A key problem with lending is that some borrowers may not meet their interest payment obligations or may not repay what they borrow. Such behaviour leads to lending-related losses by banks which must be met out of the bank’s own funds, i.e. its income or capital, not from depositors’ funds. To overcome such adverse behaviour by borrowers, successful banks develop a high degree of skill in “risk assessment”. As a result, they know from experience and customer analysis which customers are likely to meet their borrowing obligations and which are likely to have problems. Associated with this approach is differential pricing for risk; potential customers assessed as having a higher risk of default should be charged a higher interest rate to compensate the bank for the greater probability of sustaining a loan loss. Most of this higher lending margin will go into a loan loss reserve to meet losses arising from lending.

The key concept in risk assessment is “Know your customer”. A bank or any financial intermediary that takes the time and effort to know its customers and to understand the customers’ businesses will be in a much better position to assess the risks involved in lending to a particular customer. “Know your customer” is more than understanding a customer’s financial position. As important as that is, it also involves building a relationship with the customer so the bank can understand the way the business operates. Acquiring this customer knowledge takes time, but it is a necessary prerequisite for profitable lending, as successful banking relationships are ongoing long-term relationships that benefit both parties.

One finding of the study (§3.9, p. 30) notes that borrowers prefer to deal with the informal lending market because it is more efficient. Apparently, the informal market is also able to compete with the banks on pricing. This suggests that the informal market is much better at knowing the customer than banks, which is why customers prefer to deal in that market. The informal market is a form

of financial intermediation, and it will also make a risk assessment of potential borrowers.

The informal market would be expected to deal with customers who have a higher risk profile than those of bank customers, as the informal market would not usually take formal security over a borrower's assets. The fact that the informal market can compete with banks on price suggests that banks have not been using their competitive advantage to compete with this market; i.e. banks have not been making the effort to know their customers, so it is not surprising that the informal lending market has been more successful in attracting customers.

The Cambodian banking market is not unique in having to operate under adverse institutional circumstances, as other banking markets in the past, and no doubt in the present, have suffered under the same constraints. Similar constraints have not prevented the development of vibrant and successful bank lending markets. Banks in such markets have worked within the constraints they face and focussed their energies on perfecting their risk assessment techniques through knowing their customers.

Conclusion

The key problem with bank lending in Cambodia is not the institutional conditions under which banks operate, but rather the way in which banks approach the lending market. Banks require a radically different approach to lending. They need to:

1. make the resource investment required to know their customers;
2. use this knowledge to assess the risk involved; and then
3. price loans for the risks involved.

These steps are within the control of banks. The other changes proposed by the MPDF study will make it easier for banks to lend to SMEs, but such changes will not be sufficient unless banks themselves make the investment of effort required to seek out profitable lending opportunities.

The recent informal survey by CDRI referred to above may indicate a positive change in Cambodian banks' attitude to lending. It may take some time before this change becomes apparent in the banking market but it does suggest that banks are beginning to place more emphasis on lending as one of their key activities.

Endnotes

1. MPDF (Mekong Project Development Facility), *Private Sector Discussions, Number 14, Financing SMEs in Cambodia: Why do Banks Find it so Difficult?*, May 2003.
2. "Why Are Cambodian Banks Reluctant to Lend to SMEs?", *Cambodia Development Review*, Volume 7, Issue 3 (Phnom Penh: CDRI, July–September 2003), pp. 11–12.

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is therefore primarily developed as a research tool with this trade-off in mind. The results in terms of NPV can be read by policy makers, but specific skills in growth modelling and environmental economics are needed to modify the model and interpret the reliability of new results and their application to policy recommendations.

The model could in the future be further developed into a planning tool for sustainable natural resource utilisation. The complexity of modelling sustainable yields in natural ecosystems, however, points to the importance of linking natural resource management initiatives to capacity building of Cambodian natural resource planners and researchers. This way, more reliable national data on potential yields at different locations can be developed, and natural resource planners can develop their own models based on solid research, including indirect values that they identify and prioritise.

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Economy Watch—External Performance

World Economic Growth

The world economy slowed during fourth quarter 2005. US real GDP was 1.1 percent higher than in fourth quarter 2004, down from 4.1 percent in the third quarter 2005. This deceleration in real GDP growth primarily reflected a deceleration in personal consumption expenditure, an acceleration in imports, a downturn in federal government spending and a slowing in equipment and software and in residential fixed investment.

Real GDP of the euro zone in the fourth quarter 2005 grew by 1.8 percent on an annual basis and by 0.3 percent compared to the previous quarter. Household final consumption expenditure increased by 1.1 percent over a year earlier; government consumption expenditure grew by 1.9 percent; investment grew by 2.7 percent; and exports and imports rose by 4.9 percent and 5.2 percent, respectively.

Japanese real GDP grew by 4.5 percent in the year to fourth quarter 2005, a record rate for the past five years, and by 1.3 percent compared to the previous quarter. China maintained high economic growth in fourth quarter 2005 with real annual GDP growth at 9.9 percent, 0.5 percent higher than in the previous quarter. Secondary industry registered the highest growth at 11.4 percent, while tertiary and primary industries registered 9.6 percent and 5.2 percent, respectively.

The real annual GDP of South Korea in the fourth quarter 2005 was 5.2 percent, compared with 4.4 percent in the third quarter. The manufacturing industry increased by 10 percent, led by electric and electronic products, including semi-conductors and radio, television and communication equipment. Service industry output rose by 3.9 percent due to increased wholesale and retail trade, transport and storage.

Malaysia's real year-on-year GDP growth eased to 5.2 percent in the fourth quarter 2005, compared to 5.3 percent in the previous quarter. On the production side, growth of 7.3 percent was recorded in manufacturing. On the expenditure side, growth was led by government spending, which grew by 12.8 percent. Singapore's economy in the fourth quarter 2005 continued to record robust growth, increasing 7.7 percent from a year earlier. Manufacturing grew by 11.5 percent, mainly due to strong expansion in the biomedical, transport engineering and electronics clusters, while services grew by 7 percent. Thailand's annual real GDP growth in the fourth quarter was 4.7 percent, a decline from 5.3 percent in the previous quarter. Agricultural output fell by 3.6

percent, while manufacturing and services grew by 1.8 percent and 0.7 percent respectively.

World Inflation and Exchange Rates in International Markets

In fourth quarter 2005, consumer prices in the US were 3.7 percent higher than a year earlier. Hurricanes, instability in the Middle East and growing demand from China have all pushed up the price of energy, which led to increases in general price levels. In the euro zone, year-on-year prices were up 2.4 percent, which is above the European Central Bank's ceiling of 2 percent, reflecting increases in energy costs and higher growth in unprocessed food prices. In Japan, consumer prices declined by 0.5 percent in the year to the fourth quarter 2005, a further fall from a 0.3 percent decline into the third quarter. The main reasons for this downward trend were a drop in food prices, lower education fees and a decline in recreation costs. Annual price increases in China were 1.4 percent, up from 1.3 percent in the previous quarter.

The US dollar gained strength against most major currencies in the fourth quarter 2005. Against the euro, the US dollar traded at EUR0.84, up from 0.81 in the third quarter. The US dollar bought 117.2 Japanese yen, rising from 111.2 in the previous quarter. A widening interest rate differential in favour of the United States relative to other major economies appears to have supported the dollar. Additional support came from news that foreign demand for US assets remained buoyant, as evidenced by a rise in portfolio investment inflows into the US.

Commodity Prices in World Markets

The prices of selected major commodities in international markets in the fourth quarter 2005 did not change greatly. The prices of rice, maize and palm oil rose, while prices of soybeans, crude oil and gasoline went down. The price of white rice, Thai 100% B second grade, in the Bangkok market in fourth quarter 2005 was USD286/ton, up from USD282/ton in the third quarter. Palm oil sold at USD431.66/ton in the fourth quarter, a 4.0 percent increase from the previous quarter. The price of maize was stable at around USD99.90/ton. Soybeans sold at USD232/ton in the fourth quarter, down from USD236.35 in the third quarter. The prices of crude oil and gasoline decreased by 7.4 percent and 19 percent, respectively, from the third quarter. Crude oil sold at USD52.99/barrel and gasoline at USD 42.29 cents/litre.

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Economy Watch—External Performance

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

	2000	2001	2002	2003	2004	2005				2004
					Q4	Q1	Q2	Q3	Q4	
Selected ASEAN countries										
Cambodia	7.3	6.7	4.8	7.0	-	-	-	-	-	7.7
Indonesia	4.4	3.8	3.8	4.9	6.6	6.4	5.5	5.3	4.9	5.1
Malaysia	8.7	0.5	5.6	5.4	5.6	5.7	4.4	5.3	5.2	7.0
Singapore	9.5	-2.3	2.6	1.4	6.5	2.5	5.4	7.0	7.7	8.5
Thailand	4.4	1.9	6.1	6.9	5.0	3.3	4.6	5.3	4.7	6
Vietnam		6.0	6.7	7.0	-	-	-	-	-	7.5
Selected other Asian countries										
China	8.0	7.5	8.1	9.9	9.5	9.5	9.5	9.4	9.9	9.5
Hong Kong	10.2	0.5	5.0	3.2	7.1	2.7	7.3	8.2	-	8.3
South Korea	9.1	3.0	6.1	3.0	3.3	6.0	3.3	4.4	5.2	4.7
Taiwan	5.8	-2.2	4.2	3.1	3.3	2.7	-	-	6.0	5.7
Selected industrial countries										
Euro-12	3.5	1.4	0.7	0.5	1.6	1.3	1.2	1.5	1.8	1.8
Japan	2.8	0.4	0.4	2.6	0.8	1.3	1.4	2.9	4.5	3.4
United States	5.0	1.2	2.4	3.1	3.8	3.5	3.3	4.1	1.1	4.4

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

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

	2000	2001	2002	2003	2004	2005				2004
					Q4	Q1	Q2	Q3	Q4	
Selected ASEAN countries										
Cambodia	-0.8	-0.6	3.2	1.2	6.1	5.9	6.9	6.0	7.3	4.0
Indonesia	3.6	11.5	13.2	8.3	8.6	10.7	10.8	12	17.3	8.3
Malaysia	1.5	1.4	1.8	1.1	2.4	2.5	3.0	3.4	3.4	1.6
Singapore	1.4	1.0	-0.4	0.5	1.7	0.4	0.1	0.5	1.1	1.7
Thailand	1.5	1.7	0.6	1.8	3.1	2.8	5.3	5.6	6.0	2.7
Vietnam	-1.7	-0.4	3.8	3.2	10.7	10	9.2	-	-	8.3
Selected other Asian countries										
China	0.3	0.9	-0.7	1.2	3.2	2.8	1.7	1.3	1.4	3.9
Hong Kong	-3.6	-1.3	-3.0	-2.6	0.2	0.4	0.8	1.4	1.8	-0.4
South Korea	2.3	4.4	2.7	3.5	3.4	3.2	3.2	2.4	2.5	3.5
Taiwan	1.3	-0.01	-0.2	-0.3	1.9	1.6	2.1	-	2.4	1.6
Selected industrial countries										
Euro-12	2.3	2.6	2.2	2.1	2.3	2.1	2.1	2.3	2.4	2.2
Japan	-0.7	-0.6	-0.9	-0.3	0.5	-0.2	-0.1	-0.3	-0.5	Nil
United States	3.3	2.8	1.6	2.3	3.3	3.0	2.9	3.8	3.7	2.7

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

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

	2000	2001	2002	2003	2004	2005				2004
					Q4	Q1	Q2	Q3	Q4	
Selected ASEAN countries										
Cambodia (riel)	3,840.8	3,916.3	3,912.1	3,973	4,034.7	4,027.0	4,054.3	4,134.3	4,160.0	4,016.3
Indonesia (rupiah)	8,421	10,261	9,311	8,577	9,128	9,274	9,550	9,994	-	8,938
Malaysia (ringgit)	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.77	3.78	3.80
Singapore (S\$)	1.72	1.79	1.79	1.74	1.65	1.63	1.66	1.68	1.69	1.69
Thailand (baht)	40.1	44.4	42.9	41.5	40.3	38.6	40.1	41.3	41.02	40.2
Vietnam (dong)	14,168	14,725	15,280	15,510	-	15,809	-	-	-	-
Selected other Asian countries										
China (yuan)	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.14	8.08	8.28
Hong Kong (HK\$)	7.80	7.80	7.80	7.78	7.78	7.80	7.79	7.77	7.75	7.79
South Korea (won)	1,131	1,291	1,251	1,192	1,093	1,022	1,008	1,029	1,036	1,145
Taiwan (NT\$)	31.2	33.8	34.5	34.4	32.9	31.5	31.4	32.3	33.4	33.6
Selected industrial countries										
Euro-12 (euro)	1.09	1.12	1.06	0.89	0.77	0.76	0.79	0.81	0.84	0.80
Japan (yen)	107.8	121.5	125.4	115.9	105.9	104.7	107.4	111.2	117.2	108.2

Sources: International Monetary Fund, *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
					Q4	Q1	Q2	Q3	Q4	
Maize (IUSNo.2)—USA (\$/ton)	88.4	89.5	99.21	105.2	94.4	97.0	96.5	99.9	99.93	122.0
Palm oil—north-west Europe (\$/ton)	310.2	285.7	390.2	443.25	429.0	413.3	421.7	415	431.66	471.3
Rubber—Malaysia (\$/ton)	720.8	602.0	768.3	1050	1238.2	-	-	-	-	1252.2
Rice (Thai 100% B)—Bangkok (\$/ton)	206.7	177.3	196.9	200.9	264.9	295.6	295.7	282.0	286.0	244.4
Soybeans (US No.1)—USA (\$/ton)	193.0	180.7	201.3	241.3	216.5	229.9	290.7	236.35	232.0	288.9
Crude oil—Dubai (\$/barrel)	26.1	22.8	23.9	26.8	35.5	42.6	47.7	57.27	52.99	33.5
Gasoline—US Gulf Coast (cents/litre)	21.1	19.5	19.1	23.0	31.8	34.4	39.7	52.37	42.29	30.9

Sources: Food and Agriculture Organisation and US Energy Information Administration

Economy Watch—Domestic Performance

Main Economic Activities

Cambodia's main economic activities slowed in the last quarter of 2005 compared with the preceding quarter. Private investment, construction and external trade declined, but tourism arrivals increased.

After rising with large investment project approvals in the third quarter, the value of registered fixed asset private investment declined by 71 percent to USD119 m in the fourth quarter. Private investment dropped in all three main sectors, led by a large drop in the industrial sector. Registered fixed asset industrial investment fell by 77 percent to USD82 m, services investment by 36 percent (to USD28 m) and agricultural investment by 13 percent (to USD9 m). However, the total value of fixed asset private investment approvals in 2005, including expansion projects, amounted to USD1095 m, which was about four times the 2004 level. This was due to growth in investment in industry, followed by agricultural and service investments. Four industrial sub-sectors attracted large investments in 2005: oil refining (USD201 m), cement production (USD181 m), mining (USD179 m) and garments (USD152 m).

Construction activities, represented by the value of project approvals in Phnom Penh, have declined since the first quarter of 2005. In the fourth quarter 2005, the value of approvals amounted to USD72 m, 6.1 percent less than in the preceding quarter. This decline was driven by a 72 percent decrease in villa and house construction, while there was an increase of 9.2 percent in flat construction and 33 percent in other types. However, construction activities in Phnom Penh have grown steadily for the past three years. In 2005, project approvals increased by 36 percent to USD359 m from USD264 m in 2004. Of this, flat construction accounted for the largest amount (USD204 m in 2005), a 22 percent increase. In 2005, the value of villa and house approvals also rose by 50 percent to USD46 m, and of other construction by 66 percent to USD109 m.

A decline in total exports, mainly a drop in garment exports, in addition to a rise in total imports, left Cambodia's external trade balance showing a deficit of USD46 m in the fourth quarter 2005, compared to a surplus of USD98 m in the third quarter. Typically, garment exports peak in the third quarter and slow in the fourth quarter. In keeping with this pattern, total exports fell by 12 percent to USD645 m in the fourth quarter. During the same period, total imports rose by 9.3 percent to USD691 m, primarily due to a 22 percent increase in food and beverage imports and an 11 percent increase in vehicle imports.

For 2005, the trade deficit was USD158 m, four and a half times higher than in 2004 when it was USD29 m. Import growth (18 percent increase) more than offset

growth in exports (12 percent) and led to the widening trade deficit. Imports were boosted by a rise in imports of construction materials (41 percent), vehicles (33 percent) and fabric, used and new clothes (17 percent).

By contrast, in the fourth quarter tourism, represented by the number of foreign visitors, grew by 29 percent to 416,000. In 2005, foreign arrivals to Cambodia totalled 1,413,544—34 percent more than in the previous year. Arrivals by air increased by 37 percent to 855,800, of which 51 percent were arrivals at Siem Reap international airport, a 42 percent increase. Moreover, visitors by land and water rose by 30 percent to 557,694 persons. This includes a substantial increase in visitors by land, 79 percent.

Public Finance

The government budget deficit improved in the last quarter of 2005 to KHR195 bn, down from KHR328 bn in the preceding quarter. Government revenue strengthened by 33 percent to KHR828 bn, mainly due to a 27 percent rise in tax revenue and a sharp increase in capital revenue. Total spending during the quarter grew 7 percent to KHR1022 bn, reflecting an increase of 12 percent in current spending, but a decrease of 0.4 percent in capital spending.

In 2005, total government revenues improved by 23 percent to KHR2625 bn, achieving 114 percent of the target for the year. However, total budget expenditure also expanded by 15 percent to KHR3454 bn, reaching 111 percent of the target. This narrowed the budget deficit to KHR828 bn, down from KHR864 bn in 2004.

The increase in total revenues was mainly due to an increase of 17 percent in current revenue and robust growth in capital revenue. This resulted from an improvement in tax collections (21 percent), especially on vehicle imports, which took place in the beginning of 2005, and privatisation of state property at the end of the year. Both current and capital expenditure increased by 13 percent and 18 percent, respectively. Current expenditure on wages increased 11 percent, mostly due to civil service reform measures, as the government had intended to increase the wages of civil servants and the military by 15 percent in 2005.

Inflation and Foreign Exchange Rates

Consumer prices in Phnom Penh in the last quarter of 2005 continued to rise. Prices were 6.6 percent higher than a year earlier in the fourth quarter, compared with 4.6 percent higher in the preceding quarter. Food prices were up 11 percent, compared to 6.0 percent in the third quarter, while transportation and communication cost growth slowed to 10 percent, down from 12 percent in the previous quarter.

Economy Watch—Domestic Performance

The riel exchanged with the US dollar at 4154 riels/dollar in the fourth quarter, a depreciation of 0.5 percent from the third quarter. The riel also depreciated against the Thai baht by 1.2 percent to 101.4 riels/baht. Similarly, the riel lost 0.8 percent against the Vietnamese dong, trading at 26.1 riels per 100 dong in the fourth quarter.

Monetary Developments

Liquidity (M2) at the end of the fourth quarter of 2005 continued to grow, by 0.6 percent from the preceding quarter, to KHR5025 bn, led by a rise of 3.2 percent in riels outside banks. This resulted from a 3.6 percent increase in new riel issues.

On an annual basis, liquidity growth, however, slowed down to 16 percent in 2005, compared to a 30 percent rise in 2004. The main sources of this deceleration were slower growth in net foreign assets, a 14 percent increase in 2005, down from a 19 percent increase in 2004, and in credit to the private sector, an increase of 32 percent in 2005, down from a rise of 36 percent in 2004.

Poverty Situation—Real Daily Earnings of Vulnerable Workers

CDRI's regular quarterly survey of vulnerable workers, conducted during 15 February–3 March 2006, showed a decline in daily earnings for most vulnerable worker groups compared to the same period last year. These included motorcycle taxi drivers, skilled construction workers, garment workers, cyclo drivers, porters, scavengers and small vegetable traders. Among these, motorcycle taxi drivers' and skilled construction workers' earnings declined the most.

The real daily earnings of motorcycle taxi drivers declined by 24.5 percent to 8900 riels, down from 11,800 riels during the same period last year. This decline seemed to be correlated with the number of motorcycle taxi drivers. Ninety-seven percent of interviewed motorcycle taxi drivers perceived that there were more motorcycle taxi drivers in the capital. This view was supported by the same survey, which found that 80 percent of motorcycle taxi drivers were migrants from rural areas. Ninety percent were breadwinners in the family.

Skilled construction workers were found to be the second worst-off group. Their daily earnings declined for a third consecutive month, dropping by 18 percent to 11,750 riels in February, down from 14,400 riels in the same month last year. This decline is likely to have resulted from a smaller number of approved construction projects reported by the Department of Cadastre and Geography of Phnom Penh municipality—a 33 percent decline from February 2005 to February 2006. Further, the survey revealed that 40 percent of skilled construction

workers are single, but most could not save because their earnings were used to support their families back home. The survey also found that 30 percent of skilled construction workers had finished secondary school, while 58 percent had completed primary school and eight percent had no schooling.

The average daily earnings of garment workers also fell, by 0.3 percent, from the same period a year earlier. This could be related to a reduction in overtime work and an increase in the number of temporary workers. Although most of respondent garment workers also complained that they were unable to save on their small and declining incomes, a small proportion said that they could and that they would use their savings for running their own business when they stop working. In general, garment workers spent 2900 riels per day for food, and their total spending of all kinds was about USD33 for the month.

The average daily earnings of cyclo drivers were down to 7900 riels in February. Despite some cyclo drivers mentioning increased earnings, average earnings declined by 8 percent from a year earlier. The increase in the number of tuk-tuks was probably a major cause of the decline. Cyclo drivers worked around 10 hours per day and about 25 days per month and spent 120,000 riels in the month, primarily on food.

Porters' real earnings were 6500 riels per day, a 6 percent fall from the same time last year. Eighty-five percent of porters interviewed reported that their work was temporary and irregular, depending solely on the demand of clients. The survey further showed that most porters migrated from rural areas, where their families experienced food shortages, and about 50 percent were aged between 16 and 25.

The real daily earnings of scavengers were 5000 riels, 7.5 percent lower than in the same period last year. This was attributable to a drop of both quantity and price of rubbish over the surveyed period, combined with the increased number of scavengers arriving from rural areas.

However, the average daily earnings of rice field workers rose to 4100 riels in February, 3.3 percent higher than in the same period last year. This increase was mainly linked to a decrease in the number of rice field workers. Most of those who left went to jobs in the city. According to the survey, 80 percent reported that their earnings increased slightly, although their jobs were temporary. In addition, 50 percent of respondents stated that they had no agricultural land, while 50 percent had land of less than one hectare. Most depended on selling their labour to improve their livelihoods.

Prepared by: Ouch Chandarany and Pon Dorina

Economy Watch—Indicators

Table 1. Private Investment Projects Approved, 1997–2005

	1997*	1998	1999	2000	2001	2002	2003	2004	2005	Q	Q	Q	Q	Q
	USD m													
Private Investment	56	516	89	98	56	389	37	00	32	40	104	91		
Industry	5124	505	186	1094	998	574	1426	14	4188	21	3497	820		
. Garments	97.0	126.5	67.7	35.2	23.0	18.0	74.8	12.7	44.9	23.2	56.5	27.3		
Services	166.5	154.7	222.6	150.0	111.4	143.3	167.7	0.0	53.3	30.0	44.1	28.1		
. Hotels and tourism	41.5	112.0	171.8	79.8	71.9	45.1	118.6	0.0	46.4	0.0	33.6	22.6		
Total	744.5	856.8	449.1	269.2	216.8	239.6	314.1	16.4	475.3	96.1	404.2	119.2		
	Percentage change from previous quarter													
Total	-	-	-	-	-	-	-	-80.0	2,798.2	-79.8	320.6	-70.5		
	Percentage change from previous year													
Total	-	15.0	-47.6	-40.0	-19.5	10.5	31.1	-73.6	650.8	-15.2	392.9	628.1		

*Excluding expansion project approvals. Source: Cambodian Investment Board

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

	1997	1998	1999	2000	2001	2002	2003	2004	2005	Q4	Q1	Q2	Q3	Q4
	USD m													
Villas and houses	17.2	21.2	20.0	16.4	15.9	23.4	20.0	5.5	14.3	6.6	19.2	5.4		
Flats	19.3	227.3	290.5	174.8	167.8	179.9	91.6	46.3	48.6	69.1	41.3	45.1		
Other	221.2	27.0	16.4	14.2	12.6	16.6	87.3	12.4	43.1	28.6	16.0	21.3		
Total	257.7	275.4	326.8	205.4	196.2	219.8	198.9	64.1	106.1	104.4	76.5	71.8		
	Percentage change from previous quarter													
Total	-	-	-	-	-	-	-	-17.7	65.5	-1.6	-26.7	-6.1		
	Percentage change from previous year													
Total	-	6.9	18.7	-37.2	-4.5	12.0	-9.5	28.6	45.5	114.8	-1.8	12.0		

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	Q4	Q1	Q2	Q3	Q4
	USD m													
Total exports	493.4	784.4	941.1	1,056.2	1,268.2	1,453.2	1,708.1	545.1	463.0	515.0	730.0	644.8		
Of which: Garments	227.2	378.0	554.0	962.1	1,202.2	1,355.8	1,628.4	520.3	444.9	497.6	709.8	601.0		
. To US	107.2	74.1	486.0	714.1	840.9	943.4	1,099.8	321.2	312.5	335.9	489.5	408.1		
. To EU	-	-	-	228.1	323.3	356.3	414.7	159.1	89.2	106.0	162.5	145.3		
. To rest of world	120.0	82.0	68.0	19.9	38.0	56.1	113.8	40.0	43.1	55.7	57.8	47.5		
Agriculture	-	-	-	94.2	66.0	97.3	79.7	24.8	18.1	17.3	20.2	43.8		
. Rubber	-	-	-	29.6	25.9	29.7	35.1	12.0	7.3	6.2	9.8	13.4		
. Wood	-	-	-	32.9	22.3	16.0	10.2	2.4	3.3	2.9	2.1	2.0		
. Fish	-	-	-	5.4	6.0	4.3	2.8	4.4	1.5	1.1	0.8	6.6		
. Other	-	-	-	26.2	11.8	47.4	31.6	6.0	6.0	7.1	7.5	21.9		
Total imports	1,094.5	1,112.2	1,237.4	1,417.7	1,501.4	1,674.1	1,824.9	548.1	520.7	666.4	632.3	691.1		
Of which: Gasoline	-	-	-	-	-	26.0	33.2	7.8	10.3	9.3	9.9	10.7		
Diesel	-	-	-	-	-	102.0	109.6	23.5	21.6	25.8	24.6	21.1		
Construction materials	-	-	-	-	-	97.4	80.8	26.5	32.3	37.1	38.7	26.2		
Other	-	-	-	-	-	1,448.7	1,601.3	490.3	456.5	594.2	559.1	633.1		
Trade balance	-601.2	-327.8	-296.3	-361.5	-233.2	-220.9	-116.8	-3.0	-57.7	-151.4	97.7	-46.3		
	Percentage change from previous quarter													
Total garment exports	-	-	-	-	-	-	-	-19.2	-14.5	11.8	42.6	-15.3		
Total exports	-	-	-	-	-	-	-	-18.5	-15.1	11.2	41.7	-11.7		
Total imports	-	-	-	-	-	-	-	4.5	-5.0	28.0	-5.1	9.3		
	Percentage change from previous year													
Total garment exports	188.0	66.4	47.0	74.0	24.9	12.8	20.1	16.0	16.0	3.8	10.3	15.5		
Total exports	27.5	59.0	20.0	12.2	20.1	14.6	17.5	14.6	15.9	4.1	9.2	18.3		
Total imports	-1.8	1.6	11.3	14.6	5.9	11.5	9.0	12.5	13.7	9.9	20.5	26.1		

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

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

	1997	1998	1999	2000	2001	2002	2003	2004	2005	Q4	Q1	Q2	Q3	Q4
	Thousands of passengers													
By air	-	186.3	262.9	351.7	408.4	523.0	456.0	201.5	231.7	169.8	202.8	251.5		
By land and water	-	100.2	104.8	114.7	196.5	263.5	245.0	177.3	148.9	124.0	120.4	164.5		
Total	218.8	286.5	367.7	466.4	604.9	786.5	701.0	378.8	380.6	293.8	323.2	416.0		
	Percentage change from previous quarter													
Total	-	-	-	-	-	-	-	66.1	0.5	-22.8	10.0	28.7		
	Percentage change from previous year													
Total	-16.0	30.9	28.3	26.8	29.7	30.0	-10.9	70.1	49.6	51.6	41.8	9.8		

Source: Ministry of Tourism

Economy Watch—Indicators

Table 5. National Budget Operations on Cash Basis, 1997–2005 (bn riels)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	Q2	Q3	Q4
								Q4	Q1			
Total revenue	880	920	1326	1,528	1,529	1,744	1,765	662.2	551.6	621.9	624.0	827.8
Current revenue	-	-	-	-	1,521	1,728	1,733	657.7	551.3	611.5	609.5	701.6
Tax revenue	596	676	956	1,096	1,096	1,227	1,220	485.7	455.1	466.0	436.2	553.8
Customs duties	348	376	432	376	376	424	395	168.0	129.4	129.7	123.7	189.8
Non-tax revenue	272	204	348	424	424	501	513	172.1	96.2	145.5	173.2	147.8
Forest exploitation	36	20	36	28	29	15	7.0	0.5	1.3	1.5	0.3	0.1
Posts & telecommunications	84	88	108	124	122	123	120	26.3	21.9	32.0	30.9	38.0
Capital revenue	12	36	12	8	9	16	31	4.5	0.3	10.4	14.6	126.3
Total expenditure (on cash basis)	1,260	1,296	1,792	2,332	2,332	2,948	2,757	909.3	706.3	713.7	912.9	1022.4
Capital expenditure	452	368	624	976	977	1,388	1,171	293.5	326.3	315.9	335.4	373.8
Current expenditure (on cash basis)	808	980	1,164	1,356	1,355	1,560	1,586	615.8	380.0	397.8	577.0	648.6
Education and Health	128	132	280	344	343	454	473	290.0	52.5	92.3	202.1	228.4
Defence and Security	420	448	464	404	405	438	411	197.8	74.9	73.9	116.7	185.8
Other ministries	260	332	412	636	637	668	702	130.6	252.6	231.7	258.2	234.4
Overall deficit	-380	-380	-476	-804	-803	-1,204	-992	-247.1	-154.7	-91.9	-288.3	-194.6
Foreign financing	444	268	416	768	766	1,249	886	238.7	266.7	255.7	335.8	292.5
Domestic financing	-64	112	60	36	37	-45	106	8.4	-111.9	-163.9	-47.5	-97.9

Provisional for 2004 and 2005. Source: Ministry of Economy and Finance

Table 6. Consumer Price Index (change from year earlier), Exchange Rates and Gold Prices (period averages), 1997–2005

	1997	1998	1999	2000	2001	2002	2003	2004	2005	Q2	Q3	Q4
								Q4	Q1			
Consumer price index (percentage change from previous year)												
Provinces	-	-	5.8	5.4	0.1	0.9	4.4	23.0	14.3	7.9	3.6	4.1
Phnom Penh	8.0	14.8	4.0	0.8	0.2	3.3	1.1	5.8	5.6	6.4	4.6	6.6
- Inflation	8.0	14.1	7.6	3.4	2.5	1.8	1.5	9.1	7.9	9.8	6.0	10.6
- Transportation	19.5	15.1	3.5	6.6	4.2	0.3	4.9	14.5	12.3	11.1	11.9	10.2
Exchange rates, gold and oil prices (Phnom Penh market rates)												
Riels per USD	-	-	-	3,840.8	3,916.8	3,912.1	3,973.3	4,034.7	4,027.0	4,054.3	4,134.3	4,154.3
Riels per Thai baht	-	-	-	95.8	88.2	91.1	95.8	100.1	104.4	101.3	100.2	101.4
Riels per 100 Vietnamese dong	-	-	-	27.1	26.6	25.6	25.6	25.3	25.1	25.3	25.9	26.1*
Gold prices (USD per ounce)	46	40.4	36	33.3	32.8	36	41.4	47.0	52.6	52.5	55.4	57.0
Diesel (riels/litre)	779	883	1,06	1,105	1,329	1,521	1,508	2,150	2,350	2,500	2,76	2,921
Gold (riels/litre)	1,118	1,378	1,63	1,76	2,113	2,084	2,150	2,950	3,050	3,300	383	3,750

* Data for February 2005. Sources: D R. M.F. N.S. Ministry of Planning, Ministry of Economy and Finance

Table 7. Monetary Survey, 1997–2005 (end of period)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	Q2	Q3	Q4
								Q4	Q1			
KHR bn												
Net foreign assets	1,177	1,726	2,019	2,589	3,080	3,737	4,027	4,797	4,883	5,084	5,391	5,475
Net domestic assets	-114	-496	-576	-759	-876	-849	-698	-467	-385	-455	-397	-450
Net claims on government	54	178	103	3	-75	-119	-128	-209	-252	-343	-404	-421
Credit to private sector	637	655	763	898	936	1,059	1,337	1,817	1,983	2,166	2,386	2,394
Total liquidity	1,063	1,230	1,443	1,831	2,204	2,888	3,328	4,329	4,498	4,629	4,994	5,025
Money	385	543	531	540	609	813	937	1,153	1,198	1,215	1,279	1,323
Quasi-money	678	687	911	1,291	1,594	2,075	2,391	3,176	3,300	3,414	3,715	3,702
Percentage change from previous year												
Total liquidity	16.6	15.7	17.3	26.9	20.4	31.0	15.2	30.0	22.9	20.4	19.8	16.1
Money	17	41	-2.2	1.7	12.8	33.5	15.3	23.0	19.0	16.8	18.6	14.7
Quasi-money	16.3	1.3	32.6	41.7	23.5	30.2	15.2	32.8	20.3	21.7	20.2	16.6

Source: National Bank of Cambodia

Table 8. Real Average Daily Earnings of Vulnerable Workers

	Daily earnings (riels)									Percentage change from previous year		
	2000	2002	2003	2004	2005	2006	2004	2005	2006	2004	2005	2006
	Nov				Feb	May	Aug	Nov	Feb			
Cyclo drivers	7,594	8,975	8,572	7,614	8,527	7,726	7,857	7,768	7,873	-11.2	4.7	-7.7
Porters	6,233	7,044	6,676	6,895	6,933	7,056	6,000	6,473	6,519	3.3	-4.0	-6.0
Small vegetable sellers	5,256	6,566	6,532	6,947	6,385	8,574	5,938	8,385	6,186	6.4	5.4	-3.3
Scavengers	2,718	3,685	3,944	4,446	5,382	5,270	4,335	4,801	4,984	12.7	11.3	-7.4
Waitresses*	2,111	4,365	4,932	4,448	4,470	4,287	4,648	3,893	4,670	-9.8	-2.8	4.5
Rice field workers	4,198	4,304	4,177	4,139	3,997	3,822	4,009	4,224	4,127	-0.9	-3.0	3.3
Garment workers	6,701	8,904	9,577	9,277	9,213	7,235	8,756	8,659	9,184	-3.1	-8.7	-0.3
Motorcycle-taxi drivers	8,610	12,184	10,092	9,204	11,767	11,130	9,406	9,645	8,884	-8.8	14.8	-24.5
Unskilled construction workers	5,399	6,453	6,558	6,382	5,747	8,130	6,069	6,691	5,974	-2.7	4.3	3.9
Skilled construction workers	13,127	12,605	13,111	12,679	14,367	12,320	10,273	11,253	11,750	-3.3	-4.9	-18.2

Notes: 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

Continued from page 20 **CDRI Update**

Cambodians are also moving into key management roles in other parts of the organisation.

It is a major challenge for CDRI that there is not yet a well-developed sector of experienced Cambodian researchers. This means both a constant need for internal capacity building and a vulnerability to lose experienced staff to other organisations and institutes. Yet, when I look around and see CDRI alumni, most notably his Excellency Dr Hang Chuon Naron, the Co-chair of the CDRI Board, and the work they are doing in senior positions elsewhere, I feel it is yet another testament to CDRI's success.

They say that service is its own reward, and I have found that to be truly the case in my work with CDRI. There have been times, especially during the leadership transition in 2003, when it has been a lot of hard work, but I have enjoyed and learned something from everything I have been involved in during these six years. I have valued greatly the stimulating and constructive discussions in the Board meetings and would like to thank all my past and present colleagues on the Board for their contributions. The Board is currently in transition and I know that the new line up is going to provide excellent support and guidance in the coming years.

Most of all, however, I have felt very privileged to be witness to the growing capacity of an inspiring group of young Cambodians making a wonderful contribution to their country's development. I would like to thank them and the management for all I have learned from them.... In conclusion, I would like to wish everyone associated with CDRI, its staff and management, its Board, donors and partners, continued success in the future.

Research

CDRI has recently submitted its initial draft report concerning a study on the Reviewing the Poverty Impact of Regional Economic Integration in the Greater Mekong Sub-region (RETA). CDRI's RETA team recently participated in a workshop at ADB headquarters in Manila to confer with other research institutes from Laos, Thailand, and Vietnam who are also collaborating on this project. In Cambodia, CDRI is working alongside the National Institute of Statistics (NIS). Meanwhile, work on CDRI's two other important poverty-related studies, the Moving Out of Poverty Study (MOPS) and the Participatory Poverty Assessment of Tonle Sap (PPA) continues toward completion.

CDRI has recently been informed by AusAid that its proposal for a Water Resource Management Research and Capacity Building programme has been approved. The 5-year programme will begin 1 July 2006, and will be undertaken in collaboration with the University of Sydney and the Royal University of Phnom Penh (RUPP). The key

government stakeholders in this research are the Ministry of Water Resources and Meteorology (MoRaM) and the Ministry of Agriculture, Forestry, and Fisheries (MAFF). Initial research will focus on the irrigation sector.

CDRI's Development Analysis Network (DAN) team is currently engaged in a region-wide study concerning Pro-poor Tourism in the Greater Mekong Sub-region. CDRI is providing the conceptual and organizational leadership for this project. A regional DAN meeting in Luang Prabang, Laos showed that tourism development policy is an increasingly important component of national poverty reduction strategies. In Cambodia, CDRI is collaborating with the Center for Advanced Studies (CAS) to complete the fieldwork for a case study in Siem Reap.

CDRI introduced a new publication format in March 2006 with the release of four Policy Briefs prepared by the Natural Resources and Environment unit. Each four-page policy brief addresses a specific issue associated with forest management policy and practices in Cambodia. The policy briefs have been issued in both English and Khmer language in order to reach a wider audience. These policy briefs have been well received by government officials, donors, and civil society organizations and will serve as a model for how other research units will prepare similarly high-quality reports. CDRI also aims to publish the second Annual Development Review in September 2006. The ADR will feature seven chapters written by CDRI research staff. The publication of the English language ADR will be accompanied by Khmer-language briefs in order to reach a wider audience among Khmer speaking stakeholders.

Centre for Peace and Development

In the past six months, an assessment tool was developed by a CDRI research fellow to assess training needs. This assessment tool was used for the first time in Kratie province in February, which led to two sessions to train local officials in conflict management. In the Working for Peace 2006 training series, the CPD team has already conducted module 1 of the four modules for 25 participants selected from varied backgrounds. The CPD is also preparing to take stock of needs, modules and locations of training programmes in peace building and conflict resolution.

In the same period, COPCEL (Conflict Prevention in Cambodian Elections) conducted four Copcel Provincial Meetings (Copcelprom) in Kandal, Mondolkiri, Stung Treng and Ratanakkiri, five Copcel Core Meetings (COPCELCOM) and two Copcel Enlarged Meetings (COPCELEM), in which participants could identify and discuss many election issues. The dissemination of COPCEL minutes has helped communicate certain concerns of various actors in Cambodian elections.

Glossary Terms Used in this Issue

Net Present Value (NPV)

Net present value is defined as the sum of discounted benefits minus the sum of discounted costs as described in the formula in the article on page 6.

Discount rate (NPV calculation)

A rate which is used to convert all costs and benefits to a comparable present value.

Total economic value (TEV)

Total economic value is defined as the sum of direct use-values, indirect use values and non-use values.

Deciduous forest

Dry deciduous Dipterocarp forest type where the trees drop their leaves more or less completely every year in the dry season. Most characteristic species are fire resistant and have thick bark. Deciduous forest can be characterized as the most open forest type in the study.

Semi-evergreen forest

A mix of evergreen and deciduous forest where some of the trees drop their leaves during the dry season.

The upper tree story consists of deciduous trees, while the lower story is still evergreen. Semi-evergreen forest can be characterized as a forest type with intermediate volume of trees compared to the other two forest types.

Evergreen forest

Multi-storied forest type where the trees keep their leaves throughout the year. Evergreen forests can be characterized as the most dense forest type in the study.

Cost-benefit analysis (CBA)

An economic tool used to calculate the net present value. It calculates the present value of a stream of costs and benefits in a project, and adds this up to a total net present value.

Forest growth model

A model designed to predicts how different tree species grow in a forest and thereby assessing how much timber can be expected to be harvested at a given time in the future.

Carbon sequestration

The intake and storage of carbon. Trees and plants absorb carbon dioxide, release the oxygen and store the carbon.

Cambodia Development Review—2006 Subscription Rates

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CDRI UPDATE

Some reflections on change and growth at CDRI by Jenny Pearson, Retiring Co-Chair CDRI Board of Directors

Coming to the end of any activity is a time for reflection and so it is for me as my mandate of two terms on the Board of CDRI comes to an end. So many interesting things have happened during the six years that I have served as the Co-chair... In 2000, CDRI had about 40 staff who were embarking on implementation of the Institute's first ever strategic plan. The last of its training programmes in English language had only recently been phased out and the Institute was finding its way building a research programme. At the same time, the Cambodian Centre for Conflict Resolution became the Centre for Peace and Development.

Today things are very different and CDRI has achieved much during these years. It is recognised as the leading research institute in Cambodia, putting high quality independent research findings into the public domain, and making important contributions to the critical public policy debates which concern all who are working for Cambodia's development. This has not always been smooth sailing of course because, as we all know, striving for international standards of excellence in a developing country context presents many challenges. So, while proud of its achievements, CDRI is also aware of its weaknesses and works constantly to find ways to improve its performance.



H.E. Dr Hang Chuon Naron, CDRI's Board Co-chair, thanking the retiring Co-chair Jenny Pearson for her contribution to CDRI's development at a Board reception hosted by Executive Director, Larry Strange.

For me the most significant and exciting developments have taken place in the last two years. The Board has approved an institutional development plan which, when fully implemented, will see CDRI functioning as a professional research institute that can hold its own with any in the world. Within that plan there is a very strong focus on building the capacity of Cambodian researchers. For the first time there is now a clear plan and structure for their development and career progression. I hear the pride in their voices when they introduce themselves as, for example, a Research Associate or Research Fellow, when making their insightful and relevant contributions in public fora – I feel proud of them too. Cambodians now hold the management positions in all programmes, the expatriates having been moved into adviser roles.

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