CURRENCY AND EXCHANGE RATES
Currency Unit – Cambodian Riel

FISCAL YEAR
(January 1 to December 31)
### Abbreviations and Acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AAA</td>
<td>Analytical and Advisory Services</td>
</tr>
<tr>
<td>AAC</td>
<td>Annual allowable cut</td>
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<tr>
<td>AAIEP</td>
<td>Advisory Assistance to Industry for Export Promotion</td>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<td>ADESS</td>
<td>Agricultural Development Support to Sella</td>
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<tr>
<td>AEW</td>
<td>Agricultural Extension Worker</td>
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<td>AFD</td>
<td>Agence Française de Développement</td>
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<tr>
<td>AIC</td>
<td>Agricultural Inputs Company</td>
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<tr>
<td>AQIP</td>
<td>Agriculture Quality Improvement Project</td>
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<td>AMK</td>
<td>Angkor Microfinance Kampuchea</td>
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<tr>
<td>APIP</td>
<td>Agriculture Productivity Improvement Project</td>
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<tr>
<td>AQIP</td>
<td>Agriculture Quality Improvement Project</td>
</tr>
<tr>
<td>ARD</td>
<td>Agriculture and Rural Development</td>
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<tr>
<td>AusAID</td>
<td>Australian Agency for International Development</td>
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<td>ASDL</td>
<td>Agriculture Sector Development Loan (ADB)</td>
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<tr>
<td>ASEAN</td>
<td>Association of South East Asian Nations</td>
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<tr>
<td>BAMS</td>
<td>Bureau of Agricultural Materials and Standards</td>
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<tr>
<td>CAEEP</td>
<td>Cambodia-Australia Agricultural Extension Project (CAAEP)</td>
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<tr>
<td>CAR</td>
<td>Council of Administrative Reform</td>
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<td>CARDI</td>
<td>Cambodia Agricultural Research and Development Institute</td>
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<tr>
<td>CAS</td>
<td>Country Assistance Strategy</td>
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<tr>
<td>CCs</td>
<td>Commune Councils</td>
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<td>CDC</td>
<td>Council for the Development of Cambodia</td>
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<td>CEDAC</td>
<td>Centre d'Etude et de Développement Agricole Cambodgien</td>
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<td>CIAP</td>
<td>Cambodia IRRI Australia Project</td>
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<td>CIDA</td>
<td>Canadian International Development Agency</td>
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<td>CLP</td>
<td>Council for Land Policy</td>
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<td>CDRI</td>
<td>Cambodia Development Resource Institute</td>
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<tr>
<td>COM</td>
<td>Council of Ministers</td>
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<td>CSES</td>
<td>Cambodia Socio Economic Survey</td>
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<td>C/SF</td>
<td>Commune/Sangkat Fund</td>
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<td>DAE</td>
<td>Department of Agricultural Extension</td>
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<tr>
<td>DANIDA</td>
<td>Danish International Development Assistance</td>
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<td>DAO</td>
<td>District Agricultural Offices</td>
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<td>DFID</td>
<td>Department for International Development (UK)</td>
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<td>DoF</td>
<td>Department of Fisheries</td>
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<tr>
<td>EBA</td>
<td>&quot;Everything But Arms&quot; EU Initiative</td>
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<tr>
<td>EC</td>
<td>European Community</td>
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<td>ECHO</td>
<td>European Commission Humanitarian Office</td>
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<td>EEZ</td>
<td>Exclusive Economic Zone</td>
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<td>EMT</td>
<td>Ennien Moulethan Tchonnebat (&quot;Local rural credit&quot;)</td>
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<tr>
<td>ESPP</td>
<td>Education Sector Support Program</td>
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<td>EU</td>
<td>European Union</td>
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<td>Food and Agriculture Organization</td>
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<td>FDI</td>
<td>Foreign District Investment</td>
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<td>Department of International Development Co-operation (Finland)</td>
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<td>FRMR</td>
<td>Fund for the Repair and Maintenance of Roads</td>
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<td>FWUC</td>
<td>Farmer Water User Community</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GREC</td>
<td>Groupe de Recherche et d'Échanges Technologiques</td>
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<td>GTZ</td>
<td>Deutsche Gesellschaft für Technische Zusammenarbeit GmbH</td>
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<tr>
<td>ha</td>
<td>hectare(s)</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
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<td>IFAPER</td>
<td>Integrated Fiduciary Assessment and Public Expenditure</td>
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<td>IFSR</td>
<td>Independent Forestry Sector Review</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IP</td>
<td>Indigenous People</td>
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<td>IPM</td>
<td>Integrated Pest Management</td>
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<td>IRAM</td>
<td>Institut de Recherches et d'Applications des Méthodes de Développement</td>
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<td>IRCC</td>
<td>Institute for Rubber Research of Cambodia</td>
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<td>IRRI</td>
<td>International Rice Research Institute</td>
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<td>JICA</td>
<td>Japan International Cooperation Agency</td>
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<td>LADIT</td>
<td>Landlessness and Development Information Tool</td>
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<td>LASED</td>
<td>Land Allocation for Social and Economic Development</td>
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<td>LBAT</td>
<td>Labor-based appropriate technology</td>
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<td>LIL</td>
<td>Learning and Innovation Loan</td>
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<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>LMAP</td>
<td>Land Management and Administration Project</td>
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<tr>
<td>MAFF</td>
<td>Ministry of Agriculture, Forestry and Fisheries</td>
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<td>MEF</td>
<td>Ministry of Economy and Finance</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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<td>MFI</td>
<td>Micro-Finance Institution</td>
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<td>Micro Finance Organization</td>
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<td>MIME</td>
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<td>MLMUPC</td>
<td>Ministry of Land Management, Urban Planning and Construction</td>
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<td>MOC</td>
<td>Ministry of Commerce</td>
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<td>MOE</td>
<td>Ministry of Environment</td>
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<td>MOEY</td>
<td>Ministry of Education, Youth and Sports</td>
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<td>MOI</td>
<td>Ministry of Interior</td>
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<td>MOWVA</td>
<td>Ministry of Women's and Veterans' Affairs</td>
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<td>MOWRAM</td>
<td>Ministry of Water Resources and Meteorology</td>
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<tr>
<td>MPWT</td>
<td>Ministry of Public Works and Transport</td>
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<tr>
<td>MRC</td>
<td>Mekong River Commission</td>
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<td>MRD</td>
<td>Ministry of Rural Development</td>
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<td>MTEF</td>
<td>Middle-Term Expenditure Framework</td>
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<td>NAHPIC</td>
<td>National Animal Health and Production Investigation Center</td>
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<tr>
<td>NBC</td>
<td>National Bank of Cambodia</td>
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<tr>
<td>NCDM</td>
<td>National Committee for Disaster Management</td>
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<td>NDMP</td>
<td>National Disaster Management Policy</td>
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<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>NIS</td>
<td>National Institute of Statistics</td>
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<tr>
<td>NPRS</td>
<td>National Poverty Reduction Strategy</td>
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<tr>
<td>O&amp;M</td>
<td>Operations and Maintenance</td>
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<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tr>
<td>ODA</td>
<td>Official development assistance p.a. per annum</td>
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<td>Priority Action Program</td>
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<td>PDAFF</td>
<td>Provincial Department of Agriculture, Fisheries and Forestry</td>
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<td>Programme de Réhabilitation et d'Appui au Secteur Agricole du Cambodge, Phase II (EU)</td>
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<td>Provincial Rural Development Committees</td>
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<td>PRIP</td>
<td>Provincial and Rural Infrastructure Project</td>
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<td>PSIA</td>
<td>Poverty and Social Impact Assessment</td>
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<td>RDB</td>
<td>Rural Development Bank</td>
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<td>RGC</td>
<td>Royal Government of Cambodia</td>
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<td>RILGP</td>
<td>Rural Investment and Local Governance Project</td>
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<td>RPO</td>
<td>Rural Producers Organization</td>
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<td>RPRP</td>
<td>Rural Poverty Reduction Program (IFAD)</td>
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<td>RSSN</td>
<td>Rural Sector Strategy Note</td>
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<td>SAC</td>
<td>Structural Adjustment Credit (World Bank)</td>
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<td>SEDP</td>
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<td>Swedish International Development Agency</td>
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<td>SME</td>
<td>Small and Medium Enterprise</td>
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<tr>
<td>TA</td>
<td>Technical Assistance</td>
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<td>TWG</td>
<td>Technical Working Group</td>
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<td>UNDP</td>
<td>United Nations Development Program</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Economic and Social Commission for Asia and the Pacific</td>
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<tr>
<td>VAHW</td>
<td>Village Animal Health Worker</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<tr>
<td>WTO</td>
<td>World Trade Organization</td>
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Recovery from three decades of conflict, over this last decade, Cambodia has undergone dramatic economic, political, and social transitions. Cambodia experienced rapid institutional changes as it restored peace, moved from a centrally planned to a market-oriented economy, and moved from isolation to regional and global integration. In this context, the 2002 and 2003 local and national elections, the sustained 6 percent economic growth rate of the last decade, and the accession to the World Trade Organization constitute major achievements.

Cambodia has achieved political and macroeconomic stability and has initiated key structural reforms. Nevertheless, Cambodia’s economy remains vulnerable, and economic growth has not translated into widespread poverty reduction. With a GDP per capita of US$280 and social indicators showing little progress since the 1960s, Cambodia remains one of the poorest countries in the world. The legacies of war—the losses in physical and social capital, depleted human capital, and the remaining land mines—will continue to challenge the country’s overall development in the short and medium terms. In addition, the country’s small and open economy is faced with the challenge of establishing institutions and infrastructure that will allow it to realize the benefits and mitigate the risks of regional and global integration, in an increasingly competitive regional environment.

To a great extent, progress will depend on achievements in rural areas. Ninety percent of Cambodia’s poor live in rural areas. Over the last decade, gaps between rural and urban areas have deepened, and little progress on overall poverty reduction has been made. Thus, the general consensus is that more inclusive growth and progress on poverty reduction will depend largely on addressing the key constraints faced by the rural economy. The government’s National Poverty Reduction Strategy (NPRS, 2003–2005) recognizes the need to deepen and accelerate reforms and to focus the limited resources on four pillars: agriculture and rural development, education, health, and infrastructure. Although both the government’s Second Socioeconomic Development Plan (SEDP II, 2001–2005) and NPRS have identified general priorities for the rural sector, more work is needed to develop concrete programs to revitalize the rural economy. To maximize impact, these plans need to start with a clearer and more strategic articulation of priority actions that link reforms and investments to available resources, improve the focus on outcomes and results, and strengthen the coordination between stakeholders.

The World Bank was asked to contribute to this process through further analytical work, in particular by articulating its proposals in a Rural Sector Strategy Note (RSSN). The first phase of the work led to the preparation of a draft Note (March 2003–March 2004). The second phase (March 2004–May 2005) enabled the government, donors, and other partners to discuss the draft Note and led to the preparation of this document as a contribution to the ongoing dialogue around strategic priorities to develop rural areas and specific actions to reach agreed results.

The purpose of this Note is to provide a broad framework to explore options for Cambodia’s future directions for rural development with the government, donors and other development partners. In addition, this Note informed the preparation of the World Bank’s new Country Assistance Strategy (CAS), which was developed as a joint exercise with the Asian Development Bank (ADB) and the United Kingdom’s Department for International Development (DFID). The Note provides a profile of existing conditions in the rural sector, and highlights areas for priority attention to achieve broad-based and healthy growth rates sufficient to enable the rural sector to continue contributing significantly to rural and non-rural incomes and employment.
The note is organized in three main parts. Part I provides an overview of the performance of Cambodia's rural economy. Part II reviews the key issues affecting the rural sector and proposes elements of a pro-poor agriculture and rural development strategy. Part III discusses cross-cutting issues affecting the delivery of results, as well as proposals for follow-on activities to this Note.
Acknowledgements

This report was prepared by a team led by Marianne Grosclaude, and consisting of Louise Scura and Stephen Mink, with contributions from Wael Zakout, Malcolm Childress and Keith Bell (land), William B. Magrath and Peter Jipp (forestry), Douglas Olson and Mei Xie (water management), Idah Psawaryi-Riddihough (natural hazard management), Ronald Zweig (fisheries), Steven Schonberger (natural resource management), Andrew Goodland (agribusiness, off-farm rural employment), Philippe Boyer (agriculture), Christina Malmberg Calvo (rural infrastructure), and Richard Burcroft. Steven Schonberger and Mudita Chamroeun facilitated the consultation process in Cambodia, with the help of James Brew (IFC) as regards the private sector. The team was supported by Evelyn Bautista-Laguidao and Cecilia B. Tan-Yap in Washington DC, and Amara Khiev in Phnom Penh.

Background papers for the report were prepared by Kent Helmers, John Gibson and Pia Wallgren (sources of income of rural households), Olga Torres (rural finance), Peter Millington (water management), Joseph Ernstberger and Liu Xueming (sources of growth), Christian Castellanet (agricultural extension), Bruno Vindel and Emmanuel Pousse (deconcentration of agricultural services).

The report benefited from comments from its peer reviewers: Gershon Feder (DECRG), Dina Umali-Deininger (SASAR) and Louise Bevan (Consultant), and from detailed comments from Kazi Mahbub Al-Matin, Chorching Goh (EASPR), Magdi Amin (EASFP), Imogene Jensen (EASTR), Luiz Tavares (EASUR), Gillian Brown (EACTF), Glen Morgan (EASES), Rebecca Sekse (EASEG), Chandrasekar Govindarajalu (ENV), Rohit Khanna (ENVGC), Eric Haythorne (LEGPS), Zhi Liu (EASIN), and James Brew (IFC). Helpful guidance was also received from Nisha Agrawal (Country Manager, EACSF), Homi Kharas (Sector Director, EASPR), Mark D. Wilson (Sector Director, EASRD) and Hoonae Kim (Sector Manager, EASRD).

The team extends its thanks to H.E. Keat Chhon, Sr. Minister of Economy and Finance, and H.E. Hang Chhon Naron, Secretary General of the Ministry of Economy and Finance, who supported and coordinated the consultation process with government agencies and other stakeholders; and to H.E. Chan Tong Yves, Secretary of State, Ministry of Agriculture, Forestry and Fisheries, H.E. Im Chhun Lim, Minister, Ministry of Land Management, Urban Planning and Construction, H.E. Sok Siphana, Secretary of State, Ministry of Commerce, H.E. Veng Sakhon, Secretary of State, Ministry of Water Resources and Meteorology, and H.E. Ly Thuch, former Minister, Ministry of Rural Development, for the time they devoted to collect and provide feedback on behalf of their respective ministries. We would also like to acknowledge valuable comments and contributions from government agencies in Phnom Penh and in provinces, from the donor community, including those received through the joint Government-Donors Technical Working Groups, and from the many representatives of the private sector, research institutes and NGOs, who contributed their views and feedback on the initial drafts.

The document has been edited by Alicia Hetmer, and a Khmer translation, available on the World Bank Group’s website (http://www.worldbank.org/easrd), has been prepared by Tia Savora.
Profile of Existing Conditions and a Vision for Rural Development

1. *While Cambodia’s economic growth has been moderately strong over the past decade, this growth has been concentrated in urban areas and in a few, vulnerable activities.* The Cambodian economy has signs of fundamental weaknesses: the base of growth is narrow and is concentrated in the manufacturing and tourism sectors, which accounted for much of the growth since 1993. The rural-urban income gap is widening due to the urban bias of the growth to date and the slow growth in rural incomes. Agriculture, which is focused predominantly on subsistence rice production, has experienced relatively modest growth, with productivity of land and labor well below regional comparators. Nonetheless, the broader agriculture sector, including direct harvesting of natural resources such as fish and forest products, is still Cambodia’s single most important source of employment and livelihoods for approximately 70 percent of the country’s population. However, current trends indicate that the sector’s ability to continue to contribute in this manner is limited, and the amount of new employment outside agriculture generated by the growth in the manufacturing and tourism sectors has been very limited.

2. *A robust rural economy and the income growth and employment that it will generate are paramount for the achievement of Cambodia’s economic and social goals.* Cambodia continues to experience rapid population growth and weak absorption of labor by other economic sectors. These two factors combine to indicate that rural population growth will continue, at least in the short and medium terms, to need to find productive engagement largely in rural activities. If population growth continues at approximately 2.5 percent annually, and rapid growth in employment opportunities outside the agriculture sector does not occur, most of the 250,000 people joining the workforce each year will have to be supported by the broad agricultural sector, including harvesting natural resources. Given the limited alternative economic opportunities, one important corollary will be increased pressure on the land, forest, and fishery resource base as rural households seek their livelihoods.

3. *Cambodia is one of the two countries in the region (together with Lao PDR) in which the agriculture sector represents the largest share both GDP and employment. Nonetheless, the performance of Cambodia’s agriculture sector has been disappointing.* Its agricultural growth lags behind that of neighboring countries, and significant productivity gaps separate Cambodia from other major agricultural producers and exporters in the region. While the government intends to rely on private sector investments and agriculture as the two engines of economic growth, Cambodia is poised to enter the WTO at a time that its agricultural exports and private investments in agro-industries have been decreasing over the past years.

4. *Rural livelihoods face numerous and high risks that limit rural incomes. The result is the predominance of subsistence agriculture and dependence on common property natural resources, especially for the poorest households.* Rural households operate in a risky environment in which the incidence of shocks and crises—floods; crop and animal losses through disease; health crises; and land grabbing by powerful groups or individuals—is high. Subsistence agriculture is still prevalent and harvesting natural resources remains the main safety net for poorer households. Faced with low and seasonal agricultural revenues, rural households also are constantly looking for work or other income-generating activities, the majority of which will be temporary and poorly rewarded.
5. **Significant improvements in how natural resources are managed are essential to support rural growth based on both extending areas under agricultural production and ensuring sustainable availability of natural resources.** The current natural resources management framework has provided very limited benefits in terms of rural growth and poverty reduction, and there are several indications of decreasing availability of resources. Both intensification and extensification of agricultural activities will put additional pressures on the resource base. Some measures have been taken to transfer use rights from large-scale commercial interests to direct government and community control. However, this transfer has not been accompanied by development and implementation of effective management systems that ensure the access of rural households to these resources. In addition, increasing land available to the landless and smallholders involves a complex process of reducing large land holdings as well as the potential conversion of degraded forest, flood plains, and other land with multiple uses. To better manage the resource base, including the sustainable conversion of land, the government will have to improve the resource information base, establish viable land-use planning mechanisms, and develop socially acceptable mechanisms for allocating use rights to farmer households. More generally, secure access to natural resource assets will be an essential anchor to broad-based rural growth and reduction of vulnerability.

6. **Increased transformation of the smallholder agricultural sector away from subsistence toward greater commercial orientation, including regional specialization, will be essential to improve productivity and incomes of farmers, and thereby accelerate agricultural growth and poverty reduction.** Cambodia has achieved overall rice self sufficiency, although there are still localized deficit areas. While attention to food security needs will continue to be important in some areas, particularly as regards nutritional balance, there is scope to move to more specialization and market orientation. However, the pace of this shift will depend on rural households’ perception of the progress in addressing risks associated with greater dependence on markets for basic needs and incomes. Reducing rural households’ vulnerability consists of a number of elements, ranging from improving land tenure security, better managing natural hazards (for example, floods), reducing the burden on producers of informal road passage and market access fees, and deepening markets through such measures as cost-reducing infrastructure investments and facilitating competition in market chains.

7. **Increased productivity and specialization also will require rural producers to have improved access to information and technology.** Rural producers’ access to information and technology are important for regional specialization in agricultural production and to achieve the production potential revealed by existing low crop and livestock yields. *The development of agricultural research and extension capacity, which began 15 years ago, remains dependent on donor funding.* In view of capacity and budget constraints in the public sector, it will be essential in this process for the government to focus on the key public role and foster the appropriate involvement of private providers. Confronted by the combined challenges of balanced intensification, diversification, and regional specialization, an approach based on *multiple service providers* likely will deliver results more quickly and sustainably than focusing on building public extension service capacity. Furthermore, advisory services to farmers will need to be complemented by access to financial services tailored to their needs and access to quality inputs.

8. **While progress has been made, basic services and infrastructure are critically lacking.** Access to infrastructure is very closely tied to the growth of the rural economy, linking producers to market, reducing the costs of production inputs, increasing the competitiveness of Cambodia’s exports, and promoting private sector investments in rural areas. Despite significant investments over the past decade, rural areas are underserved by basic social, economic, and infrastructure services, and lag behind neighboring countries in most areas. Formal or semi-formal financial
services, and lag behind neighboring countries in most areas. Formal or semi-formal financial services do not serve the majority of rural areas. Education and health infrastructure and services also are under-developed by regional standards, increasing rural households' vulnerability and limiting their access to economic opportunities.

9. **Improvements in basic social services and infrastructure, as well as the broader business environment, also will support the development of off-farm activities contributing to rural economic growth.** Non-farm rural economic activity, mostly informal, already makes a large contribution to rural household incomes. Income diversification serves as both risk management and income generation for households. Rural households are involved in a broad range of activities that include agriculture; construction; transportation; factory work, services, and government work as regards wage labor; or in micro-businesses. These last include making processed foods for sale; providing services; petty trading in agricultural produce, fish, and livestock; and making and trading manufactured goods.

10. **A vision to develop rural areas.** This Note recommends a set of strategic reforms designed to stimulate on-farm and off-farm development in rural Cambodia. These reforms would be in policy, institutional capacity at both the central and local levels, and reorientation of public investment. The strategy emerges from a vision of the desirable and the possible: a Cambodian rural sector in which:

- There is good local governance, and local communities are involved in key development and resource allocation decisions.
- Access to productive natural resources is fair and transparent, and activities involving the use of natural resources are sustainable.
- Credit is available for on- and off-farm investment and can be secured by fixed assets including land.
- Adequate development of labor-absorbing activities in the industrial and services sectors improves farm household incomes through full- and part-time off-farm employment opportunities, and the number of people working on farms and completely dependent on subsistence farming and informal activities declines.
- Farm productivity and farm incomes increase.
- The incidence of catastrophic household shocks is reduced, with households better able to mitigate and manage risks.
- Diversification into other crops and products occurs as farmers freely respond to changing market prices and unbiased incentives.
- Farming develops in different regions of the country according to the differing potential of areas.
- Economic development is spread more evenly throughout the country, and the rural-urban income gap narrows.

**Key Strategic Elements**

11. The Second Socioeconomic Development Plan (SEDP II, 2001–2005), the National Poverty Reduction Strategy (NPRS, 2003–2005), and, more recently, the new government's "Rectangular Strategy," which will serve as the basis for the preparation of the National Strategic Development Plan 2006–2010, provide general directions to agencies involved in the development of rural areas. These general directions remain to be turned into a full-fledged, coherent strategy to develop rural areas. To contribute toward the achievement of the MDGs, and to ensure sustained
growth of the rural economy while ensuring that the benefits of agricultural and rural development are widely shared by rural households, including the poorest, the following key strategic orientations are proposed. Specific priority actions, developed under Part II of this Note, also are summarized in the matrix attached at the end of this executive summary.

12. **Both the legal framework and technical management systems for natural resources will have to be strengthened in the short run.** The legal framework governing land, forestry, fisheries, and water is incomplete. Compounded with weak enforcement of existing laws and regulations, this incomplete legal framework limits the security of access by rural households, adds to the uncertainty of the business environment, and increases the scope for rent-seeking behavior by natural resource managers and users. Management systems that strengthen local accountability while ensuring that broader and longer term sustainability concerns are respected are urgently required to improve the management of resources currently being exploited as de facto open access areas with little or no protection of customary and household access rights. Priorities include:

- Improving land tenure security—particularly for the poor and disadvantaged groups—through land titling, while increasing access to land for the landless and land-poor and addressing the root causes of landlessness.
- Implementing marine and freshwater management systems that ensure access of fisheries-dependent communities while maintaining sustainability of stocks.
- Implementing a combination of forest management systems that permit the realization of local community, broader economic growth, and biodiversity and other conservation benefits with emphasis on enforcement mechanisms based on transparency and both local and higher level accountability.
- Developing and piloting area-based water management systems to reduce vulnerability to floods and droughts, allow for intensification of farming systems, and ensure sustained and good quality water supply services.

13. **A combination of improvements in output and input markets, as well as policies and investments to support diversification and intensification of production, are needed to enable rural economic growth to reach a minimum of 5 percent to 6 percent p.a. and match the needs of a growing rural labor force.** Compared to current sector performance, this is a high growth rate, and increasing rice productivity will go only so far toward meeting it. Achieving a higher growth rate will require diversification away from rice, which for the most part must be market driven and, to a significant extent, export oriented. Farmers’ and agribusiness competitiveness and integration with global markets is limited by low productivity, weak production and marketing infrastructure, and other institutional factors (such as corruption) that raise the costs of conducting business and inhibit efficient transmission of signals from markets to rural producers, transporters, processors, and Cambodia’s nascent rural financial markets. To address these issues, this Note argues that deep reforms are needed in agriculture sector management, starting by articulating a clear program for agricultural development that focuses on (1) improving the delivery of quality, demand-driven agricultural services and (2) addressing high transaction costs in marketing chains.

14. **Policies and incentives remain to be developed, in consultation with farmers and the private sector, to enhance the supply response in traditional outputs such as rice, livestock and fish; and to facilitate diversification** in production and value-added processing, as well as determining the factors that will enable the rural poor to capture a larger share of the additional value generated from rural-based production. Options exist (and examples are emerging in
Cambodia) for pursuing a strategy of pro-poor rural growth through market-led diversification, including contract farming and marketing associations. However, these require substantial changes in the rural investment climate and the organizational structures linking rural producers with processors and the market.

15. **Additional investments in basic infrastructure and social services, as well as improved access to financial services, will be critical to support rural economic growth:**

   - Additional investments are needed in basic education, particularly to increase completion rates of girls in rural areas. Investments that improve general health—particularly of women, who account for over 50 percent of agricultural labor—and reduce the cost of health services, can reduce a major source of household vulnerability.
   - Improved access to roads, electricity, and potable water supply will increase opportunities for market access and provide opportunities to develop non-farm activities.
   - Improved access to a broader range of financial services, tailored to the needs of rural households, will reduce the vulnerability of these households and will be needed to support the diversification of the rural economy.

16. **The diversity of income sources and the significant variations among and within regions, districts, and communes make it clear that there are no generic solutions for rural development.** Rather, the process needs to be locally specific, responsive to the local conditions, and circumstances, and able to maximize the participation of local organizations and populations. Strengthening the participation of local organizations and populations in planning and policy development will contribute to better prioritization of public investments. In addition, the national level needs to support local planning and governance processes by addressing the cross-sectoral policy and institutional issues that affect the rural sector.

**Delivering Results and Next Steps**

17. To deliver results, an elaborated rural development strategy will need to take into consideration several additional elements that both cut across rural space and link it to the rest of the economy. These aspects are horizontal links to other national agendas; institutional capacity constraints that suggest concentrating public sector attention on key roles; and pursuit of selective coordination needs, including of donor support.

18. **Strengthen links to cross-cutting agendas.** Progress on agricultural and rural development depends not only on addressing issues within these domains but also on progressing on important agendas that cut horizontally across sectors. The National Poverty Reduction Strategy (NPRS, 2003–2005) and second five-year Socioeconomic Development Plan (SEDP II, 2001–2005), and more recently the government’s Rectangular Strategy, identify the most important of these agendas. Sectoral progress is recognized to depend on parallel progress in three aspects of improving governance: (1) civil service reform, (2) decentralization and local governance, and (3) anti-corruption. In addition, there is the horizontal agenda of private sector development that underpins the agro-processing value chains and the non-farm rural economy more broadly. Such issues define the enabling environment for rural development. They are key elements to get right for rural development to proceed at the pace needed to bring welfare improvements to rural people.

19. The main responsibility for such issues will reside, in large measure, outside the agencies responsible for agriculture and rural development; however, passive engagement on their part
would be a mistake. First, to be effective, broad directions of reform will need to take root in sector agendas. The alignment of sector agendas will put these rural-focused agencies in the vanguard of benefiting from change. Second, in some areas, agricultural and rural development agencies are defining solutions able to contribute to broader agendas. Examples are improvements to intergovernmental financial transfers, as well as local development planning and implementation, in the context of the recent decentralization reforms. Sector agencies can gain by engaging constructively but will need to improve their institutional capacity to do so.

20. **Concentrate on key public sector roles.** A challenge for the government is selectivity in its focus on building capacity to fill roles in guiding economic development toward efficient and equitable growth. The government has already largely shed activities that still burden the public sector in neighboring countries, such as direct involvement in production and state domination of market institutions. It still faces enormous tasks to provide public goods, address market failures, and provide useful services that the private sector is likely to find unprofitable. Additional roles include creating consensus on implementing and coordinating sector policies that involve conflicting goals. Furthermore, the government has a critical role to fulfill in following principles and employing measures to create good governance. In addition, with the importance of donors in funding support for public investments, there is the additional challenge of coordinating these donor activities to align with national priorities. Limited capacities in government agencies put a premium on selectivity even in the provision of various services that will be important to rural producers as they seek to diversify activities and orient more to market opportunities. Creating the conditions for further private sector development and leveraging the capacity and resources of the private sector to provide the inputs, services and infrastructure needed to revitalize the rural economy would have to be at the core of the rural development agenda.

21. **Focus selectively on coordination needs, including donor support.** Given the multiplicity of government agencies involved in agricultural and rural development, the number of external partners making significant contributions to development financing, and still-emerging core capacities in public functions, there is a premium on government’s focusing selectively on coordination needs. Current efforts for coordination will be most effective if accompanied by stronger government leadership. The 2003 initiative to coordinate donor policy and support that led to the creation of several joint government-donors technical working groups (TWGs), is a good start. Consideration also could be given to ways to consolidate and coordinate the agendas of these groups, thereby enabling a perspective on the overall volume of donor commitments for agriculture and rural development, including its sub-sector composition. Coordination also would provide a venue for aligning donor support more generally to the sector reform agenda for agricultural and rural development in Cambodia.

22. **Next steps: Moving toward a common framework to develop rural areas.** This Note is expected to contribute to the policy dialogue between the government and its partners on the prioritization of economic reforms and investments in rural areas toward defining a common agenda for growth and poverty reduction in rural Cambodia. Consultations on this Note were conducted with the government, and with other stakeholders, including other donors, to ensure balance and accuracy. The Note is not intended to present a comprehensive strategy, since important information gaps and limited engagement with the government to date leave significant work for subsequent stages. Further dialogue would aim to clarify strategic directions with the government, identify priority sub-sectors and information gaps needing further assessment, and determine specific areas in which sufficient knowledge exists to embark on implementing concrete agendas leading to visible results on the ground. The World Bank stands prepared to support this subsequent phase of work in agreement and coordination with the government and its other partners.
Matrix of recommended priority actions:  
Time horizon and available resources

How to read the matrix:

➢ The matrix is not exhaustive; rather, it focuses on critical actions.
➢ Not all programs, projects, and partners are mentioned. This matrix is a “living document” and could be updated regularly to reflect progress towards the implementation of an agreed reform agenda and mobilization of additional resources.
➢ Highlighted in bold italic are actions that will require additional resources (or for which existing resources have not been identified at this stage) and a stronger focus from the government and its partners. Highlighted in black are actions already underway under different initiatives, financed either by the government, NGOs, donors, the private sector, or other stakeholders. The matrix also indicates the Millennium Development Goals (MDGs) to which the proposed agenda most directly contributes.
➢ Actions are different in nature and scope depending on the needs in different areas and of the status of progress in sub-sectors. The actions include policy decisions, institutional reforms, investments, research and study, or a mix of several of them. There is, therefore, a degree of heterogeneity in the list of actions.
➢ For acronyms, please refer to the list at the beginning of this document.
## Land Reforms [MDG 1: Eradicate extreme poverty and hunger MDG 7: Ensure environmental sustainability]

|--------------|------------------------|-------------------------|-------------------------|-----------|----------|
| **Strengthen land management:**  
- Rationalize land classification system;  
- Rationalize economic, fisheries and forestry concession systems;  
- Strengthen land use planning  
- Finalize State land sub-decree  
- Finalize Economic concessions sub-decree  
- Implement Economic Concessions sub-decree  
- Finalize IP land rights sub-decree (ongoing)  
- Implement State land sub-decree  
- **Implement Indigenous People’s land rights sub-decree** |  |  |  | LMAP | MLMUPC, CLP and its member agencies |
| **Land distribution:**  
- Design and implement the social land concession program  
- Land distribution program design informed by PSIA and pilots (ongoing)  
- Implement Social land concessions program |  |  |  | LMAP | Commune Councils (CCs), Provincial governments |
| **Strengthen land administration:**  
- Strengthen land dispute resolution;  
- Expand areas covered by systematic land titling and registration;  
- Revise land transfer structure and taxes & develop property valuation  
- Build capacity of Cadastral Commissions and monitor their performance (ongoing, 24 provinces)  
- Distribute 1 million land titles in 10 provinces and Phnom Penh municipality (ongoing)  
- Strengthen land registration offices in 10 provinces (ongoing)  
- Distribute 1 million land titles in 10 provinces and Phnom Penh municipality (ongoing)  
- **Expand systematic land titling to other provinces**  
- **Strengthen land registration in remaining provinces**  
- (estimated total for the country: 5-6 million titles) |  |  |  | LMAP | NGOs |

**Key parallel reforms and investments:** strengthening contract enforcement, strengthening of the judiciary, development of rural finance services, infrastructure and agriculture support services.
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<tbody>
<tr>
<td>Consolidate forest concession reforms:</td>
<td>Finalize contract restructuring &amp; terminate non complying concessions</td>
<td>Implement State land sub-decree</td>
<td>Implement State land sub-decree</td>
<td>WB LIL, WB SAC, LMAP</td>
<td>MAFF, Council of Ministers, TWG on forestry, Donors (WB, CIDA, etc.), MLMUPC, CLP, Sector agencies, local governments, NGOs, NGOs</td>
</tr>
<tr>
<td>- Complete forestry concession system restructuring;</td>
<td>Finalize/adopt and implement State land management sub-decree</td>
<td>Continue mapping, demarcation, survey and inventory of forest land</td>
<td>Continue mapping, demarcation, survey and inventory of forest land</td>
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<tr>
<td>- Rationalize forest land use;</td>
<td>Accelerate mapping, demarcation, survey and inventory of forest land</td>
<td>Gradually scale-up pilots</td>
<td>Gradually scale-up pilots</td>
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<td>- Improve management of forest areas outside parks and protected areas;</td>
<td>Study options for sustainable management of forest areas outside parks and protected areas</td>
<td>Strengthen capacity of the Forestry Administration at different levels</td>
<td>Strengthen capacity of the Forestry Administration at different levels</td>
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<tr>
<td>- Strengthen capacity to supervise forest concession compliance.</td>
<td>Pilot new management arrangements</td>
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<td>Revisit structure of the forestry sector:</td>
<td>Continue dialogue and study options for local public input into forest management and revenue sharing</td>
<td>Pilots, and scale up ongoing successful initiatives</td>
<td>Continue capacity building of Forestry Administration, local governments and communities</td>
<td>WB LIL, Several community forestry initiatives</td>
<td>MAFF, other government agencies involved in law enforcement, Donors (DFID, GTZ, DANIDA, SIDA, WB, etc.), NGOs, local government and communities</td>
</tr>
<tr>
<td>- Selective focus of “single line of command” arrangements;</td>
<td>Continue to study options for management of forests for local livelihoods and agro-forestry development</td>
<td>Strengthen capacity of forestry administration to implement new service functions</td>
<td>Monitor impact of reforms</td>
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<tr>
<td>- Integrate in provincial rural development arrangements;</td>
<td>Study options to draw in other agencies, local government and civil society into oversight of illegal logging and other forest crimes.</td>
<td>Strengthen local capacity for forest management</td>
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<tr>
<td>- Broaden forest crime reporting and prosecution arrangements.</td>
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<td>Monitor impact of reforms</td>
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<tr>
<td>Facilitate restructuring of wood processing industry:</td>
<td>Conduct mill census and capacity survey</td>
<td>Monitor structural changes in wood processing industry, adjust policy and incentives as needed.</td>
<td>Monitor structural changes in wood processing industry, adjust policy and incentives as needed.</td>
<td></td>
<td>MOC, MAFF</td>
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<tr>
<td>- Study options/incentives for right-sizing of private sector capacities</td>
<td>Study potential for high-quality wood products export?</td>
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Key parallel reforms and investments: strengthening of the judiciary, of the land management framework.
Fisheries Management Reforms [MDG 1: Eradicate extreme poverty and hunger; MDG 7: Ensure environmental sustainability]

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<tbody>
<tr>
<td><strong>Strengthen institutional framework for fisheries management:</strong></td>
<td>* Establish inter-ministerial committee to help coordinate use of aquatic resources; Strengthen the government-donors technical working group. * Finalize / pass Fisheries Law, and review regularly as needed; * Finalize community fisheries sub-decree &amp; other key regulations * Train DOF staff (including provincial and district staff) on new management system * Implement community fisheries sub-decree &amp; other key regulations * Set-up regular monitoring system for fisheries stock to inform policy and investment decisions</td>
<td></td>
<td>APIP (2004)</td>
<td>MAFF, Donors (TWG on Fisheries), NGOs, other relevant agencies</td>
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<tr>
<td><strong>Strengthen fisheries management strategy:</strong></td>
<td>* Assess impact of recent fisheries reforms (ongoing) * Review lessons learnt from pilots * Design a sustainable community fisheries program * Study possible improvements and /or alternatives to current concession system</td>
<td>* Implement sustainable community fisheries management program * Pilot alternative management systems, then scaling up based on review</td>
<td>PSIA-fisheries (DFID)</td>
<td>MAFF, DFID, DANIDA NGOs Communities, Other donors, local governments MAFF, private sector, NGOs, donors</td>
<td></td>
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**Key parallel reforms and investments:** strengthening of the judiciary, civil service reform
### Water management reforms [MDG 1: Eradicate extreme poverty and hunger; MDG 7: Ensure environmental sustainability]

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<tr>
<td><strong>Consolidate the</strong></td>
<td>• Consolidate donor coordination (TWG)</td>
<td>• Regular coordination on water management policies and investments, and monitoring</td>
<td>• Regular coordination on water management policies and investments, and monitoring</td>
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<tr>
<td><strong>institutional and</strong></td>
<td>• Establish cross-ministerial committee to improve coordination on water issues &amp;</td>
<td>of progress and impact</td>
<td>of progress and impact</td>
</tr>
<tr>
<td><strong>policy framework:</strong></td>
<td>monitor agencies cooperation</td>
<td>• Implement recommendations of functional review at central and local level</td>
<td>• Implement Water Law and sub-decrees, and review regularly</td>
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<td></td>
<td>• Develop action plans to guide concerned agencies, with regular</td>
<td>• Implement Water Law and sub-decrees, and review regularly</td>
<td>• Implement with regular monitoring of progress and impact by all stakeholders</td>
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<tr>
<td></td>
<td>inter-ministerial monitoring</td>
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<td></td>
<td>• Functional review of key water agencies (MOWRAM, MIME, MRD)</td>
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<tr>
<td></td>
<td>• Adopt Water Law</td>
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<td>• Publicize law, train staff, implement law</td>
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<td></td>
<td>• Finalize and adopt key sub-decrees through consultations</td>
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<td></td>
<td>• Publicize sub-decrees and train staff</td>
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<td></td>
<td>• Review consistency between policy making, planning and investments decisions in</td>
<td>• Strengthen coordination and consistency with local governance framework</td>
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<td></td>
<td>key water sector agencies and local governance framework</td>
<td>• Improve coordination of Cambodia programs with regional MRC programs</td>
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<td></td>
<td>• Strengthen participation in cross-country initiatives of the MRC</td>
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<td></td>
<td>(including Mekong Water Resources Strategy)</td>
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| Resources          | WB: APIP, EFRP                                                                       | ADB                                                                                 | JICA                                                                                  |
|                    | Donors                                                                              | Key water sector agencies                                                           |                                        |
|                    | MOWRAM                                                                              | MIME                                                                                |                                        |
|                    | MRD                                                                                 | Donor support                                                                       |                                        |
|                    | (ADB, France, Japan, WB)                                                            | (ADB, France, Japan, WB)                                                            |                                        |
| Improve strategic investment planning: | • Clarify selection criteria for priority investments  
• Pilot river basin plan in one priority area (NW Irrigation Project)  
• Strengthen capacity to assess benefits to the poor and design pro-poor policies and investments | • Scale-up by extending to other basins/sub-basins after review of lessons from experience  
• Incorporate and implement water resource management actions at the local level within the context of broader rural development initiatives. |  | ADB (Northwest Irrigation Project)  
ADB  
MIME, MRD, MAFF  
Local communities  
Other stakeholders |
| Mainstream disaster preparedness and mitigation: | • Review and approve the NDMP  
• Train National Committee for Disaster Management (NCDM) in damage assessment, reporting  
• Review experience with community-based hazard management  
• Integrate preparedness and mitigation in sector activities such as land-use planning and infrastructure design | • Allocate adequate resources to implement NDPM  
• Implement NDPM  
• Implement risk management strategy | • Allocate adequate resources to implement NDPM  
• Implement NDPM  
• Implement risk management strategy | APIP  
ADB  
NCDM  
Donors  
NGOs  
Sector agencies |
| Mobilize resources for rural water supply and sanitation: | • Encourage private sector participation through legal and regulatory framework (ongoing)  
• Increase investments in more remote, underserved areas | • Increase investments in more remote, underserved areas | • Increase investments in more remote, underserved areas | WB RILGP  
MIME  
MRD  
Local governments  
Private sector |
### Agriculture sector performance improvement reforms [MDG 1: Eradicate extreme poverty and hunger MDG 7: Ensure environmental sustainability]

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<td></td>
<td>• <strong>Formulate, with TA support, a sector-wide agricultural development program to guide</strong> policy development and investments <strong>• Progressively align resources with agreed programmatic priorities (MTEF)</strong> <strong>• Functional review of MAFF</strong> <strong>• Implementation of new functional organization of MAFF (local and central)</strong> <strong>• Finalize privatization of SOEs in agriculture sector</strong> <strong>• Study options for deconcentration of agricultural services (ongoing)</strong> <strong>• Pilots (deconcentrated agricultural services)</strong></td>
<td><strong>• Implementation of agricultural program and regular updates</strong> <strong>• Progressively align resources with agreed programmatic priorities (MTEF)</strong> <strong>• Implementation of new functional organization of MAFF (local and central)</strong> <strong>• Scaling up to all provinces</strong></td>
<td><strong>• Implementation of agricultural program and regular updates</strong> <strong>• Scaling up to all provinces</strong></td>
<td>ASDL (ADB) APIP (WB), ADESS RPRP (IFAD) CAAEP II (AusAID)</td>
<td>MAFF Donors Other stakeholders MEF ADB, IFAD WB, FAO, GTZ, AFD, AusAID, JICA, CIDA, etc.</td>
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Matrix page 7
<table>
<thead>
<tr>
<th>Strengthen core support services, including private sector involvement:</th>
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<tbody>
<tr>
<td>- Pluralistic agriculture research and extension system;</td>
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<td>- Promote producers' organizations;</td>
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<td>- Food safety and standards;</td>
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<td>- Epidemiology surveillance systems;</td>
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<tr>
<td>- Ag. Trade support services;</td>
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<tr>
<td>- Early warning systems.</td>
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<tr>
<td>• Ag. Extension capacity building in 13 provinces (ongoing)</td>
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<tr>
<td>• Reviews of agricultural extension, IPM systems (ongoing)</td>
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<tr>
<td>• Master plan for agricultural research</td>
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<td>• Agricultural services study</td>
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<tr>
<td>• RPO identification/needs assessment study</td>
</tr>
<tr>
<td>• Develop food standards, regulations, establish institutions,</td>
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<tr>
<td>publicize (ongoing)</td>
</tr>
<tr>
<td>• Capacity building, public information, implementation</td>
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<tr>
<td>• Establish animal epidemiology surveillance system (ongoing)</td>
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<tr>
<td>• Establish plant quarantine/surveillance system (legal</td>
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<tr>
<td>framework, institutions, capacity building)</td>
</tr>
<tr>
<td>• Develop agricultural trade information system</td>
</tr>
<tr>
<td>• Strengthen existing early warning system (see also: natural</td>
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<tr>
<td>hazard mitigation strategy)</td>
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<tr>
<td>• Strengthen agricultural extension system and scaling-up to</td>
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<tr>
<td>all provinces</td>
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<tr>
<td>• Strengthen delivery of core agricultural services,</td>
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<tr>
<td>rationalizing public/private sector involvement</td>
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<tr>
<td>• Pilot support schemes for RPOs</td>
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<tr>
<td>• Strengthen and expand capacity and implementation at the</td>
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<tr>
<td>local level</td>
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<tr>
<td>• Strengthen and expand animal and plant surveillance systems</td>
</tr>
<tr>
<td>• Develop agricultural trade information system</td>
</tr>
<tr>
<td>• Strengthen existing early warning system (see also: natural</td>
</tr>
<tr>
<td>hazard mitigation strategy)</td>
</tr>
<tr>
<td><strong>CAAEP II</strong></td>
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<tr>
<td><strong>ADESS</strong></td>
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<tr>
<td><strong>APIP</strong></td>
</tr>
<tr>
<td><strong>WB (AAA)</strong></td>
</tr>
<tr>
<td><strong>ASLD</strong></td>
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<tr>
<td><strong>EU Livestock Project</strong></td>
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<tr>
<td><strong>MAFF, MOC</strong></td>
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<tr>
<td><strong>MOWRAM</strong></td>
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<tr>
<td><strong>CARDI</strong></td>
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<td><strong>NDMC</strong></td>
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<tr>
<td><strong>AusAID</strong></td>
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<tr>
<td><strong>IFAD</strong></td>
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<tr>
<td><strong>ADB</strong></td>
</tr>
<tr>
<td><strong>FAO, WB, WFP</strong></td>
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<tr>
<td><strong>EU</strong></td>
</tr>
<tr>
<td><strong>Other donors</strong></td>
</tr>
</tbody>
</table>

Matrix page 8
Address commodity-specific constraints through integrated programs and public-private sector partnerships:
- Clarify rice sector strategy;
- Strengthen livestock support services;
- Facilitate the re-orientation of the rubber sector;
- Fisheries commercialization support;
- Cash crops/niche products development.

* Formulate rice sector strategy with TA support & consultations
  * Strengthen and expand the VAHWs system (ongoing; APIP: 4 provinces; upcoming EU livestock project: 5 provinces)
  * Livestock value chain analysis
  * Complete privatization of rubber enterprises (ongoing)
  * Rubber marketing/certification study (ongoing)
  * Smallholder rubber production support program
  * Liberalize rubber marketing / allow establishment of private processing facilities
  * Review experience with rice-fish farming system
  * Address identified constraints to fish marketing and exports
  * Study constraints/potential for diversification & possible options to support development

* Implement specific actions (nature and scale dependent on decision on rice strategy and policy)
  * Strengthen and expand the VAHWs system to all provinces
  * Address key constraints identified in livestock value chain study
  * Integrate farming systems approach, including rice-fish systems, in extension programs
  * Expand support program for smallholder rubber producers
  * Address identified constraints to fish marketing and exports

* Strengthen and expand the VAHWs system to all provinces

APIP
EU livestock project
ASDP
AFD
MAFF, MEF
MOC
Private sector
WB, AusAID
EU, AFD,
ADB
Other donors
NGOs

Key parallel reforms and investments: Civil service reform, land administration and management, water management, rural infrastructure development, private sector development

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Microfinance and rural finance development [MDG 1: Eradicate extreme poverty and hunger]

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<tr>
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</thead>
<tbody>
<tr>
<td>Update rural finance policy:</td>
<td>Improve understanding of rural households sources of income and coping strategies: study service demand and existing supply, coping and cash-flow strategies</td>
<td>Monitor policy implementation and update, including through regular dialogue with MFIs/MFOs</td>
<td>Monitor policy implementation and update, including through regular dialogue with MFIs/MFOs</td>
<td>MEF, NBC, RDB, MFIs/MFOs Sector agencies Donors, NGOs</td>
<td>Private sector</td>
</tr>
</tbody>
</table>

Matrix page 9
<table>
<thead>
<tr>
<th>Facilitate the development of a wider range of finance services:</th>
<th></th>
<th></th>
<th></th>
<th>MEF, NBC, Donors, MFIs/MFOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Simplify the tax burden of MFI</td>
<td>- Implement recommendations of guarantee fund/institution study</td>
<td></td>
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<tr>
<td>- Study modalities for the establishment of a deposit guarantee fund or guarantee institution</td>
<td></td>
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<tr>
<td>Reduce the costs of micro-finance operations:</td>
<td></td>
<td></td>
<td></td>
<td>MEF, Donors, NBC, MFIs/MFOs</td>
</tr>
<tr>
<td>- Study options for the creation of a credit bureau</td>
<td>- Establish a credit bureau?</td>
<td></td>
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</tr>
<tr>
<td>- Reduce currency exchange risks for MFIs/MFOs</td>
<td>- Continue efforts to build capacity of NBC and MFIs/MFOs</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Promote NBC’s plan to transfer money between provinces and to expand the check clearinghouse in provinces</td>
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<tr>
<td>- Promote the emerging Association of MFIs</td>
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<tr>
<td>- Amend the influential shareholder liability requirements</td>
<td></td>
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<td></td>
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<tr>
<td>- Strengthen efforts to build capacity of NBC and MFIs/MFOs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase professionalism of small credit providers:</td>
<td></td>
<td></td>
<td></td>
<td>NBC, Donors, MEF, MFIs association Sector agencies</td>
</tr>
<tr>
<td>- Strengthen supervision capacity of NBC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Raise awareness of public, government, donors on good practices in micro-finance</td>
<td></td>
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</tbody>
</table>

**Key parallel reforms and investments:** Infrastructure, improvement of investment climate, contracts enforcement, legal and judiciary systems
## Rural infrastructure services development [MDG 1: Eradicate extreme poverty and hunger]

<table>
<thead>
<tr>
<th></th>
<th>Time Horizon</th>
<th>Resources</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td></td>
<td>Review the existing set of policies, strategies, institutional arrangements for management and financing of rural infrastructure services, identify gaps and inconsistencies, and develop road map to address them</td>
<td>Better targeted and prioritized investments</td>
<td>Better targeted and prioritized investments</td>
</tr>
<tr>
<td></td>
<td>Strengthen consistency of infrastructure development planning with local and regional development planning</td>
<td>Strengthen local government capacity to prioritize, plan and manage local infrastructure and service delivery</td>
<td>Improve cost recovery in rural infrastructure services</td>
</tr>
<tr>
<td></td>
<td><strong>Enhance contribution of the private sector in service delivery (through access to credit, insurance, ease of getting permits)</strong></td>
<td><strong>Improve cost recovery in rural infrastructure services</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Ensure transport policies support poverty reduction objectives:</strong></td>
<td>Formulate, adopt and implement a national transport policy that addresses rural mobility needs</td>
<td>Implement national transport policy</td>
<td>Implement national transport policy</td>
</tr>
<tr>
<td></td>
<td><strong>Align national policy and rural roads strategy</strong></td>
<td></td>
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</tbody>
</table>
| Improve rural access through maintaining existing road assets and enhancing rural mobility: | **Prepare rural roads inventories and mapping**  
- Ensure adequate link between main road network and local roads  
- Use Labor Based Appropriate Technology (LBAT) for maintenance  
- Review availability, affordability and safety of rural transport services, identify gaps and develop recommendations to fill gaps  
- Involve private sector in provision of road works and transport services | **Prepare rural roads inventories and mapping**  
- Ensure adequate link between main road network and local roads  
- Use Labor Based Appropriate Technology (LBAT) for maintenance  
- Implement recommendations of rural transport services review  
- Involve private sector in provision of road works and transport services | MPWT, MRD |
|---|---|---|---|
| Provide adequate financing for road maintenance and local road/track improvement: | **Reform FMRR to ensure adequate, predictable funding for maintenance.**  
- Develop local government resource base and fiscal transfer system | **Develop local government resource base and fiscal transfer system** | IFAPER follow-up  
MEF |
| Better power supply/electricity coverage in rural areas: | **Develop rural electrification master plan, to guide decentralized investments in rural electrification**  
- Improve access to financing, especially for private rural suppliers  
- Develop concepts of transparency and performance-based subsidies. | **Improve access to financing, especially for private rural suppliers**  
- Develop concepts of transparency and performance-based subsidies. | MIME  
Private sector  
MEF |

**Key parallel reforms and investments:** Decentralization, private sector development, public finance management

Matrix page 12
### Rural education [MDG 2: Achieve universal basic education MDG 3: Promote gender equality and empower women]

<table>
<thead>
<tr>
<th>Enable equitable access to rural education:</th>
<th>Time Horizon</th>
<th>Resources</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase investments in poor and underserved areas</td>
<td>Increase investments in poor and underserved areas</td>
<td>Increase investments in poor and underserved areas</td>
<td></td>
</tr>
<tr>
<td>Develop policies to increase participation in schooling, with specific attention to gender issues</td>
<td>Implement and review policies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Improve quality of rural education:</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Further decentralize education planning and administration</td>
<td>Monitor quality of rural education services</td>
<td>Monitor quality of rural education services</td>
<td>Several ongoing initiatives</td>
</tr>
<tr>
<td>Enhance teacher professional development (salaries, housing, career path)</td>
<td></td>
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<td></td>
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<tr>
<td>Improve the quality of teacher training</td>
<td></td>
<td></td>
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<tr>
<td>Establish a quality assurance and monitoring system</td>
<td></td>
<td></td>
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<tr>
<td>Review curriculum to include topics of relevance to rural communities</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Revise literacy programs:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Increase functional contents of literacy programs to make them more relevant to rural communities</td>
<td></td>
<td></td>
<td>MOEY, rural sector agencies, users, donors, NGOs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Better target disadvantaged groups:</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Design education investments program that address specific constraints/needs of disadvantaged groups: girls, poorer households, ethnic minorities</td>
<td>Design education investments program that address specific constraints/needs of disadvantaged groups: girls, poorer households, ethnic minorities</td>
<td>Design education investments program that address specific constraints/needs of disadvantaged groups: girls, poorer households, ethnic minorities</td>
<td>Several ongoing initiatives</td>
</tr>
<tr>
<td>Train teachers who speak local languages</td>
<td>Train teachers who speak local languages</td>
<td>Train teachers who speak local languages</td>
<td></td>
</tr>
</tbody>
</table>
Rural healthcare [MDG 4: Reduce child mortality MDG 5: Improve maternal health MDG 6: Combat HIV/AIDS, malaria and other diseases]

<table>
<thead>
<tr>
<th>Time Horizon</th>
<th>Improve accessibility and quality of health care services:</th>
<th>Improve affordability of health care services for the poor:</th>
<th>Promote private sector participation:</th>
<th>Resources</th>
<th>Partners</th>
</tr>
</thead>
</table>
| Short-term (2004–06)              | * Improve planning and public expenditure on healthcare facilities, in particular, through better analysis of needs by region  
   * Continue development of primary health care facilities and second referral hospitals | * Strengthen local management capacity  
   * Promote sustainable local funding  
   * Review pricing policy with a view to developing effective targeting mechanisms for the poor  
   * Re-focus on public health and preventive care | * Review experience with the delivery of private healthcare services | | MOH, local governments, users, private sector, NGOs, donors |
| Medium-term (2007–10)             | * Improve planning and public expenditure on healthcare facilities, in particular through better analysis of needs by region  
   * Continue development of primary health care facilities and second referral hospitals | * Strengthen local management capacity  
   * Promote sustainable local funding  
   * Revise pricing policy | * Review policy framework for the provision of private healthcare | | Several ongoing initiatives |
| Long-term (beyond 2010)           | * Continue development of primary health care facilities and second referral hospitals | | * Focus public investments in more remote areas | MOH, private sector, donors |

Cross-cutting issues

<table>
<thead>
<tr>
<th>Key aspects for the rural sector</th>
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</table>
| Public sector management         | * Civil service reform—including providing salaries that will allow to retain qualified staff and to improve service delivery  
   * Public finance management reform—including aligning public resources available for the rural sector with agreed priority actions (MTEF), transparency and predictability of resource allocation |
| Corruption                       | * Reform of the judiciary, and enforcement of existing laws and regulations  
   * Reducing transaction costs along marketing chains  
   * Improving the predictability of contracts |
| Decentralization/Deconcentration  | * Progress with decentralization and deconcentration reforms  
   * Stronger involvement of rural sector agencies in the deconcentration policy dialogue  
   * Continued piloting of deconcentration in rural sector agencies (MAFF, MOWRAM, MLMUPC) |
| Private sector development       | * Implementation of investment climate reforms, including addressing rural investment climate issues  
   * Development of a private sector strategy that takes into account rural SMEs and agribusiness needs |
Part I: Pro-Poor Development and Growth: The Centrality of Rural Development

Past growth has not led to significant poverty reduction.

1. Conducive macroeconomic fundamentals allowed for impressive post-conflict growth rates. Economic growth has been solid, averaging 6 percent during 1994–2001, with the exception of 1998 following the mid-1997 political events. Economic recovery accelerated during 1999–2001, with annual GDP growth averaging 7 percent. Fiscal revenue has improved; inflation has been limited (below 4 percent); and the exchange rate has stabilized. Important structural progress also has been made, with the implementation of the bank relicensing program, the ongoing strengthening of the tax and customs administration, and drafting of key commercial laws needed to meet the requirements of WTO accession.

2. The Cambodian economy, however, remains vulnerable, with growth narrowly based and urban biased, and a weak business environment. The impressive growth performance of the last decade largely reflected a recovery from the past, and has been dependent on a very narrow, urban-oriented base. The growth of the manufacturing sector has been steady at an average 14.7 percent p.a. over the 1993–2001 period, but primarily based in the garment industry. Future prospects are uncertain in view of the expiration of the US-Cambodia bilateral textile agreement at the end of 2004 and China’s entry to WTO. Growth in the services sector, which contributes 36 percent to GDP, has been limited, and heavily dependent on the tourism sector (table 1). Investors’ confidence is limited, and the general business environment is perceived by entrepreneurs as poor, with corruption being the major issue. Agriculture, the most prominent sector both in terms of share of GDP (37 percent in 2001) and share of the labor force (74 percent, Labor Force Survey, 2002), has expanded by approximately 3.5 percent annually in real terms during 1993–2001. However, agriculture experienced large year-to-year fluctuations and contributed little to employment creation.

Table 1. Sector contribution to GDP and employment

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</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>37</td>
<td>3.5</td>
<td>73.7</td>
<td>1.55</td>
<td>78.9</td>
</tr>
<tr>
<td>Industry</td>
<td>27</td>
<td>14.7</td>
<td>8.4</td>
<td>43.29</td>
<td>3.8</td>
</tr>
<tr>
<td>Services</td>
<td>36</td>
<td>1.9</td>
<td>17.9</td>
<td>1.08</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: Ministry of Commerce.

3. Formal off-farm employment is limited, particularly in rural areas. Employment growth in the manufacturing sector has been strong but starting from a very small base. Approximately 220,000 workers (a high proportion of whom are women)—8 percent of the workforce—are employed by the garment industry. Employment creation in the services sector also has been

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2 Agriculture, or the agriculture sector, refers here to the broad range of crop, livestock, forestry, and fisheries activities.
limited over the last decade. In the absence of other opportunities, most of the people entering the labor market remain in rural areas and are counted as part of the agricultural work force with a high degree of underemployment, as reflected in low rural wages.3 Low skills levels further limit young rural dwellers' access to economic opportunities.

4. The high rate of population growth (2.5 percent p.a.) exerts pressure on the economy to create jobs, and the agriculture sector is absorbing most of the new entrants on the job market. One of the most striking figures is the high proportion (55 percent) of the population under the age of 20. This large increment of young people together with a significant number (150,000) of former military are entering the job market with few opportunities to find gainful employment. Some 220,000–250,000 people are entering the job market each year, most of them in rural areas, while at the same time few people will retire. One of the greatest challenges will be to provide productive employment to this rapidly growing labor force. More rapid rural growth will clearly play a pivotal role in generating employment, raising rural incomes, and in reducing poverty in Cambodia. To continue to absorb these new entrants in the labor market, agricultural output and incomes will have to increase on a sustained basis at least on pace with the increasing labor force, which in real terms means at least 5 percent to 6 percent per year. Higher growth rates would be required to also increase real wages. However, the burden of solving the employment issue cannot rest solely on the agricultural sector. Continued emphasis on creating the enabling environment for the rapid growth of the industrial and services sectors is also needed.

5. Growth has benefited primarily urban areas and not led to widespread poverty reduction in rural areas where most of the population lives. The Cambodia NPRS estimates that the incidence of poverty has declined from 39 percent of the total population in 1993–94 to 36 percent in 1997.4 The NPRS also found that, on average, the poor are living close to the poverty line and that, consequently, there is considerable potential for poverty reduction through growth with equity. Conversely, trends could reverse and poverty could worsen with slower growth or an even more constrained distribution of benefits. Reduction in poverty incidence and progress toward reaching the MDGs—both mainly in urban areas—suggest that past economic growth has mostly benefited urban areas, where 15 percent of the population lives, with limited trickle down to the rural economy, and no indication of progress in rural poverty reduction. The GDP per capita in rural areas is estimated at US$119, compared to US$280 nationwide. Ninety percent of the poor live in rural areas and 79 percent of the poor depend on the broader agriculture sector for their livelihoods. Progress in reaching the government’s poverty reduction goals will not be achieved without addressing, head on, several key constraints faced by the rural economy.

Rural livelihoods are limited by lack of opportunities and vulnerability.

6. Dependence on subsistence agriculture is high.5 Cambodia is still a predominantly agrarian society, with 70 percent of the population, and an even higher percentage of the poor (79 percent) engaged in agriculture, and subsistence consumption absorbing approximately 60 percent to 65 percent of agricultural output (FAO 2003). With the poverty line defined on the basis of caloric

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3 Riel 3,500–4,000 per day for agricultural wages, and Riel 3,800–4,200 for non-farm wages (Helmers and others 2003).
4 However, with a population estimated at 10 million in 1993–94 and 11.4 million in 1997, in absolute terms the number of poor has increased over the last decade from 3.9–4.1 million (in absolute terms, a 5 percent increase).
5 Findings in this section are extracted from the “Sources of Income in Rural Areas” background study conducted by Helmers and others 2003, unless otherwise indicated.
intake, food insecurity remains an important aspect of rural poverty. While overall food and rice availability has improved in recent years, and a small rice surplus has emerged, many rural households do not have adequate or reliable access to food supplies. Up to two-thirds of the 1.6 million rural households face seasonal food shortages each year, and 50 percent of children under age 5 are underweight (NPRS). Rice alone makes up 25 percent to 30 percent of the total expenditures of poor households. These figures suggest that agricultural productivity increases targeted to subsistence farmers could have a significant impact in terms of poverty reduction (particularly caloric intake), and facilitate the transition to more commercially oriented farming activities. High geographic variation suggests that problems of storage, transport, and alternative income earning opportunities exist as well.

7. **Exploitation of natural (common pool) resources is a common strategy to complement agricultural incomes from small landholdings.** Since the country’s economy is not yet diversified, land and natural resource assets still play a critical role in rural households’ livelihoods. Improving livelihoods and reducing vulnerability of rural populations are, therefore, critically dependent on the patterns of ownership and access to land and natural resources. Although there are regional variations, in general, land holdings are small with an average 1.5 ha (ha) per household, with half of farms below 0.75 ha (CSES 1999). Average land holding size has been shrinking with population growth, resulting in seasonal or permanent out-migration to cities and less populated areas, and greater dependency on off-farm employment, when available. The poorest households are characterized by little or no access to agricultural land (less than 2 ha in unfavorable locations) and, consequently, a stronger reliance on common property resources to meet subsistence needs. The poorest households also generally have no kinship support, large young families of 5–12 children, few assets (no or one draught animal, few farming implements), food shortage 3–8 months each year, high indebtedness, and typically are unable to repay or borrow additional amounts (ADB 2001).

<table>
<thead>
<tr>
<th>Source of income</th>
<th>Sources of rural household incomes by expenditure quintiles (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>50 54 54 55 37 50</td>
</tr>
<tr>
<td>Of which rice</td>
<td>26 29 28 31 17 26</td>
</tr>
<tr>
<td>Livestock</td>
<td>19 19 18 16 11 17</td>
</tr>
<tr>
<td>Common Pool Resources</td>
<td>21 16 15 12 6 14</td>
</tr>
<tr>
<td>Wages</td>
<td>9 9 11 10 23 13</td>
</tr>
<tr>
<td>Nonfarm</td>
<td>8 12 10 14 25 14</td>
</tr>
<tr>
<td>Transfer, remittances,</td>
<td>12 9 10 9 9 9</td>
</tr>
<tr>
<td>other</td>
<td></td>
</tr>
<tr>
<td>Mean household income (1000 riel/year)</td>
<td>2,553 3,057 3,351 3,875 5,616 3,689</td>
</tr>
</tbody>
</table>

8. **Informal off-farm employment is an important source of income for rural households.** Rural households cope with lack of full time, remunerative economic opportunities by diversifying sources of incomes.⁶ Studies that have tried to quantify the relative importance of

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⁶ Research on sources of income in Cambodia is patchy at best, with few nationwide studies and little detail on many issues critical for the identification of policies and projects to support rural development. The most comprehensive study has been the CSES 1999, although this work has limitations related to the
these sources found that 29 percent to 50 percent of income (cash and in-kind) comes from agriculture; 14 percent to 22 percent from fisheries and forestry-based activities; and as high as 36 percent to 57 percent from business and wage labor. The majority of wage and business revenues come from casual, seasonal agricultural and nonagricultural wage labor, and seasonal micro-business activities; access to steady and remunerative nonagricultural employment is usually observed only for the wealthiest. Rural household members faced with low and seasonal agricultural revenues are constantly looking for work or other income-generating activities, the majority of which will be temporary and poorly rewarded.

9. The overall mix of productive activities that contribute to rural household income is, therefore, very heterogeneous across households and regions. Agro-ecological zones, access to and proximity of markets, and the presence of an agricultural extension worker are correlated with rural households' sources of incomes. Proximity and access to fisheries and forest resources determine their relative contribution to rural livelihoods. Research has found significant positive correlation between proximity to roads and the importance of non-farm economic activities, and between the presence in a village of an agricultural extension worker and agricultural incomes. Opportunities for non-farm employment are better in the south and southeast, where road networks are more developed. Both for access to markets to sell locally produced goods and services, and for access to wage labor, availability of roads, and to a lesser extent water transport, is also an important factor in determining income levels. Women, who constitute the majority of the agricultural labor force (54 percent), participate much less in the non-farm wage income activities, although more in micro-business activities. Ethnic minorities, concentrated in the more isolated and less densely populated areas of the northeast, depend much more on agriculture and natural resources for their livelihoods.

10. The incidence of shocks and crises is extremely common, with 90 percent of households on average subject to a crisis causing income loss within a 1-year period. Income losses are sizeable—nearly 30 percent of total rural household income is lost each year due to household shocks and crises (Helmers and others 2003). Crop failures (due mainly to flood and/or pest damage), illness of household members and high livestock mortality rates are the main causes of catastrophic loss. As a result of repeated crises, indebtedness of rural households is high, contributing to distress sales of land and increasing landlessness. Studies of landlessness indicate that 12 percent to 17 percent of rural households in Cambodia have no land, although this figure varies considerably among provinces, districts, and communes. Female-headed households suffer disproportionately from landlessness. Women are in general more vulnerable to poverty and other risks, with less access to health and education services, agricultural extension, paid employment, and land ownership and other property rights (box 1).

11. Access to formal social protection is likely to remain limited in the near future. Despite increases in government budget allocations for social sector interventions in recent years, implementation of laws and policies related to social protection has been weak, the coverage of experience of the field enumerators and the relatively small (though nationwide) sample size. There are, in particular, gaps in the research with respect to highland and coastal populations and, more generally, on the roles of rice and other field crops, non-farm income, and common pool resources in the incomes of poorer rural households. However, there is general consistency in the broad findings of many of the rural income surveys, which suggests that the research findings are reliable, even though limited in scope and coverage (Helmers and others 2003).

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Research also shows that credit conditions also are worse for the poor, who have to rely more heavily on informal moneylenders and higher interest rates.
existing programs is limited, and resources are insufficient to meet the basic livelihood needs of beneficiaries. Most programs aimed at reducing the vulnerability of the poor are funded by external assistance, which raises questions as regards their sustainability. In the absence of formal mechanisms for managing risks, rural households rely on informal coping strategies ranging from borrowing from money-lenders or relatives, to distress sales of assets (livestock, land), or migration (seasonal or permanent) to cities or other regions.

12. These findings suggest that a strategy to improve rural livelihoods require a comprehensive and complex set of actions, recognizing the dependency of rural households on multiple activities and the need for responses tailored to the diversity of local situations and rural households. Future prospects for sustainable use of land and natural resources, as well as improvements in rural livelihoods, will be shaped by three key factors: (1) the policy and regulatory framework affecting access to and management of key resources, such as land, forests, fisheries, and water; (2) a cohesive strategy for agricultural and rural development; and (3) opportunities for off-farm employment, particularly in rural areas. While focusing on ways to increase economic opportunities in rural areas, whether on farm or off farm, choices should also be guided by the need to reduce the vulnerability of rural households to income crisis, including through safety nets. In view of their extensive participation in the rural economy, and their greater vulnerability and lack of access to opportunities, policies and programs to develop rural areas should ensure that the specific needs of women are addressed (box 1).

**Box 1. Summary findings and recommendations from Cambodia’s Gender Assessment Study**

**Key issues.** Women are even more constrained by unequal access to natural resources and services. They have a major role in agricultural production and a potentially more important role in reducing food insecurity. Women are a minority among beneficiaries of agricultural and rural-livelihoods-related services and assets. High illiteracy rates and the content and location of extension services are two key constraints to improving women’s access to agricultural extension services. Despite a gender-responsive Land Law, women are vulnerable to having their land rights ignored. Rural roads and transport, as well as water supply, and the provision of financial services are priorities for women. Women are under-represented in agriculture sector decisionmaking and the civil service. However, government and donor-supported programs are increasingly responsive to these concerns. The agriculture and rural development section of the NPRS includes gender-specific targets and indicators.

**Recommendations.** (1) Promote decentralized growth and expand efforts to develop employment opportunities in rural areas to limit the negative social impacts of the urban migration of young women. (2) Support the development of small-scale enterprises, which are more likely in the short term to provide employment to women. (3) Develop strategies for upgrading the literacy and skill levels of women. (4) Address the social protection needs of female migrant workers. (5) Develop innovative ways to provide agricultural information and extension services to women. (6) Ensure improved and secure access to land and natural resources for women. (7) Continue investments in locally planned rural infrastructure so that both men and women’s needs are recognized and addressed. (8) Make health services affordable for poor women. (9) Increase women’s participation at the village level.

**Management of land and natural resources is undergoing dramatic changes.**

13. **Demographics and natural resources endowments create specific challenges for different regions.** Cambodia is richly endowed with land; substantial natural resources, notably forests and

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fisheries; and a wide variety of natural habitats and ecosystems, including upland and lowland forests, freshwater wetlands, and diverse riverine areas. However, 70 percent of the population is concentrated on 30 percent of the land, along the lowland corridor from the Thai border in the Northwest to the Vietnamese border in the Southeast. Most land is used for rice cultivation and fishing in the flood plain and riverine areas, with population pressure increasingly threatening the Tonle Sap ecosystem (flooded forest and lake fisheries). The presence of remaining landmines is an additional issue in particular in the Northwest and some of the central and southern provinces. In contrast, dense forest and low population density characterize the North/Northeast and Southwest of the country (see map in annex 3). Transition zones between lowland and uplands are experiencing increasing in-migration and encroachment of farmers on forested areas. Strategies and policies for the management of natural resources would need to recognize these differences and provide responses tailored to regional and local situations: different population densities and different agro-ecosystems.

14. Previous work conducted by the World Food Program (WFP) evaluated the relative importance of different agro-ecosystems (box 2). A rapid comparison of this classification with land-use maps and poverty maps (annex 3) shows that the incidence of poverty is higher in lowland rain-fed and scrub/degraded-forest areas, in which the majority of the population is concentrated. However, UNDP's maps of progress toward meeting the Cambodia MDGs (annex 3) show a different situation, with a clear distinction between the Northern provinces, late on most MDGs, and the rest of the country, in which more progress is being made in reaching some or all the MDGs. Although the quality of the data on which the maps are built may be challenged, the maps support the idea of different regional priorities and comparative advantages.

**Box 2. Results of the WFP Food Economy Zones analysis**

<table>
<thead>
<tr>
<th>Lowland rain-fed areas:</th>
<th>45 districts, 2.9 million people.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The majority of the population relies on a single nonirrigated wet season rice crop as a major food and income resource. Small independent land holdings. Income supplemented by a variety of seasonal activities. Terrain relatively flat and under extensive cultivation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Riverine:</th>
<th>28 districts, 1.7 million people.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The majority of people rely on cash crops, floating or dry season rice, and fishing for food security and income. Population resides next to major rivers or in communes adjoining the Tonle Sap.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urban/market:</th>
<th>17 districts, estimated at 1.3 million people.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population relies on cash income jobs and small business in urban government centers.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scrub/contract labor:</th>
<th>24 districts, 1.2 million people reside in these areas.</th>
</tr>
</thead>
<tbody>
<tr>
<td>People rely mainly on degraded-forest resources and wage labor for income. Limited cultivation of rice, insufficient to meet annual needs. Landless households commonly found in these areas. Vulnerable to reduction of forest resources through exploitation, and isolation from markets and major roads.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Forest:</th>
<th>37 districts, 450,000 people.</th>
</tr>
</thead>
<tbody>
<tr>
<td>People rely mainly on forest products for food and income. Dependent on access to forested areas. Very low densities, fewer than 8 people per square kilometer.</td>
<td></td>
</tr>
</tbody>
</table>

| Mixed: Forest/rice (4 districts, 229,000 people), forest/riverine (3 districts, 122,000 people), forest/scrub (9 districts, 230,900 people), rice/scrub/forest (3 districts, 104,500 people), unclear/diversified (7 districts, 565,000 people). |

*Source: Helmers and others 2003.*
15. Recent changes in natural resource management policies have left vast areas of the country (30 percent to 40 percent of total area) with unclear management arrangements. Following the recent cancellation of nonperforming forest concessions, approximately 1.6 million ha of forest areas have reverted to "forest reserve," for which management arrangements still must be defined. The cancellation of another 1.86 million ha of nonperforming forestry concessions is also under consideration. An additional 1.73 million ha seem to be scrub land, undergrowth, non-wooded land, and similar unused areas not yet declared to be under any specific ownership, control, or use. Additional cancellations of economic concessions above the authorized size under the new Land Law will further increase the reserve of land potentially available for agricultural development. However, the exact use of these areas and potential for development under agriculture or agro-forestry systems has not been assessed (Part II). In the fisheries domain, half of areas previously under concession arrangements (approximately 500,000 ha) were cancelled in 2001, but joint-management arrangements involving local communities have to be further developed. In the short term, sustainable and transparent management arrangements need to be developed to prevent misappropriation and over-exploitation of these resources.

Table 3. Cambodia—Estimates of Land Tenure/Use, 2004

<table>
<thead>
<tr>
<th>Category</th>
<th>Area (million ha)</th>
<th>% share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forests not under concessions</td>
<td>4.7</td>
<td>26.1</td>
</tr>
<tr>
<td>Protected areas/forests</td>
<td>3.3</td>
<td>18.3</td>
</tr>
<tr>
<td>Cultivated areas</td>
<td>2.7</td>
<td>15.0</td>
</tr>
<tr>
<td>Forest concessions</td>
<td>3.1</td>
<td>17.2</td>
</tr>
<tr>
<td>Scrub land, nonwooded land</td>
<td>1.7</td>
<td>9.4</td>
</tr>
<tr>
<td>Towns, infrastructure</td>
<td>1.1</td>
<td>6.1</td>
</tr>
<tr>
<td>Fishing concession lots</td>
<td>0.5</td>
<td>2.8</td>
</tr>
<tr>
<td>Agricultural concessions</td>
<td>0.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Land mines contaminated areas</td>
<td>0.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>18.0</td>
<td>100.00</td>
</tr>
</tbody>
</table>


The performance of the agriculture sector has been disappointing.

16. While agriculture’s contribution to the economy is high by regional standards, agriculture’s performance is lackluster and its growth potential uncertain. The dominant contribution of agriculture to GDP (37 percent in 2001)\(^\text{10}\) and its importance as a source of income and livelihood are artifacts of the undiversified nature of the economy rather than of robust growth in the agricultural sector. In the 1990s, agricultural growth in Cambodia was one of the lowest in the region (figure 1), although performance has improved in recent years. Political unrest, the regional financial crisis in 1998, and severe floods in 2000 all helped reduce growth. Another feature of the sector’s growth performance ctor has been large year-to-year fluctuations. These reflect vulnerability to weather conditions and suggest insufficient investment in the sector and possible over-exploitation of natural resources.

\(^{10}\) This is high for the region and compares with 51 percent of GDP in Lao PDR, 23 percent in Vietnam, 17 percent in Indonesia, 16 percent in China, 15 percent in the Philippines, 8.5 percent in Thailand, and 8.1 percent in Malaysia in 2001.
17. **Growth of the agriculture sector has been led by crop production and fisheries.** Within agriculture, crop production—particularly of rice—has grown faster than population, at approximately 4.8 percent p.a. between 1993 and 2001 (constant 2000 prices). Evaluating the growth performance of the fisheries sector is difficult because of lack of reliable data. However, sources concur in estimating that the contribution of the fisheries sector to agricultural GDP growth has been commensurate with that of the rice sector. Fishery output value is estimated to have grown by 6.0 percent p.a. over 1993–2001. Despite its importance in Cambodia’s farming systems, livestock output value grew at a much lower rate of 2.4 percent p.a., with greater inter-annual variability due to vulnerability to disease and floods. Over 1993–2001, following the suspension of commercial logging in forestry concessions and cancellation of several forestry concessions, crops contributed an average of 19 percent to total GDP growth, fisheries 12 percent, livestock 4 percent; and forestry to a 6 percent decrease.

18. **The productivity of Cambodian agriculture is low,** in terms of both labor and land, with a gross output value estimated at US$200/worker and US$280/ha. There have been productivity gains, from an estimated 1.3 t/ha in the early 1990s to 2 t/ha since 2000. Nevertheless, rice yields remain low compared to neighboring countries’ performance, suggesting room for additional productivity gains. An important structural constraint is low soil fertility in 50 percent of the area under rice cultivation, which also is where the majority of the farming population is concentrated (Nesbitt 1997). Other constraints are the low level of fertilizer use; risks associated with flooding; and the prevalent subsistence orientation of farming systems, which contributes to low investments in agricultural inputs. Furthermore, it should be noted that the low rice productivity is also the reflection of the prominence of lowland rain-fed rice farming systems practiced by approximately 80 percent of farmers. It is estimated that only 17 percent of paddy land benefits

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11 This latest data should be considered with caution although, due to the inclusion of small-scale fishing data only in the late 1990s (not included in previous years, making comparison difficult).
12 Livestock contributes on average to 17 percent of rural households’ incomes (Helmers and others 2003).
13 This compares with a 15 percent contribution to GDP growth by services and 56 percent by industry over the same period.
14 In 2002, 2.6 ton/ha in Thailand, 3.3 ton/ha in the Philippines, 3.5 ton/ha in Lao PDR, 4.4 ton/ha in Indonesia, 4.6 ton/ha in Vietnam, and 6.3 ton/ha in China (FAO).
from water control structures. Productivity of other important crops (maize, cassava) appears to be on the lower end compared to other countries in the region (figure 2).

![Figure 2. Average yields in 2001 in ton/ha](image)

<table>
<thead>
<tr>
<th>Country</th>
<th>Rice</th>
<th>Maize</th>
<th>Cassava</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>2.07</td>
<td>2.76</td>
<td>10.5</td>
<td>0.85</td>
</tr>
<tr>
<td>Vietnam</td>
<td>4.29</td>
<td>2.96</td>
<td>12</td>
<td>1.24</td>
</tr>
<tr>
<td>Thailand</td>
<td>2.62</td>
<td>3.73</td>
<td>17.5</td>
<td>1.42</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>3.13</td>
<td>2.55</td>
<td>4</td>
<td>0.9</td>
</tr>
<tr>
<td>China</td>
<td>6.15</td>
<td>4.7</td>
<td>16</td>
<td>1.62</td>
</tr>
<tr>
<td>Indonesia</td>
<td>4.39</td>
<td>2.84</td>
<td>12.9</td>
<td>1.22</td>
</tr>
<tr>
<td>Malaysia</td>
<td>3.14</td>
<td>3.05</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Source: FAO.

19. **Cambodian agriculture is strikingly undiversified, with 90 percent of the total area planted with rice (2.3 million ha).** Rice plays a major role in food security as the primary staple as well as contributes to a modest surplus for export. Cultivation of other crops is done mainly at household scale and is growing fast, but from a low initial base, covering 8 percent of cropped areas. The remaining 2 percent is planted with industrial crops, including rubber and tobacco. Rubber remains a major export commodity for Cambodia, ranking first among its agricultural exports in value. Livestock is a common source of complementary income for rural households. The prominence of rice among Cambodia’s crops compared to other countries in the region is not a reflection of the lack of potential for crop diversification but results from the largely subsistence orientation of Cambodia’s agriculture. The potential for diversification of existing farming systems is significant, provided key constraints—lack of infrastructure, of reliable market and technical information, access to financial services, access to inputs, insecurity of tenure—are addressed. Farmers have adequate incentives for new investments in more intensive production patterns and diversification away from rice.

20. **Regional specialization is underway, although still limited.** The prevalence of subsistence agriculture means that farm holdings are generally unspecialized, with the exception of areas with higher productivity and better market access. However, traditional production zones have always

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15 This compares with 80% for Lao PDR, 62 percent for Vietnam, 57 percent for Thailand, 38 percent for Indonesia, 32 percent for the Philippines, and 12 percent for Malaysia (IRRI 2001).
existed, for example, rubber in red soil areas and 50 percent of rice production coming from five provinces. In addition, regional specialization is becoming more visible. As the government further clarifies its agricultural development strategy, consideration should be given to promoting further specialization based on regional and local comparative advantages. This specialization would require the development of a capacity to analyze agricultural potential at the local level to inform policy and investment choices at local and national levels.

21. **Despite progress in liberalizing trade policies, official agricultural exports remain low, and unofficial trade is growing.** Regionally, Cambodia ranks lowest in terms of agricultural tradability\(^\text{16}\) and food import capacity.\(^\text{17}\) Current exports of agricultural produce represent approximately only 6 percent of total merchandise exports, which are heavily dominated by garments (77 percent). Trade in agriculture, forestry, and fishery products has fallen in recent years—from US$252 million in 1997 to just US$89 million in 2001 (IMF 2003). This decline is explained mainly by the reduction in exports of forestry products after the logging ban. Growing unofficial exports of rice (an estimated 450,000 tons in 2001), fresh fish, and live animals to Thailand and Vietnam are indicators of substantial distortions and inefficiencies in marketing and trade facilitation.

22. **The main barriers to agricultural trade appear to be important inefficiencies in marketing and trade channels.** Since the late 1980s, Cambodia has pursued a gradual liberalization of the economy, including a floating exchange rate, eliminating quantitative restrictions in trade, reducing tariffs, and dismembering state monopolies in the key input and output markets. Although high tariffs remain on some goods, recent accessions to, first, ASEAN (1999) and, more recently, WTO (2003) have set Cambodia on a course of further rationalization of its trade policy and a gradual reduction of tariffs. Institutional and governance issues, resulting in substantial unofficial trade flows, as well as market organization, financing, and infrastructure constraints that affect marketing and trade of key commodities have been well documented (Integrated Framework and recent work on value chain analysis).

23. **Therefore Cambodia may not yet be able to seize opportunities from globalization of markets and liberalization of trade, such as those resulting from the recent WTO accession or the China-ASEAN Early Harvest Program,\(^\text{18}\) with resulting loss of prospective income for rural communities and for the national economy.** Cambodia is and will remain a small economy. Future growth of the agricultural sector will depend on its capacity to gain access to regional and international markets, necessitated in part to offset growing food imports. Cambodia's imports of milled rice, vegetable oil, fruits and vegetables, poultry, and pork have been progressing over the last decade. The short-term impact of trade liberalization on rural incomes and rural poverty has not been clearly assessed yet. In principle, lowering import tariffs could be expected to create additional competitive pressures on the agricultural and non-farm rural sectors by increasing the in-flow of foreign goods and agricultural produce. In practice, however, due to enforcement issues and the development of unofficial trade, tariff barriers have been effective to only a limited extent. Whether the rural sector can rise to the challenge of global

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\(^{16}\) Agricultural tradability (ratio of total agricultural imports + exports to agricultural GDP) is a measure of the sector's openness.

\(^{17}\) Food import capacity (ratio of the value of food imports to total nonfood exports) measures the capacity of a country to have foreign exchange to finance food imports.

\(^{18}\) In November 2002, China and the ASEAN (Association of South-East Asian Nations) members, including Cambodia, signed an Early Harvest Program (EHP) of the Framework Agreement on Comprehensive Economic Cooperation in Phnom Penh, Cambodia. The objective is to promote trade of agricultural commodities and foodstuffs with China through an "Early Harvest" tariff reduction program.
competition in the medium and longer terms is difficult to foresee, although the reform agenda proposed below could mitigate some of the more severe consequences.

**Basic services and infrastructure are critically lacking.**

24. *Development of the rural economy requires the provision of basic infrastructure and social services.* The growth of the rural economy is closely linked to access to infrastructure. Road transportation is vital for much of the economic activity in rural areas. Roads link producers to markets and lower the costs of trade, thereby potentially reducing the costs of farm inputs and increasing farm gate output prices.\(^19\) Access to transport infrastructure has a clear impact on the development of off-farm income generation opportunities (Helmers and others 2003), and the presence of permanent village markets is correlated with higher household income levels (Auffret 2003). Simple trading of goods and services is hampered by weak transport infrastructure and the inability to communicate over distances. The absence of power and telecommunication networks dissuades private investment in rural areas. Finally, the development of human capital is hindered by the limited access to educational and health facilities and poor quality water supply and sanitation.

25. *Rural areas are underserved by social, economic, and infrastructure services.* Rural infrastructure was severely damaged and/or neglected during the years of fighting. Despite improvements in recent years, there is still a very long way to go to improve rural dwellers’ access to infrastructure. This lack of access is especially true in less populated areas in the Northwest and Northeast, to which inflows of population are observed. Cambodia lags behind other countries in the region for most indicators (box 3 and table 4). Moreover, its institutions serving rural areas are challenged by problems of capacity, public financial management and allocation of resources, and corruption. Decentralization and outsourcing to the private sector have the potential to strengthen rural service delivery, but substantial governance and capacity challenges remain.

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\(^{19}\) However, this may not be sufficient, and benefits can be captured by traders when monopolies exist, for example, on provision of credit.
Box 3. Status of economic and social infrastructure services in rural areas

**Water supply and sanitation:** Less than 26 percent of households have access to safe drinking water, and, of those, only a mere 4 percent of the poorest 20 percent do. Less than 16 percent of rural households have access to sanitation facilities. These numbers are below the 2005 targets of 40 percent and 20 percent, respectively. There are no sewage systems outside major cities, and Cambodia has one of the highest rates of water-borne diseases in the world.

**Transportation:** Approximately 6 percent of the poorest quintile live more than 5 km from the nearest road. Less than 30 percent of villages can be reached by vehicular traffic during the wet season. The network is in poor shape, with 52 percent of roads reported in poor condition and 8 percent in bad condition in 2003.

**Energy and telecommunication services** basically are available only in populous and large township areas. Cambodia has the lowest electrification ratio among East Asian countries, as low as 5 percent in rural areas. As for telecommunication, fixed-line penetration for the entire country is only 0.27 per 100 households, while mobile penetration was 1.27 per 100 in 2000. Fixed-line coverage is even lower in rural areas, to which expansion would require massive investments. Mobile services have extended—with high tariffs—to some rural areas.

**Health:** Most of the rural poor live far from health facilities. Infant and maternity mortality rates are high. Healthcare facilities are confined mostly to larger urban centers, leaving rural areas almost totally unserved.

**Education:** Only 46 percent of villages have a primary school.

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Table 4. Infrastructure services coverage: Comparison with neighboring countries

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Cambodia</th>
<th>Vietnam</th>
<th>Thailand</th>
<th>Lao PDR</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent roads paved, 1999 a/</td>
<td>16</td>
<td>25</td>
<td>97</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>Main telephone lines per 100 inhabitants, 2001 a/</td>
<td>0.24</td>
<td>3.75</td>
<td>9.39</td>
<td>0.93</td>
<td>13.8</td>
</tr>
<tr>
<td>Percent population with access to electricity, 2000 b/</td>
<td>16</td>
<td>76</td>
<td>82</td>
<td>&gt; 22</td>
<td></td>
</tr>
<tr>
<td>Improved water source (% rural population with access, 2000) a/</td>
<td>26</td>
<td>72</td>
<td>81</td>
<td>29</td>
<td>66</td>
</tr>
<tr>
<td>Improved sanitation facilities (% rural population with access, 2000) a/</td>
<td>10</td>
<td>38</td>
<td>96</td>
<td>19</td>
<td>24</td>
</tr>
</tbody>
</table>


26. **The rudimentary banking system does not yet serve the rural poor and the agriculture sector.** Access to financial services is an important factor to enable households to cope with variability of incomes and vulnerability, and to respond to existing economic opportunities. The financial sector benefits from a relatively sound legal and regulatory framework. Following the promulgation of the Banking and Financial Institutions Law in 1999, the bank restructuring process completed in 2002 has improved public confidence in the banking sector. However, lending activities of banks continue to stagnate, and growth in private sector credit has been virtually nonexistent in the past two years, despite strong demand from SMEs. Recent estimates of access to micro-credit indicate that only 15 percent of Cambodia’s rural population has access.

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20 The main reasons identified are (1) loans are mostly short term, with very high interest rates, providing principally import/export financing and working capital to the trade and service sectors (tourism); (2) most banks are foreign owned and their focus is on providing services to their home country customers in Cambodia; and (3) banks are concentrated in urban areas, with only a few banks having branch offices outside major cities, leaving most of the rural population with no access formal financial services (ADB 2002).

21 Credit to the private sector is 7 percent of GDP, significantly lower than that of other Asian countries at a comparable stage of development (IMF 2003).
to credit from a formal or semi-formal institution (bank or registered microfinance institution or organization). Thus, 85 percent of the rural population are left to rely solely on informal sources such as friends, relatives, moneylenders, or middlepersons. Different sources estimate the demand for credit by rural households at US$40–125 million p.a.\textsuperscript{22} Studies indicate that the formal sector is reluctant to lend in rural areas because of higher costs, few perceived opportunities and the inability to effectively assess credit risks. Conversely, farmers and rural SMEs outside major cities are unable to approach banks and therefore prefer to turn to the informal credit market (Torres 2004). Access to savings services is even more limited.

27. \textit{The rural business climate is poor, with corruption perceived as the main constraint.} Investment Climate Assessment findings\textsuperscript{23} indicate that the perception of entrepreneurs inside and outside of Cambodia is that corruption is widespread and that the country is still prone to instability. The weak rule of law, bureaucratic costs, and corruption are perceived as the main constraints to doing business in Cambodia. The availability of factor inputs—finance, skills, and infrastructure—probably as a result of narrow growth and the nature of existing micro-enterprises and SMEs, are identified as secondary constraints. However, compared to urban firms, rural firms were more concerned with potential macroeconomic instability, the cost of financing, transportation, and electricity.

28. \textit{Investments in rural areas appear to be declining.} An “Assessment of the Agro-Industrial Situation in Cambodia” undertaken under the European Commission’s PRASAC II project confirms a downward trend in registered agro-industry investment. Overall investment approvals have declined dramatically, and approvals in agriculture-related industries even more so. Since 1998, the share of agriculture-related industries has declined from 22 percent to a low 3 percent. A similar downward trend is observed in numbers of newly registered SMEs. In addition, investments in the agricultural sector have been relatively capital-intensive and support extensive rather than intensive forms of agriculture, with limited contribution to rural employment creation (Van Acker 1999). Given the expectations that agriculture and the private sector would foster the country’s economic development (SEDP II, NPRS), these trends are worrying.

Table 5. Approved Investment (US$std)

<table>
<thead>
<tr>
<th>Year</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agro-industries</td>
<td>2,023</td>
<td>29,558</td>
<td>5,929</td>
<td>-</td>
</tr>
<tr>
<td>Food processing</td>
<td>7,972</td>
<td>11,913</td>
<td>-</td>
<td>2,016</td>
</tr>
<tr>
<td>Leather processing</td>
<td>-</td>
<td>-</td>
<td>1,116</td>
<td>-</td>
</tr>
<tr>
<td>Tobacco</td>
<td>7,195</td>
<td>-</td>
<td>-</td>
<td>3,652</td>
</tr>
<tr>
<td>Wood processing</td>
<td>164,464</td>
<td>14,148</td>
<td>-</td>
<td>1,236</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>181,653</strong></td>
<td><strong>55,619</strong></td>
<td><strong>7,044</strong></td>
<td><strong>6,904</strong></td>
</tr>
</tbody>
</table>

| Total approved investment | 832,531 | 482,240 | 226,014 | 197,710 |
| % of agro-industries | 22     | 12     | 3     | 3     |


*These figures relate to approved investment. Actual investment might be much lower.

29. \textit{Agro-industries are under-developed and generally under-performing.} In number, the vast majority of the private sector consists of small agro-industrial firms. Despite its apparent comparative advantages, which are driven by relatively low labor costs and abundance of land, Cambodia’s value added in agro-industry is very low compared to other countries in the region or

\textsuperscript{22} The ADB estimated total rural finance demand at US$120–130 million p.a., of which one-third for micro-credit ranging in loan size from US$50–300.

other sectors such as garments.\textsuperscript{24} Lack of reliable surpluses constrains the development of agro-industries. In addition, it appears that technology upgrades in post-harvest handling and processing are limited by lack of credit facilities for the sector (FAO 2003). However, more research is needed to analyze the key constraints faced by agribusiness firms and develop possible responses.

\textsuperscript{24} Cambodia: Seizing the Global Opportunity, World Bank 2004.
Part II: Catalyzing Rural Development - Key Elements of a Pro-Poor Agriculture and Rural Sector Development Strategy

30. The Second Socioeconomic Development Plan (SEDP II, 2001–2005), the National Poverty Reduction Strategy (NPRS, 2003–2005), and the Cambodia MDGs (appendix 1) have provided a general framework to guide agencies involved in the development of Cambodia's rural areas. More recently, the new government's “Rectangular Strategy” has proposed a set of economic policy directions to achieve the country’s growth and poverty reduction objectives. These remain to be translated in a full-fledged strategy to develop rural areas by rural sector agencies. Part I of this Notes described the complexity and interconnectedness of Cambodia’s rural issues. Thus, a rural development strategy for Cambodia requires a balanced use of appropriate policies, investments, and institutional measures that affect not only agriculture but also the broader base of rural activities. These measures include those specific to the rural sector, such as land and natural resources management, agriculture, as well as those specific to rural institutions. In addition, policies fundamental to the economy as a whole, such as for infrastructure, the financial sectors, and broad public sector reform, also will have a profound impact on rural development.

31. The government’s over-arching goal to reduce poverty in rural areas will be achieved by promoting more rapid and sustained agricultural growth—including of forestry, livestock, and fisheries—and rural non-farm growth. Promoting agricultural growth and raising agricultural incomes will necessarily involve enabling large numbers of farmers to shift from subsistence to market-oriented agriculture. In the short term, the current gaps and inefficiencies in the land and natural resource management framework will need to be addressed, to ensure land tenure security, access to natural resources and the sustainable use of those resources, that are the very foundation of agriculture and a source of complementary revenues for the majority of poor rural households. Promoting agricultural growth also will require better linking farmers to domestic and international markets, and creating the conditions for diversification to higher value crops, livestock, and fisheries to meet emerging local and international demand. It will demand investments in key market-related infrastructure and institutions to enhance the domestic and international competitiveness of Cambodia’s agricultural products. There is increasing evidence that serious governance constraints affect the competitiveness of Cambodia’s rural products. Progress on policy and institutional reforms to address these issues therefore need to accompany further investments. Fostering sustainable agricultural supply response from farmers to meet market demand also will require policies and investments that ensure access to other factors of production, such as improved technologies, financial services, and animal health services. Finally, improving the quality of rural services (education and health) to strengthen human capital in rural areas will be critical to meet the new market challenges and facilitate the movement of the rural population from agriculture to the industrial and services sectors, whether in rural or urban areas.

32. This section discusses the key areas for action that need to be taken to breathe life into rural development. They are:

- Improving Access to and Management of Productive Natural Resources—will be critical for the livelihoods of the poorest segments of the population. The focus is on balancing priorities among competing uses of land, forest, fisheries and water; establishing equitable access and stable and transferable tenure; involving local communities; and reducing the incidence of crises and shocks through, *inter alia*, improved water management.
• *Increasing Agricultural Income*—moving away from self-sufficiency focused on rice monoculture and providing incentives for agricultural diversification. Measures to promote higher factor productivity for land and labor aimed at subsistence farmers could have a substantial impact on poverty (in terms of caloric intake), and facilitate the transition to more commercially oriented farming systems. Improved agricultural support services and market functioning would serve to further stimulate productivity. Diversification of agriculture and of the rural economy needs to be supported, by identifying and addressing key constraints to the diversification of farming systems and the development of the non-farm rural economy.

• *Bridging the Gap in Access to Rural Infrastructure and Support Services*—improving the sectoral allocation and geographic balance of public investment. Given the diversity of income sources and the significant variations between and within regions, districts and communes, it is clear that there are no generic solutions for rural development. Rather, the process needs to be locally specific, responsive to the local conditions and circumstances, and maximize the participation of local organizations and populations, therefore with deconcentration and decentralization essential.

**Improving management of and access to productive natural resource assets**

33. Since the country’s economy is not yet diversified and agriculture and direct harvesting of natural resources are economic mainstays, land and natural resource assets play a central role in Cambodia’s economic and social development. While rural development and economic development more generally will require the Cambodian economy to diversify away from primary producing activities, in the short and medium terms, improving livelihoods and reducing vulnerability of rural populations will be critically dependent on the patterns of ownership and access to land and other natural resources.

34. Future prospects for sustainable use of land and natural resources and improvement of rural livelihoods will depend on policies and regulations affecting three priorities: (1) access to and management of key resources (land, forest, fisheries, and water), (2) strategic orientations for agricultural development, and (3) opportunities for off-farm employment. Across the four main natural resources—land, forests, fish, and water—analogous management systems are needed that possess key features covering resource assessment, allocation and access, monitoring, and enforcement. All the natural resources share the common need for a more reliable assessment of the status of each resource as a solid foundation for policy and management decisions affecting that resource. In all cases, the appropriate starting point for each assessment is an analysis of the inherent capability of the resource to support different types and magnitudes of use, as well as a related assessment of the institutional capacity in the natural resource sub-sectors to manage such uses.

**Land administration and management reforms**

35. *The rules governing rights to land have been in constant flux over recent history.* The Khmer Rouge, which governed Cambodia from 1975 to 1979, collectivized all land and destroyed all land records, including cadastral maps and titles. The regime brought about one of the greatest population displacements in human history, forcing millions to move from cities and towns to the countryside and from one part of the country to the other. Many thousands also fled
across borders. The right to own land was reestablished in 1989, enabling farmers to claim possession rights of plots up to 5 ha after 5 years of continuous cultivation, and households to gain ownership title to residential plots up to 2,000 square meters. Concession rights were granted for plantation plots exceeding five ha. Land left vacant for more than three years reverted to state ownership. Following the enactment of the land law, a program was initiated calling for applications for land tenure certificates to confirm occupancy and use rights. More than 4 million applications were submitted. However, to date, only a small percentage of the land tenure certificates have been issued due to the limited capacity of the government.

36. The Ministry of Land Management, Urban Planning and Construction (MLMUPC) was established in 1998 to take primary responsibility for land management. Land management for Cambodia includes leading the development of the policy and regulatory framework, and coordination of land-use planning and geodetic and cadastral surveying. MLMUPC is also charged to coordinate land registration and administration and property valuation. Implementation of land registration, administration of land transactions, and land-use planning are the responsibility of the Provincial and Municipal offices of the MLMUPC. The Ministry of Agriculture, Forestry and Fisheries (MAFF) has responsibility for the management of forestry land and wetlands, as well as the administration of agricultural, forestry, and fisheries concessions.

37. A 1998 assessment by the World Bank identified 7 main problems in the land sector: (1) inadequate legal and regulatory framework for land administration and management; (2) weak institutional and human resources capacity to implement a reform program; (3) lack of tenure security for most of the population, which has permitted land grabbing by elites and powerful interests, and a large number of land disputes; (4) inadequate regulatory framework and unclear institutional responsibilities for land classification and reclassification, including the definition of boundaries for forest land, protected areas and other state land, as well as agricultural land. The boundaries of all of these were determined ad hoc; (5) increasing landlessness, estimated at 12 percent–13 percent of the rural population; (6) unregulated and uncertain access by the poor to natural resources on state land; and (7) lack of regulations and transparency in awarding economic concessions.

38. These issues remain key concerns. Nonetheless, Cambodia has made significant progress in addressing some of them, particularly the establishment of legal and regulatory frameworks and roles and responsibilities for land administration and management. In particular, progress has been made through the (1) establishment, in 1998, of the Ministry of Land Management, Urban Development and Construction to lead the government’s efforts on the land reform agenda; (2) establishment in 2000 of the Council of Land Policy with membership of 13 ministries to guide the preparation of land policy formulation; (3) adoption of a national land policy by the Council of Ministers in May 2001; (4) enactment of a new land law in August 2001; and (5) adoption of several sub-decrees under the land law, including systematic and

25 CSES–1997 showed 13 percent of rural households possessed no agricultural land; CSES–1999 showed 15.8% had no land. Using a different sampling method, the Oxfam Landlessness and Development Information Tool (LADIT) survey in 2000 showed 12 percent landless. The more recent update conducted for the Assessment of Potential Impacts of Social Land Concessions (PSIA 2004) found a 12 percent landlessness rate among rural households.

26 In 2001 the government initiated a Land Management and Administration Project supported by the World Bank, ADB, and the Finnish and the German governments, with three objectives: to complete the regulatory framework, establish sustainable land registration institutions, and issue approximately 1 million titles by 2007.
sporadic land titling, land registration, Cadastral Commissions for out-of-court land dispute resolution, and social concessions for land distribution. Several other sub-decrees are expected to be adopted in 2005, including management of economic concessions, state land management, and recognition and registration of indigenous people land rights.

39. **Strengthening land tenure security and expanding titling.** Tenure security is addressed in the provisions of the 2001 land law that codifies the establishment of property rights and creates the basis for a modern land registration system. It establishes that ownership rights can be derived directly from existing occupation beginning before the land law was promulgated, thus giving most existing occupants legal protection. With donor assistance, the government also has developed additional capacity for land administration, and has made some progress on land titling. Systematic mapping and titling will be expanded across the country over the next 10 years, but progress is expected to remain slow. The current target is the issuance of 1 million land titles in 10 provinces and Phnom Penh Municipality by 2007. More tangible improvements in property rights will take time, even with the establishment of the legal and regulatory framework, the institutional structure, and dispute settlement resolution mechanisms. However, to realize the full benefits of those reforms, it is important that other parallel interventions be conducted to facilitate the development of land markets and improve access to credit. These interventions include improving the policy environment for sales and rental markets, such as allowing registration of leases in land offices, applying a property tax structure to discourage the speculative holding of unused land, adopting a secured transactions law, and strengthening the financial sector in rural areas. There is a risk that, in the absence of more broadly accessible credit and effective social safety nets in rural areas, land titling may lead to increased land concentration. Operational land markets would enable people to sell land in case of sudden need for cash and, therefore, also could result in concentration of land, because those with access to credit value land more highly.

40. The 2001 land law provides for government acquisition of private lands when the public interest requires it. The registered owner is legally entitled to “fair and just” compensation. However, no sub-decrees or regulations specifically relating to land acquisition or resettlement exist. In practice, land often is obtained by the state without compensation or through ad-hoc local negotiations.

41. **Strengthening land dispute resolution.** Due to the weak capacity of the courts to deal with land cases, a National Land Dispute Settlement Commission, with provincial committees, was set up in late 1999 to resolve, out of court, land disputes. The 2001 land law sought to address remaining deficiencies in the dispute resolution system by allowing the establishment of Cadastral Commissions. The commissions comprise a non-court system to resolve disputes over untitled land and provide protection to households involved in current land-grabbing cases. The commissions operate at the district, provincial, and national levels. The sub-decree creating the Cadastral Commissions was issued in 2002. As of 2004, cadastral commission offices had opened, and substantial staff training had been provided. Despite progress on the dispute resolution mechanism, conflicts over land cannot be reduced substantially without better information on land use, clear policies and regulations on land classification, adequate capacity to resolve disputes, and, ultimately, demarcation of boundaries generally accepted by all.

42. **Rationalizing land classification for a more efficient use of land resources.** Land in Cambodia is legally classified as either state or private land. Approximately only 20 percent of the land is classified as private. However, this official private-public allocation bears little relationship to existing land use or to the suitability of land for particular uses. There are large areas of unused land under state control that are suitable for private use. Furthermore, a
significant portion of state public land allocated for protection or managed use by the state has been cleared and settled, and is being used for agriculture. There is, therefore, an urgent need to rationalize both the amount and types of land under state control.

43. To complicate this picture, the actual area, location, and boundaries of the state land are not known with any certainty. Furthermore, there is no current agreement on the institutional responsibilities to identify, survey, and demarcate state land. State land comprises two categories: "state public land" and "state private land." State public land is intended only for conservation and management. It therefore cannot be disposed of by the state for private use. In contrast, state private land can be disposed of by the state for private use and is often given out in concessions rather than directly distributed through outright sale or grant.

44. A forthcoming sub-decree on state land management will provide the regulatory framework for classification, reclassification, and management responsibilities of state land and will establish the legal framework for the institutional responsibilities to undertake these tasks. The government is expected to develop and adopt this sub-decree in 2005. The sub-decree will enable the delineation of various categories of state private land and state public land, including forest lands, and protected areas. Importantly, it will allow for the rationalization of the amount of land in the state public domain and the reclassification of land not needed for effective management, releasing land for other uses.

45. **Rationalizing economic concessions.** The 2001 land law allows agricultural land concessions, commonly referred to in Cambodia as economic concessions, to be given out for commercial farming of products for both international and national markets. Since the program's inception, a total of 827,286 ha have been granted for agricultural concessions. However, as of August 2002, MAFF had revoked non compliant, non effective or illegal concessions totaling 103,680 ha, leaving 26 concessions totaling 723,606 ha in effect. While the legal limit to the size of each such agricultural concession is 10,000 ha, over half of the area of concessions—463,606 ha—is above the legal size limit. There is, therefore, an urgent need to rationalize both the amount and type of land under economic concessions.

46. **In practice, a large portion of the economic concessions has been granted on forest land.** Despite the concession logging suspension in effect since 2002 on all other forest land, the terms of the economic concessions allow logging trees in the concession area. Moreover, in some of the concessions, the clear felling of the natural vegetation in the concession area has been the only activity undertaken under the concession, raising concerns that the economic concessions are de facto being used to circumvent the logging ban and the new safeguards in place for review and allocation of forest concessions. It is urgent to (1) make more systematic and transparent the process by which economic concessions are evaluated and granted and (2) adopt a rigorous and open review system similar to that now employed for forest concessions.

47. **In addition, even though one of the rationales for the agricultural land concessions is to generate revenues for the state, in practice, the economic concessions have not generated much government revenue.** There are several reasons for this. First, although royalties also are due from logging associated with land clearance, little has been collected since the standing stock in the concession area is not documented and the amount cut is not effectively monitored. Second, since royalties for the economic concessions are calculated on the basis of production, and most of the concession land, an estimated 641,500 ha, has remained unused for agriculture, little revenue has been generated. Thus, there is a real need to revise the basis of revenue calculation and strengthen the systems for revenue collection and accounting.
48. One of the key questions remaining is that of the modalities for concession reduction. With ADB support, work is underway as part of the preparation of the Economic Concessions Sub-decree to clarify how concession reduction would take place.

49. Land distribution is envisaged as a means to address landlessness. Despite the land distribution in 1989, over recent years, the number of rural households without recognized access to the use of land has increased. Landlessness is economically significant in Cambodia because of the undiversified nature of the economy. With limited options for off-farm rural employment, access to land for subsistence agricultural production, along with access to other natural resources for direct harvesting, is de facto the only social safety net available to rural households in the short term. The growing incidence of landlessness is due in part to forced or distressed land sales, and dispossession by military and politically connected people. The significant proportion of households who never owned land reflects the increasing demographic pressure on land in the most densely populated areas. Landlessness is found to be highest among families headed by single women (21.2 percent). It has driven a significant number of households out of their villages.

50. To address landlessness, the 2001 Land Law contains provisions for “social concessions,” that is, grants of private state land to households for social purposes that can be used for cultivation or residence (Chapter 2, Article 17, Chapter 5, Articles 48–62). The sub-decree detailing the issuance of social concessions was approved by the Council of Ministers in March 2003. There is a strong social rationale for transferring the usufruct and/or the ownership of these unused lands to landless households, and such transfers are envisaged as an important instrument in poverty reduction. The program would allow significant amounts of unutilized land to be put into production while directly benefiting the poorest.

51. However, as previous land distribution in Cambodia has demonstrated, land distribution alone is a temporary solution at best. With its large young population poised to enter the labor force, Cambodia will quickly outgrow this solution. The aim is for the social concession program to have a strong economic rationale and be more than a temporary social safety net. Therefore, the program must (1) assist beneficiaries to graduate from subsistence agricultural production, and (2) convert the unused state land into a more productive use, thus increasing the national production and productivity and providing an engine for broader-based rural growth and employment creation.

52. It is not envisaged that all state private land will be distributed to smallholders, but rather that a combination of well managed economic concessions and social land concessions will be appropriate. As part of the background paper for policy development under preparation for the economic concession sub-decree, the appropriate role for economic concessions is being reviewed in depth. The recent work conducted to assess the poverty and social impact of the proposed social land concession program indicated that little good agricultural land is currently left idle and readily available for distribution. Possible additional sources of land for distribution under social concessions include:

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27 Of the land that was expropriated, the parties thought to be responsible are listed as military (36%), provincial authorities (36%), former owners (13%), local authorities (12%), relatives (2%), and others (LADIT 2002).
28 Landlessness and Development Information Tool (LADIT) 2000.
• Cancelled forest concessions and other areas of unmanaged forest land not needed for forest management or environmental protection and suitable for agriculture production
• Cancelled economic concessions
• Small parcels of state land in communes
• Other areas of state public land currently under the control of government agencies, including the military
• Land recovered through enforcement of Article 18 of the land law.

53. Since, initially, land to be distributed needs to be classified into agriculture or urban land, the first need is for the government to adopt the sub-decree on the state land management. The sub-decree will enable the reclassification of land and allow for the release of the land currently under the control of various state agencies. In addition, since a substantial area of land suitable for land distribution is currently under economic concessions over the legal size and/or nonperforming economic concessions, it is essential for the government to adopt the economic concession sub-decree to facilitate the cancellation of these concessions and enable distribution of the land from the cancelled concessions. Therefore the two forthcoming sub-decrees—on economic concessions and on state land management—are essential to ensure successful implementation of the social land concession program. The viability of the social land concession program will depend on the government's political will to adopt and implement these sub-decrees as well as to effectively enforce the land law.

54. Largely, the social concessions are intended to be based on the distribution of vacant state land so that the program does not face costly land acquisition issues. Nonetheless, for land distribution through social concessions to result in sustainable livelihoods for beneficiaries and agricultural output increases, significant investments in accompanying productive infrastructure (water control, roads), technology transfer, improved access to markets and social infrastructure will be required. Initial analysis of the potential poverty impact of land distribution confirms observations from other countries that the poverty impact of land distribution alone is limited (Auffret 2003). However, complementary investments in essential infrastructure and technical support services help to enhance the poverty impact of land distribution. Thus, to evaluate the feasibility and long-term sustainability of such a program, it will be important to assess the relative costs and benefits of different packages of support. Another important element for the success of a social land distribution program will be the inclusion of specific measures to address existing governance risks and capacity constraints. The “Assessment of Potential Impacts of Land Distribution” (PSIA 2004) provided initial insights on the feasibility and modalities of such a program. Ongoing work for the preparation of an agrarian structure study in 2005-2006 (World Bank) will provide further information for the design of the proposed social land distribution program.

55. The following priority actions are recommended to rationalize land access and allocation, improve land tenure security, and thus promote rural development:
Recommended Priority Actions for Land Administration and Management Reform

Priority area #1 Strengthen land management through coordinated interagency efforts

Land management encompasses land classification and reclassification among various categories of land, land-use planning, zoning, and management control over land use. The specific elements of land management urgently needed to achieve these objectives are:

- Expedite the finalization of the sub-decrees called for under the 2001 land law. Those to be adopted in 2005 are the: (1) state land management sub-decree; (2) sub-decree on management of economic concessions; and (3) sub-decree on the recognition and the registration of indigenous people land rights.
- Rationalize the land classification system. The forthcoming state land management sub-decree under the 2001 land law will provide the regulatory framework for classification and reclassification of state land—between state public and state private land—and outline the procedures for alienation and disposal of state land. These, however, are only the first steps; implementation of the sub-decree will require substantial focus and assistance.
- Strengthen land-use planning. This includes the coordination of land-use planning with socioeconomic development plans and natural resources management, decentralization of land management and planning authority, and development of land-use plans for priority areas. Land-use planning should be the responsibility of the commune councils with support from MLMUPC and other relevant agencies.
- Pilot social concessions and evaluate feasibility to proceed to full-scale implementation of a social concessions program, including land distribution and related support services. Implementation of pilot projects began in 4 different districts at the end of 2003. The land distribution program will distribute idle state private land to households identified as having priority needs for social land concessions. To materialize the benefits of the social land concessions, and economic and social infrastructure, training and enterprise development need to be provided to the beneficiaries of land distribution. The program will require a coordinated approach and significant resources from both the government and donors. Distribution of land under the social concessions program requires enforcement of Article 18 of the land law and implementation of the state land management and economic concessions sub-decrees.
- Rationalize economic, fisheries, and forestry concession systems. A coordinated approach, standard assessment and approval procedures, and improved revenue collection and management practices should be adopted across the types of concessions.

Priority area #2 Strengthen land administration to increase land tenure security and support the development of efficient land markets

The overall policy goal of land administration is to clarify and record ownership and other rights of all properties (public and private) in accordance with the land law.

- Systematically expand areas covered by land titling and registration. This expansion should include the issuance of a target of 1 million land titles by 2007, as well as recognition of communal land-use rights, which are particularly important in highland areas.
- Strengthen and streamline the functions of land registration offices to enable efficient and transparent registration of land transactions.
Develop and implement an anticorruption strategy with the focus on streamlining sporadic land titling to become titling on demand; eliminate informal payments; establish, implement, and monitor minimum service standards, and strengthen internal investigation of corruption and misconduct.

Strengthen land dispute resolution. Support implementation and monitor performance of the Cadastral Commissions.

Review and revise transfer land structure and taxes on sporadic land titling to ensure full participation in land registration.

There is also a need for complementary actions in three other areas to ensure that the benefits of land titling materialize. These are (1) support the development of secure transactions regulations; (2) strengthen the financial sector to enable the use of land titles as collateral; and (3) reform the judiciary to enable more appropriate in-court resolution of land disputes.

Forest management reforms

56. Cambodia's forests are estimated to cover approximately 11.1 million ha, approximately 61 percent of the country's total area (map, annex 3). Parks and protected areas account for 3.3 million ha, approximately one-fifth of the total area, most of it forested, but the quality of management and level of resource protection are low. From the high of approximately 6.8 million ha in 1999, the government has reduced area under forest concessions to approximately 3.1 million ha. A 2002 GTZ survey found that some 80,000 ha nationwide, consisting primarily of poorly stocked and degraded forest, were under some recognized form of community forestry. The remaining approximately 5 million ha of forest land, while officially in the public domain, are not effectively managed or protected.

57. The forest sector has considerable potential to contribute sustainably to rural development and rural livelihoods in Cambodia, both directly and indirectly. Direct contributions include: augmenting public revenues from managed extraction of timber and other resources; augmenting household incomes and consumption derived from timber and non-timber forest products (NTFPs); and increasing employment and incomes from value-added processing of forest products. Forest land, beyond that needed for effective forest management, also can contribute to rural development through carefully planned conversion to other productive uses. However, current policy and regulatory and management arrangements are weak. They need to be strengthened considerably to enable (1) increasing the sector's sustainable contribution to public

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30 Independent Forestry Sector Review 2004. In 2003, an informal consortium of government, donor agencies, and NGOs commissioned a team of independent experts to examine experiences in the Cambodian forestry sector, including the recent controversy over the World Bank's role in advocating reforms in forestry concessions and forest law enforcement. The Independent Forestry Sector Review intended to provide a perspective on the underlying challenges facing the sector and on the adequacy of the balance and range of the reform program that has been pursued by the government. The review, completed in 2004, provided a starting point for further forest sector policy dialogue.

31 In line with similar countries at a similar level of development, forests contribute to a substantial share of the livelihoods of nearby rural households. Firewood and charcoal account for virtually all rural household energy supplies; forest-based hunting and fishing are common activities for rural households in riparian areas; and collection of resin is thought to be a major source of cash income (an estimated 20,000 tons collected annually worth approximately US$6 million) for roughly 100,000 households living in forested areas.
revenues and rural livelihoods and (2) preserving the ecological\textsuperscript{32} and cultural value of forestry resources.

58. Forest conversion and land development are largely unplanned and not managed. The findings of the Independent Forestry Sector Review estimate the annual deforestation rate at 1 percent,\textsuperscript{33} as a result of a combination of illegal logging and spontaneous as well as government-sanctioned conversion of forest land to use for agriculture. The losses are concentrated in a number of key areas. These are in the Northwest near the border with Thailand, in Rattanakiri, along national Route 4 and coastal roads, and flooded forest around Tonle Sap. The forest area of Cambodia is essentially the unplanned residual of the country's natural endowment, illegal logging, and the spontaneous growth of agricultural settlement. Numerous encroachments by farmers, often following illegal logging, are in the aggregate the most substantial threat to the forest resource, but conversion also takes the form of government-sanctioned industrial crop development through large-scale economic land concessions. While substantial areas of forest land likely have potential for sustainable use under agricultural and other land uses, the conversions currently taking place are problematic. The areas potentially suitable for agriculture have not been assessed or identified; and no procedures or plans have been established to regulate the conversion of forest land to other uses and ensure that conversions are in the public interest and are conducted transparently and through sound land management practices.

59. The Ministry of Agriculture, Forestry and Fisheries (MAFF) has responsibility for the management of forest land, as well as the administration of agricultural and forestry concessions. The 2002 Forest Law provides for a Forest Administration consisting of a vertical structure divided into central level, regional inspectorates, cantonments, divisions, and triages. This is based on a model of early post-colonial experience and is intended to permit the effective management of a national forest territory with minimal interference and distortion from local authorities. The single line of control structure was established in a detailed implementing MAFF Prakas in 2003. The Forestry Administration in MAFF is also the primary agency responsible for detection and investigation of illegal logging. This responsibility is a natural and logical extension of its resource management responsibilities and is in keeping with international practice.

60. Governance problems related to illegal logging in Cambodia have attracted more attention than any other feature of the sector. Many of the governance challenges facing forestry, such as civil service remuneration, accountability, and performance, are qualitatively the same as those facing other sectors. Others are more specific to forestry, such as questions of law enforcement, inter-sectoral oversight and coordination (especially between MAFF and other ministries with shared oversight responsibility such as Land and Environment), and the specific issue of independent monitoring. Rampant illegal logging, with the apparent connivance of senior government officials in the mid-1990s, led to Cambodia's forestry sector becoming a major preoccupation of the international community and put forestry at the heart of the governance and development debate. Estimates of illegal logging rates in the mid-1990s raised fears of the potential exhaustion of the commercial potential of the resource base within a few years. Crackdown efforts in the late 1990s and early part of this decade appear to have been partly successful, but the extent of the remaining problem has not been quantified. When the logging

\textsuperscript{32} Environmental services, especially watershed management, and soil and water conservation are part of the complex of benefits that derive from forests. Despite suggestions in the popular press and elsewhere that deforestation is damaging water resources in Cambodia, particularly the Tonle Sap, analysis by the Mekong River Commission has shown that sedimentation is not damaging the lake and that the lake is not becoming shallower.

\textsuperscript{33} Independent Forestry Sector Review 2004.
ban (in place since 2002) is lifted in early 2006 the anticipated timber harvesting in annual coups will present new challenges for forest law enforcement.

61. The presence of an independent monitor, a role recently filled by a private contractor (SGS), helps to discipline the Forestry Administration in a role that is inherently fraught with moral hazard. In principle, illegal logging is also subject to other Cambodian legal provisions (for example, larceny) that are under the independent purview of other agencies, such as the Ministry of Interior. Military and police authorities have been involved occasionally in suppression activities, seizures of logging equipment, and other actions, but the cross-ministry coordination of forest law enforcement in Cambodia has been ad hoc and largely ineffective.

62. Forest concession system reform needs to anticipate gaps and problems between design and implementation. With inadequate preparation and analysis, in the mid-1990s, Cambodia launched a poorly conceived and undisciplined forestry concession strategy that, at its peak, covered 6.8 million ha, including virtually all the commercially valuable timber resource, as well as other lands not well suited to commercial exploitation. With donor assistance, this system gradually has been reined in and now consists of approximately 12 concessions covering something less than 3.14 million ha. Further concession cancellations (including an additional 6 concessions covering approximately 2 million hectares) have been recommended by a technical review team of the Forest Administration. However, government has not taken action on these recommendations.

63. At the same time, the government has developed a comprehensive system for regulating concession planning and operations. As designed, these provisions address the full range of modern forestry practice including silvicultural methods, inventory and resource assessment, engineering design, and social and environmental safeguards. Currently, legal concession operations are in abeyance while plans and approval processes are being piloted. As and when operations resume, there will be a new set of challenges as the diversity of control problems increase, a larger number of personnel are involved in concession oversight and the material throughput of the concession system will increase. It is realistic to expect additional problems and gaps between design and implementation at that point. These will need to be anticipated and met with ongoing technical assistance; greater transparency; and more conscious efforts to publicize standards, approval processes, and permit conditions.

64. Management of the broader forest estate needs to become more sophisticated and differentiate between forest land of national interest and other areas. Forest land management generally needs to be brought more effectively under the national land policy development process, and the amount of the forest estate need to be rationalized, taking into account inherent resource capabilities and institutional management capacities. Forest resource management in Cambodia needs to become more sophisticated, regimented, and documented. Irrespective of the product orientation of management (timber, resin, wildlife, environment) or management modalities (concession, community, or public agency), standards for description, consultation, prescription, projection, evaluation, and documentation need to be defined by the government and fulfilled by the respective resource managers.

65. The official public forestry estate is largely un-surveyed and un-inventoried. However, realistically, only a relatively small portion of the forest is genuinely of national interest and capable of being managed for more than local objectives. Moreover, most forest land is not covered by adequate plans of any sort. While the Forest Administration has put in place measures to ensure suitable management of the residual concession estate, there is a virtual policy and management vacuum with respect to the other forest areas, especially those outside protected
areas. It is unlikely that even the recently restructured Forestry Administration can be mobilized to provide effective management to this large an area. Therefore, the limited resources and capabilities of the Forestry Administration should be focused on the small subset of forest land that is of national importance, effectively, the concession area and a limited number of other large blocks of high-value forests. A first step in that direction would be a careful reevaluation of the forest estate and its partition into: (1) areas where there is an overriding national interest that the forest remain directly managed by the Forestry Administration for revenue generation, biodiversity conservation, protection of hydrologic functions, etc; (2) forest areas that might be managed locally; and (3) areas that might be converted to non-forest uses and managed locally.

66. In forest areas not suitable for conversion to other uses, administrative arrangements in the forestry sector need to be further developed to allow for broader local involvement in forestry management. There is a need to develop alternative forestry management mechanisms giving communities a greater say in the management of forests, including high-value forests. In such cases, the Forest Administration, fully within its legislated mandate, can cooperate with local authorities on a range of innovative management arrangements that give local authorities opportunities to take initiatives and recognize the benefits of sustainable management practices. One option is provided by the Community Forestry Sub-decree approved by the Council of Ministers in December 2003. This sub-decree establishes procedures by which local communities can be granted managerial and considerable regulatory control over forests on which they are dependent. Further development of local forest management and decision-making requires delegation of authority and definition of a system of checks and balances between local and national authorities. At present, Cambodian forest law provides no clear basis on which to develop such relationships. They are permitted, however, within the principles and prerogatives established under the Law on Administration and Management of Communes/Sangkats.

67. Community forestry arrangements have substantial applicability in Cambodia. Through them, motivated by the right to retain a relatively large share of forest-based income, local communities are empowered to manage publicly owned forest land. Currently, fewer than 100,000 ha (approximately 80,000 ha in late 2002) are formally under recognized community management. And, while substantial scope for expansion of community forestry exists, only a small portion of the total forest resource could effectively be brought under community management in the near-term. Obstacles to rapid expansion include the time required to formulate meaningful community forestry associations, the cost of providing services and technical assistance, and the competing pressure to address immediate threats facing some of these areas such as illegal timber harvesting and land grabbing. Existing community forestry pilots in over 400 communities, the passage of the community forestry sub-decree, and the expected cancellation of nearly 2 million ha currently under forest concessions have set the stage for a potential expansion of locally managed forests in Cambodia. To date, community forestry has been established in degraded forest areas and in areas of relatively high population density, principally around Tonle Sap and along the Lower Mekong. In Ratanakiri, the potential to include larger, better stocked forest areas in less populated regions of the country has just begun to be explored. A successful expansion of community forestry in Cambodia will depend critically on the Forestry Administration developing a capacity and structure to provide services, technical

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34 Chapter IV of the Law (in particular, Articles 42–47) provides for the delegation of functions or delegation of authority for specific functions by State authorities to the Commune Councils. While Article 45 states that Commune Councils do not have authority in their own right to decide on forestry issues, Articles 42 and 43 allow such authority to be assigned or delegated to a Commune Council by the Forest Administration. In addition, Article 47 suggests that the Ministry of Interior can issue a sub-decree if clarification of the core or delegated roles of Commune Councils is needed.
advice, and material support through locally oriented structures including commune-level forestry and agriculture entities and community forestry associations themselves.

68. Among other possibilities is the development of private-public partnerships for management contracts at the local and provincial levels. These contracts would aim to attract private investors into activities on public land under the supervision of local governments and communities and following the national guidelines for sustainable management. Financial arrangements would need to promote responsible management and quality oversight from local authorities.

69. Arrangements for local communities' involvement in forest management need to be strengthened. Even with respect to forest areas to be managed primarily by the Forest Administration with a view toward national concerns (revenue, environmental issues), there invariably will be important local consequences of management. Such impacts could include loss of resource access due to logging, protection, road access, or developments accompanying forest management. Safeguarding local welfare and ensuring that conflicts with local people do not compromise the effectiveness of management efforts will require genuine efforts and diligent adherence to established procedures for considering and accommodating local concerns. Currently, local level consultation are undertaken in an ad hoc manner and are often highly personalized, creating opportunities for rent-seeking behavior and corruption, exclusion and neglect of the interests of vulnerable groups, and politicization of decision-making. To address these issues, the government needs to accelerate and broaden its ongoing process of forest administration development and reform. Government might consider incorporating formal training on community consultation into existing skill development programs. Effective local consultation should be undertaken as part of forest management planning and well before the commencement of operations. The development of a participatory monitoring system could help improve transparency and efficiency in resource utilization building on nascent efforts that are by conservation NGOs, Buddhist monks and others that are already under implementation. A deliberate learning-style approach could be adopted with pilots in areas selected on the basis of different forest and social characteristics. This approach could lead in short order to well justified and broadly applicable standards and arrangements.

70. Royalty revenues collection needs to be made systematic and adequately monitored. Following the suspension of concession logging, total forest revenues have fallen from an average of US$8–12 million through the 1990s to approximately US$2 million in 2002. On the basis of best current estimates of the annual allowable cut (AAC) on the concession system (currently 3.1 million ha) at approximately 250,000 cubic meters, a resumption of logging would translate to an anticipated royalty revenue of approximately $15 million per year.\textsuperscript{35}, should the existing governance and revenue collection issues be addressed. In addition to revenues from what is intended to be sustainable management of forest concessions, royalties also are due from logging associated with land clearance as well as from small-scale commercialization of wood and non-timber forest products (including resin, poles, and fire wood). Revenues accruing from these sources tend to be small and are subject to leakages due to weak supervision of collection and revenue management.

\textsuperscript{35} This contrasts with an earlier World Bank/FAO/UNDP estimate of US$100 million p.a. The change results largely from the roughly 60 percent reduction in the concession area and a drop in estimated economic stumpage prices from a high in 1996 of approximately US$80 per cubic meters. In addition, during the eight intervening years, illegal logging has reduced the potential sustainable yield, with the result that a long period of recovery will be required before allowable harvest levels can return to their potential.
71. **Industrial policy needs to be reviewed, including an assessment of current processing capacity.** Forestry sector development strategy in the mid-1990s was aimed at establishing a large-scale wood processing industry. The capacity that resulted may have been significantly beyond the potential of the resource base, although this remains to be assessed. Based on a reasonable estimate of carrying capacity of the resource base, Cambodia cannot support the large-scale wood industry anticipated by government in the 1990s. Currently, most legally installed processing capacity is idle, and wages and taxes from wood processing are very limited. In addition to the capacity in fixed mills, there is a multitude of small, sometimes illegal, and mobile sawmills contributing to pressure on the resource base. However, the volume and composition of this capacity is not known. Retrenchment in the area under forest concessions needs to be matched by downsizing and/or restructuring of the installed capacity (and better control of the mobile milling capacity), because this excess demand contributes to pressures for illegal logging and over exploitation.

72. While wood processing industry development had been aimed at the production of utility-grade lumber and plywood, Cambodia may be better placed as a producer of luxury timber. This strategy would fit with the country's need to develop extensive management strategies based on low harvest rates in the deciduous forest areas and could be developed through partnerships with international manufacturers. As a first step, research into the capacity of luxury species to withstand commercial harvesting is needed.

73. **To help bring about the needed downsizing and reorientation in the wood industry sub-sector, the government should put first priority on employing timber taxation and the forest revenue system to send appropriate market signals to industry.** As currently defined, forest resource planning, at least so far as the concession system is concerned, involves the estimation of a sustainable allowable cut. The government's stance in renegotiating concession contracts, especially the timber royalty provisions, needs to reflect reasonable estimates of the installed industry's willingness to pay as well as the government's reservation price, which, among other things, should consider the social and environmental values of the existing forest under concessions. Any reasonable timber price regime would not provide artificially inexpensive timber for continued operation of the mills but, rather, would provide incentives for closure of excess capacity and movement towards higher-value content. The development of a robust annual bidding coupe system could provide invaluable price discovery information that easily could be incorporated in concession restructuring. However, annual coupes may present a much more challenging scenario for forest crime monitoring and control, and the specific modalities would need to be carefully studied. There are several critical risks associated with a coupe system, including difficult detection and prosecution of forest crimes, exposing communities to deterioration of customary rights, undermining efforts to develop private sector investment in the forest sector, and making timber revenue collection more difficult given the potentially very large number of scattered annual bidding coupes.

74. **The rate at which this adjustment will take place could be hastened by relaxing pending contract requirements for additional processing investments** (in lieu of other company commitments) and by ensuring that there are few obstacles to realignment of milling capacity among the remaining concessions. Enforcement of licensing requirements, legal provisions on sawmill location, and other controls should follow as the next step in liquidating excess capacity. On the basis of capacity that remains after these measures, a long-term program to monitor and control forest industry development in relation to resource capacity is needed.
75. The following priority actions are recommended to rationalize the allocation of forest land; control the unplanned conversion and loss of forests; protect the ecological, economic, and cultural value of forests; and increase the sustainable contribution of the sector to rural livelihoods and development. These recommended actions should be reviewed in the context of the ongoing discussions on the results of the Independent Forestry Sector Review.

**Recommended Priority Actions for Forest Management Reform**

**Priority area #1 Consolidate forest concession management reforms**

- **Complete forestry concession system restructuring.** Government’s review of concession Strategic Forest Management Plans has resulted in recommendations that effectively amount to proposals to terminate an additional six concessions. While controversy remains about six other remaining concessions, Government should not delay further in terminating unworkable concessions. Concessions that remain under consideration should be asked to provide time-bound plans for meeting outstanding regulatory requirements. The progress made in rationalizing the forest concession system can provide valuable lessons for getting a better handle on the other types of concessions (land, fisheries).

- **Strengthen capacity of the Forestry Administration at different levels** to supervise forest concessions and ensure appropriate consideration is given to customary and livelihood uses of forests by local communities.

- **Strengthen revenue collection and management.** Review the experience with the collection of royalties, stumpage and use fees, and design and implement a program to improve revenue management and supervision of collection.

**Priority area #2 Rationalize forest land use**

- **Assess forest land use.** Following adoption of the forthcoming sub-decree on state land management, conduct an assessment of forest land, including protected areas, to identify the core areas of forest land which would need to be retained as state public land to ensure effective protection of biodiversity and critical ecosystems; and forest management, as well as determining which of the areas are suitable for local management, and which of the remaining areas could be released for conversion for agriculture and other uses.

  ✓ **Accelerate completion of land mapping, demarcation, survey and inventory of forest land.**

  ✓ **Study options for sustainable management of forest areas outside parks and protected areas,** including possible linkages with local government and a review of the ongoing community forestry pilots to assess lessons learnt to date and potential for scaling up.

**Priority area #3 Revisit structure of the forestry sector**

- **Focus “single line of control” arrangements to forest areas of national significance,** remaining concessions, large blocks of commercially viable forests with limited demands from communities, and areas to be protected and managed for primarily national forest policy objectives. Specific, documented and widely disseminated provisions should be piloted for local public input into management decisions and revenue sharing.

- **Develop arrangements and capacity to integrate forestry input to provincial rural development support.** In areas where forest resources are fragmented, scattered, or most closely integrated into rural livelihoods and agricultural development, forestry services need not to be organized on a territorial basis. Instead, and within the provisions of the forest law,
the Forestry Administration could be restructured on a service-oriented basis to accentuate local accountability for support to tree planting, reforestation, woodlot management, and management of forests for local livelihoods and agroforestry development.

> Broden the basis of forest crime reporting and prosecution, to bring wider perspectives, reduce conflicts of interest and increase accountability and transparency. While law enforcement is a critical and integral extension of the forest management function of the Forest Administration, a wider range of public agencies, local government and civil society could be drawn into oversight of illegal logging, land encroachment and other forest crimes.

**Priority area # 4 Facilitate the restructuring of the wood processing industry**

> Facilitate the restructuring of the wood processing industry. Facilitate the right-sizing of the large-scale capacities installed in the wood processing industry, transitioning to low throughput mills producing high-quality wood products for high-end export markets, and leaving only a minimal capacity for processing construction grade timber for the domestic market.

➢ Conduct mill census and capacity survey. To ascertain the total milling capacity, including composition and processing volume, included in fixed and mobile mills.

**Fisheries management reforms**

76. *Cambodia’s fisheries resources, from its vast riverine, wetland, and coastal habitats, support millions of people with food, income, and livelihoods.* The sector is also a potentially important source of royalties for the government, contributes 10 percent to agricultural GDP, and provides an important export commodity. Fisheries resources, including fish and other aquatic animal and plants, and flooded forests also are of critical importance for ecological and habitat conservation, ecotourism, and culture. The inland fishery, which is the most important economically, accounts for 80 percent of fisheries GDP, mainly from the Tonle Sap Lake and River areas, the Mekong and Tonle Bassac River area, and the upper Mekong River area. The dry-season size of the Tonle Sap is 2,500–3,000 sq km, which increases in flood season to 10,000–15,000 sq km. Fishing is a major source of income for approximately 45 percent of households in riparian provinces. Inland fisheries statistics are unreliable, but composite estimates based on available information suggest that Cambodia ranks first in the region and fourth in the world for freshwater capture fisheries, with an annual yield estimated 300,000–450,000 metric tons.

36 However, accurate estimates of total revenues actually collected from auction of fishing concessions and licenses fees are not readily available.

37 Probably underestimated, because rice paddy field fishing, as well as the value of other animal and plant aquatic products collected, is unaccounted.

38 The Tonle Sap lake and river area is by far the richest inland fishing area and includes the provinces of Kompong Chhnang, Pursat Battambang, Banteay Meanchey, Siem Reap, Kompong Thom, and the northern part of Kandal.

39 Also important for the inland fishery and includes the southern part of Kandal, Kompong Cham, Takeo Prey Veng, and Svay Rieng.

40 Important for small-scale subsistence fishing and includes Kratie and Stung Treng.

41 According to a survey of communes in 8 provinces conducted in 1998, 1 percent of households considered fishing as their primary source of income, and 35 percent as their secondary source of income. Figures are lower at the national level. Using 1999 CSES data, incomes from fisheries represent at national level 6 percent of household incomes (Helmers and others 2003).
77. In addition, Cambodia’s 435-km coastline\(^{42}\) includes three major estuarine bays—Kompong Som, Koh Kong, and Kampot—and the 55,600-sq km Exclusive Economic Zone (EEZ)\(^{43}\), which extends 200 nautical miles offshore and supports a productive marine fishery. Inshore and offshore waters of the Cambodian Sea are home to approximately 474 marine fish species, of which approximately 30 species are economically important. It is estimated that fewer than 10,000 households are involved in marine fishing. The official marine capture fisheries statistics, which peg annual catch at approximately 30,000 metric tons, underestimate actual yields. These statistics are based solely on the estimated catch of licensed fishing gear. They do not include estimates of the substantial catch by unlicensed gear, including unlicensed foreign boats that land their catch outside of Cambodia, unlicensed domestic commercial boats, and small-scale fishers.

78. **By law, the fisheries domain belongs to the State**, and the Department of Fisheries (DoF) in MAFF has the authority to manage, protect, conserve, and develop fisheries resources. More specifically, DoF is responsible for enforcing regulations, granting concessions, issuing licenses, and collecting fees. However, management capacity is weak; management on the ground is largely ineffective; and the sector is characterized by intrasectoral, intersectoral, and international conflicts.

79. **Despite recent steps to address governance problems in the inland fisheries, current weaknesses in the policy framework and in law enforcement remain to be addressed.** After more than a decade of collective management schemes during the period of the Khmer Rouge and Vietnamese occupations, in the late 1980s a fishing concession system similar to that used during the French colonial era was reintroduced for inland fisheries as a management tool and revenue source for the government. Two-year concessions for fishing lots are awarded to the highest bidder in a public auction\(^{44}\). Fishing lot operators are obliged to follow management rules outlined in the concession’s *cahier des charges*, which prescribes (1) the area of the fishing lot assigned for exclusive use by the concessionaire and the “area set aside for people” within the fishing lot, in which common access is to be allowed; (2) the duration of the open season (typically October through May north of Phnom Penh; November through June south of Phnom Penh); and (3) the types and numbers of allovable fishing gear. Nevertheless, illegal fishing is widespread. The efficiency of the commercial concession system needs to be reassessed, including the extent to which the two-year concession system gives incentive for sustainable resource management.

80. In addition to the large-scale fishing lot fishery, under the current fisheries law, the freshwater fishery also includes medium-scale operators licensed to fish in public fishing areas (outside fishing lots, reserves, and protected areas) during specified time periods. The freshwater fishery also encompasses small-scale operators who do not require licenses and are allowed to fish anytime in public fishing areas, as well as in prescribed common-access areas within fishing lots. In addition, freshwater fish left behind in receding flood waters are collected from rice fields as a subsistence activity. Both medium-scale and small-scale operators are supposed to comply with the general fisheries regulations, including gear restrictions. However, illegal and destructive fishing practices are common.

81. **The management system based on a complex system for the segregation of commercial exploitation in fishing lots from the middle-scale commercial fisheries to small-scale, mostly subsistence fisheries, has enhanced the potential for conflicts among these various segments of**

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\(^{42}\) Along the provinces/municipalities of Koh Kong, Sihanoukville, Kampot, and Kep.

\(^{43}\) The demarcation of Cambodia’s Exclusive Economic Zone is disputed with both Vietnam and Thailand.

\(^{44}\) The transparency and regularity of which has been questioned.
the freshwater fisheries. The governance issues are serious, and the social costs are high. Privatized enforcement of the fishing lots (in the absence of efficient law enforcement), and appropriation of use rights by powerful groups and local officials, including village and commune chiefs, prevent communities from accessing released areas in some locations. Traditional fishing areas remaining within the concession system exacerbate conflicts. Furthermore, intersectoral conflicts about water use with agricultural and navigation uses are common.

82. In 2000 large-scale fishing lots were estimated to cover almost 10,000 sq km of the most productive freshwater areas. These included anchor locations in riverine areas as well as expansive areas of floodplain that comprise the residences of hundreds of thousands of people, hundreds of thousands of ha of agricultural land, as well as flooded forest habitats essential as breeding and nursery grounds for many fish and other aquatic species. In June 2001, following violent conflicts over water use among fishing lot concessionaires and farmers, the area under fisheries concession was reduced by more than half to 417,000 ha.

83. This cancellation of concessions, which effectively reduced the amount of agricultural land as well as the number of people living within the concession area, should reduce somewhat the likelihood of intersectoral conflicts. Nonetheless, the cancellation was done without consultations on how the resource would be used after the cancellation nor preplanning on how the resource subsequently would be managed. The resulting ambiguity led, in some areas, to even more intensive exploitation of the resource and more intrasectoral conflicts. The released areas are meant to be co-managed under a community fisheries management system.

84. **Community fisheries pilots need to be further consolidated as an alternative management system.** To address the conflict between fishing lot owners and small-scale fishers as well as to address the broad-based fisheries management issues of overexploitation and use of destructive fishing techniques, co-management of fisheries—voluntary collaboration among all stakeholders in the fishery to achieve the common objective of sustainable use of the fishery—has been recommended. DoF has developed a sub-decree on community fisheries. However, Cambodia has limited experience to date with co-management. CDRI (2002) identified 162 community fisheries, established since the late-1990s with the assistance of donors and NGOs, that involve over 300,000 people and cover over an estimated 225,000 ha. These are largely individual efforts, with little effective coordination across them. It is important to monitor these pilot activities and learn lessons from their experiences for broader implementation.

85. **Marine fisheries management also is hampered by serious governance issues and lack of resources to enforce the existing regulations.** The marine fishery is subdivided into two parts: (1) coastal or inshore fishery in water fewer than 20 meters deep; and (2) offshore fishery in waters more than 20 meters deep. The offshore waters are fished exclusively by the large-scale fleet, which include vessels with engines of more than 50 HP. These large-scale boats typically are owned by Thai or Vietnamese nationals, only a small number of whom are licensed to fish in Cambodian waters. Boats owned by Cambodian nationals fish the coastal waters. These include the small-scale fleet, comprised of boats without or with very small engines, which are allowed to fish unlicensed; and the mid-scale fleet, comprised of boats with engines less than 50 HP, which are supposed to be licensed. In offshore waters, conflicts with Thai and Vietnamese fishermen are common, and enforcement of the Fishing Law, in terms of unlicensed foreign vessels and illegal fishing practices, is a major issue, given the limited resources of DoF. Catches from offshore waters are not accurately recorded, since most of them are landed directly in Thailand and

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45 Several assessments indicate that released areas also are the least productive and less accessible.
Vietnam, making assessment of the status of the resource difficult. With support from DANIDA, a coastal zone management program is being implemented to address some of these issues.

86. The policy and legal framework for the fisheries sector is improving, but several concerns remain. A new draft Fisheries Law has been prepared, and several sub-decrees and a Master Plan to develop fisheries have been drafted. The revised law would include a stronger focus on community involvement in co-management of fisheries resources, at least in inland areas. However, a number of concerns remain:

- **A better assessment of the resource is needed to inform policy decisions.** There are indications of selective over-fishing, with a declining catch value and catch per unit of effort. However, fisheries statistics are notoriously unreliable, and no assessment of species stocks is available—whether for inland or marine fisheries—as the basis for further policy and regulatory developments.

- **The development of the regulatory framework needs to be informed by research and stakeholder consultations.** The release of concessions in the public domain in 2000 was not preceded by adequate feasibility and impact studies, resulting in the undesirable consequences chronicled above. Before key regulations are finalized, more work is needed on the potential poverty and social impacts of reforms. Furthermore, DoF has been hesitant in conducting inclusive consultations, and it needs to be more proactive in engaging in public dialogue. To address these concerns, a DFID-financed impact assessment of recent reforms is underway that is complemented by several donors’ and NGOs’ efforts on consultations. Additionally, more research is needed to inform the development of a viable community-based management (or co-management) system, and to explore alternative management options fitted to local conditions and DoF’s capacity. A study would be worthwhile to compare the “co-management” system with that of the fishing lot system, even considering the short two-year lease period of the latter.

- **In the rapidly changing Cambodian environment, the adequacy of the provisions of the new law and subsequent regulations will have to be closely monitored and, should adverse effects be identified, a proactive approach to amend legal and regulatory provisions should be taken by DoF.**

- **The capacity of the government to enforce laws and regulations remains a constraint.** The development of the new law and subsequent sub-decrees will have little effect so long as laws and regulations cannot be properly enforced. The issue cannot be addressed by DoF alone, and will require the cooperation of key stakeholders (local governments, military). 46

87. **Additional benefits could be generated from aquaculture development and improvements in the fisheries value-chain.** Cambodia has considerable potential for aquaculture development, including low-intensity systems such as the integration of fish culture directly in rice paddies during cultivation. In addition, the development of market channels through private investments in support systems such as ice production and processing facilities that meet international standards can greatly benefit aquaculture development and trade in fisheries in general. These are discussed below, under the section on “Improving Agricultural Incomes.”

46 This is a key challenge in that there have been some reports of the military’s attacking DoF officers who attempt to enforce regulations that affect military interests.
Recommended Priority Actions for Fisheries Management Reform

Priority area #1  Strengthen the institutional framework for fisheries resources management

- **Institutional reform and strengthening.** Review the existing system, including the related responsibilities among ministries. Form an inter-ministerial committee to help with the coordination and use of aquatic resources. Strengthen donor coordination in the fisheries sector among common strategic lines toward a sector-wide program.
- **Monitor the implementation and the impact of the new legal and regulatory framework** to promptly identify possibly needed further adjustments.
- **Address the gap between policy/regulatory framework development and implementation/enforcement.** Strengthen deconcentrated fisheries offices and capacity to implement the existing law and regulations at the local level. Strengthen partnerships and collaboration with local government, communities, and NGOs.
- **Gradually improve stock assessment capacity for both the marine and inland fisheries.** The assessments would be used to assist in the design of policies, regulations, and enforcement mechanisms to manage the stocks effectively; achieve sustainable yields; and reduce overfishing and degradation of stock value. These assessments would include stakeholder consultations and should take into account the risks of cross-sectoral impacts to fisheries from agriculture, forestry, and infrastructure development. In the longer term, a better assessment of the stock biomass, species composition, and size distribution would provide the basis to determine the economically sustainable yield under several scenarios.

Priority area #2  Strengthen fisheries resource management strategy

- **Rationalize the concession system.** Review the effectiveness of the current concession system in meeting the government's goal of sustainable and efficient fisheries resources management.
- **Review lessons learned from experience with community fisheries.** Review the results of the pilots and design a viable community-based management system, including the formulation of procedures to engage and consult with the stakeholders. This review also should explore alternative management options for DoF.
- **Institute fisheries management reforms that appropriately address sustainability, fishing access, and user rights issues of small-scale fishers.** Based on the above reviews and on international experience, explore alternative management options.

Water and flood management reforms

88. Water resources management, irrigation and flood management, and rural water supply and sanitation will play key roles in the Cambodian rural development agenda. Water is a critical natural resource. Its appropriate use and management are key for rural development and poverty reduction in five ways: (1) as a key input to agriculture production—to improve rural livelihoods, food security, and nutrition; (2) as the single most important source of hazard risk in the extremes of its availability—droughts and floods; (3) as the source for safe drinking, bathing, sanitation, and other domestic uses—to reduce illness from water-borne disease and related costs of health care and impairment for work and education; (4) as the basis of the aquatic ecosystem—to sustain inland capture fisheries production; and (5) as an important mode of transportation for both people and goods, particularly in isolated areas during the wet season.
89. Cambodia has abundant water resources. It receives an estimated annual runoff of 475 billion cubic meters (BCM) from the Mekong system, which drains over 85 percent of the country. However, rainfall is concentrated in the six-month wet season, and there is very little reservoir storage to capture and regulate wet-season runoff. During the six dry months, evapo-transpiration far exceeds rainfall, and river levels drop significantly, resulting in limited available surface water resources, outside of the Mekong River mainstream and Tonle Sap. Floods are an annual occurrence and are virtually unmanaged, except for a dike that protects Phnom Penh. The annual floods bring positive benefits to the flood plain by replenishing soil nutrients and moisture, and dispersing fish for spawning. However, they also damage infrastructure, crops, and personal property as well as cause costly restrictions to economic and other activities. Groundwater resources are estimated at approximately 20 BCM overall, but the potential for groundwater use is uneven geographically, and is relatively uninvestigated and untapped. In many areas, aquifers are complexly layered. Furthermore, high arsenic levels are a serious problem in some areas near the Mekong mainstream.

90. The institutional, policy, and legal framework for water management needs to be consolidated. The Ministry of Water Resources and Meteorology (MOWRAM) was established in 1999 and is responsible for water resources management, including flood control and large-scale irrigation and drainage. Other government entities with responsibilities related to water include (a) the Ministries of Industry, Mines and Energy (urban and peri-urban water supply and sanitation), Rural Development (rural water supply and sanitation, and small-scale irrigation), Public Works and Transport (drainage, flood control, and navigation), Environment (water quality), Agriculture, Fisheries and Forestry (wetlands and fisheries management); and Health (water quality and health impact); (b) Provincial and Municipal governments; (c) Commune Councils; and (d) Village Development Committees. Considerable effort has been dedicated during the last several years to developing a water resources policy and legal framework. Noteworthy are the (1) National Water Resources Policy, awaiting endorsement by the Council of Ministers; (2) new draft Water Law, awaiting approval by the Legislature; (3) Water Resources Strategy; (4) Water Strategy Framework; (5) Water Sector Roadmap; and (6) draft outline water resources investment strategy.

91. These policies/strategies/laws have been supported by various donors and were well prepared. However, there is a need to:

- Rationalize, consolidate, and endorse the existing policies/strategies/laws;
- Prepare and adopt sub-decrees and regulations to implement the various provisions of the Water Law, publicize them, and build the capacity of relevant agencies to implement them;
- Enhance government ownership and continue to improve donor coordination related to the Cambodia water resources agenda;
- Improve coordination among relevant government entities with water-related responsibilities at all levels;
- Develop highly focused strategic action plans for the relevant government entities to direct their water-related programs in the context of these policies/strategies/laws and to take into consideration other sector development objectives (agriculture, fisheries, environment protection).

92. Water resources planning and management at the river-basin level are important to ensure sustainable use of water and land resources for the benefit of the rural population now and in the future. International water resources management principles indicate that water resources
management should be carried out within the context of river basins and should include the participation of central ministries, local governments, water users, and other stakeholders. Cambodia’s water resources originate primarily in the Mekong River Basin. Thus, river basin planning in Mekong sub-basins in Cambodia needs to be carried out in the context of Mekong River Basin planning, which is coordinated by the Mekong River Commission (MRC). MOWRAM recently replaced the Ministry of Public Works and Transport as the government agency responsible for coordinating Cambodia’s participation in the MRC, so MOWRAM’s capacity to undertake this function needs to be strengthened.

93. **Irrigation development needs to be implemented within the broader context of agricultural diversification and the goal of increasing rural incomes.** Cambodia’s agriculture is almost totally dedicated to rice. Only approximately 20 percent of the rice area, or 473,000 ha, includes irrigation schemes. However, effective irrigation coverage is far less. Within the 946 existing irrigation schemes, which comprise the 470,000-ha command area, only approximately 250,000 ha, or slightly more than half, receive sufficient irrigation water because of the general dilapidated status and poor initial design and management of the schemes. Most rice is produced without irrigation—planted during the wet season or at the end of the wet season and the beginning of the dry season in large areas from which the water recedes, leaving considerable soil moisture. Year-to-year production is extremely variable, because it is highly dependent on the weather, in particular, the timing and level of rainfall.

94. Presently, the country is considered “self-sufficient” in rice production in that the domestic market demand is met and small quantities are exported. Nonetheless, most rice production in Cambodia is consumed on-farm, and food security remains a major issue for poor households. Therefore, measures to increase production could help in selected areas to meet food deficits, and perhaps increase the cash income of these farmers, thus directly address poverty. Suggested measures are to (1) improve agricultural technology in rain-fed and recession rice production areas and (2) rehabilitate inexpensive small-scale irrigation systems to enhance flood recession rice production targeted at subsistence rice producers.

95. **Expansion or improvement of large-scale irrigation systems for rice production in most cases would not be cost-effective. Instead, irrigation development should focus on diversifying to higher-value crops.** Whether Cambodia will be able to (economically) increase rice exports significantly will largely depend on the evolution of external factors such as the excess production capacity in neighboring countries, current glut of rice on the international market, and long-term trend in cereal prices. In addition, rice production could be significantly increased without major investments in new large-scale hydraulic infrastructure. Therefore, the incremental costs and benefits of new large-scale irrigation development need to be compared to the incremental costs and benefits of enhancing rain-fed production and less expensive rehabilitation of existing irrigation systems. The economic viability of such investments needs to be better assessed case by case. Cambodia presently imports a number of products, such as fruit and vegetables, that presumably could be produced at lower cost for the domestic market inside Cambodia if adequate quality control, transport, and marketing mechanisms were in place. Emphasis needs to be placed on irrigation systems in conjunction with diversification to higher-value crops. Simultaneously, all of the complexities that such an emphasis implies must be kept in mind: cultural impediments to converting rice farmers to producers of other crops; quality control requirements for fruits and vegetables; marketing, processing, transport, and storage issues; and timely access to agricultural credit.
Box 4. Challenges of large-scale irrigation development in Cambodia

Most donor-financed projects are concentrating on small to medium-sized irrigation schemes on the basis that the added complexity of the larger schemes is difficult to manage in the current institutional and social context.

Challenges of larger schemes include:

- Numerous farmer water user communities (FWUCs) within one scheme, when FWUCs are still new, the legal framework incomplete, and the capacity of MOWRAM in need of being strengthened
- Differences in management capacity of each FWUC, leading to potential conflicts
- Difficulty in achieving coordinated irrigation scheduling with provincial Departments of MOWRAM (DOWRAMs) not yet skilled enough to deliver efficient service
- No clear operations and maintenance (O&M) procedures or funding for the larger infrastructure items that are retained by MOWRAM
- Some difficulty in getting all the FWUCs within a large scheme to cooperate.

Conversely:

- In countries in which the private sector benefits from a favorable business climate environment, private sector involvement is easier in larger schemes.
- There are economies of scale for new crops, for example, cotton, horticulture, fish farming.
- Larger-scale cooperative farming and marketing arrangements are possible with greater market access and price competitiveness.
- There are more opportunities for technology take-up and improved irrigation efficiency.

However, such an enabling environment for large-scale irrigation schemes remains to be created in Cambodia.

96. Prioritization of water management investments must be rationalized based on clear criteria and drawing from the principles described above. Planning documents for investments in water management (such as those prepared for the SEDP II or the NPRS) usually include lists of schemes proposed for rehabilitation, for which additional resources are being sought by the government. How the proposed investments relate to broader local development goals and sector objectives, as well as the process for prioritization of investments, often are unclear.

97. Flood management should emphasize living with floods including, where possible, preserving and enhancing the benefits and reducing the negative impacts. The impacts of annual floods are diverse and include:

- **Social costs**: Isolation of houses left with only boat transportation possible; sources of clean water cut when wellheads are submerged, spread of intestinal and other illnesses
- **Economic costs**: Significant crop losses, damage to roads.

These costs will increase as Cambodia’s economy develops. A government policy dependent solely on international agencies bearing the full costs of hazard mitigation is not viable, and the government must be prepared to shoulder a greater share of these costs. To make poverty reduction efforts sustainable, hazard risks need to be managed more proactively, employing both preventive and mitigation measures, and both structural (drainage infrastructure, dikes) and nonstructural elements.

47 In the 2000–2001 floods, assistance from the international community approached the full direct losses from the flood, estimated at US$160 million (equivalent to half of the government’s recurrent budget for 2000). Borrowing from the ADB and the World Bank alone reached 50 percent of the direct losses. Worldwide, outside assistance generally pays for less than 10 percent of countries’ natural disaster losses.
98. **Despite several efforts to build its capacity, the National Committee for Disaster Management has remained weak and unable to carry out its coordinating role.** The NCDM was created to coordinate efforts in disaster management in the country. Its membership is drawn from agencies concerned with natural hazard management and mitigation. However, the draft National Disaster Management Policy, written in 1997, has yet to be approved by the government. Despite the Committee's reporting directly to the Prime Minister, it has remained virtually powerless even to coordinate activities such as damage assessments and information flows to vulnerable communities prior to the occurrence of disasters. Given the likelihood of future disaster events, it is imperative that NCDM receive technical assistance to improve its systems and procedures for damage assessment, needs assessment, and disaster reporting, as well as its coordination capacity.

99. **There is a need for a more proactive approach to natural hazard management, with emphasis on preventive and mitigation measures.** In addition to the provision of capacity building, future efforts in the hazard management field in Cambodia must be supported by an overall National Hazard Management and Mitigation Strategy, which is proactive and adapted to the constraints of the government, in particular, its fiscal and technical capacity. The strategy should provide a comprehensive risk management framework that includes

- **Risk identification:** Understanding existing hazard exposures and assessing the level of vulnerability to the potential impacts of those hazards
- **Risk reduction:** Undertaking measures to avoid hazards and resist disaster impacts
- **Risk sharing/transfer:** Implementing strategies to reduce the financial impacts of disasters on the poor and the economy.

100. This framework must be closely linked to the policy decisions needed to make effective partners of the various NCDM members and NGO community. The present emphasis on post-disaster activities will need to be balanced with preventive and mitigation measures. Elaboration of the strategy must be participatory, and input should be solicited from the various stakeholders involved in funding disaster management. In particular, the framework should integrate lessons learned from international and local good practice. In the context of recurring and apparently worsening water disaster conditions in Cambodia, the framework also should make use of available technology for disaster management.

101. **With regards to the reduction of local vulnerability, three key areas warrant further study:**

- **Community-based hazard management.** Natural disasters significantly impact poor families and impede the delivery of basic social services such as water, health, and education. The best way to address these impacts is to involve the local communities in the development of mitigation and coping measures. Some NGOs have been exploring ways to support local communities in this respect with encouraging results that warrant further study.
- Community-based hazard management will need to be re-enforced with public awareness programs, and
- **Building social safety nets for communities to help them cope in the aftermath of disasters.** These safety nets must encourage self-reliance and avoid perpetuating the community's dependency on aid through the development of nonagricultural sources of income, establishment of credible banking and financial institutions that provide savings services and credit facilities, and investments in essential infrastructure. For needy
communities to be effectively served, there is a need to understand current their coping mechanisms and how these can be strengthened.

102. **Flood mitigation measures need to be incorporated in infrastructure design.** Technical designs, particularly for infrastructure, should be multipurpose. For example, roads can be built to withstand disasters as well as to provide high ground for stranded people and animals. Multipurpose designs also may be a cost-effective way to incorporate flood mitigation features into technical designs and these aspects need to be reviewed more closely. Study of this issue should also aim to understand the development and implementation of building codes and inspection codes, as well as the enforcement of the norms and accountability. These latter activities would need to be supported by appropriate legal and policy frameworks.

103. **Rural water supply and sanitation coverage in Cambodia is low by all standards.** Approximately only 25 percent of rural households have access to safe drinking water and approximately only 10 percent of rural households have access to sanitation facilities. While demand for drinking water is increasing in rural areas, the quantity and quality of water resources from both surface water and groundwater sources is not adequate in some areas. There are no sewage systems outside Phnom Penh. Latrines are used in rural areas, but coverage is low. *Cambodia has one of the highest rates of water-borne diseases in the world.* The use of unsafe water and poor sanitation facilities, combined with inadequate hygiene, has been identified as the most important reason for high infant mortality/morbidity rates. High arsenic levels also are an issue in several areas.

104. **More work is needed on a rural water supply and sanitation strategy to guide investments in the sector.** The MGDs for Cambodia call for the provision of safe water supplies to 40 percent of the population, and sanitation services to 20 percent of the population, both by 2005. Recently, the Ministry of Rural Development (MRD) and the Ministry of Industry, Mines and Energy (MIME) developed and adopted simultaneously a rural and an urban Water Supply and Sanitation Policy. However, there is no rural water supply and sanitation strategy that lays out the actions and the related investments needed to meet these goals. Given the importance of the health of the population to economic growth and welfare, safe drinking water and sanitation in rural areas should rank high among public investment priorities, with due consideration to the opportunities for private investment in small piped-water systems.

105. **Roles of different stakeholders in rural water supply and sanitation should be strengthened.** MRD implements a number of donor-funded rural water supply and sanitation projects. NGOs, too, are very active in this area. In addition, water supply and sanitation comprise a significant number of commune-level projects financed by Commune Councils out of the Commune/Sangkat Fund: 180 projects valued at US$627,476 (2002 data). The private sector is fairly active in water supply in peri-urban areas, and opportunities for replicating this approach in some rural areas of the country should be explored. However, there will be a need for public monitoring and regulation of the water quality as well as of the potential for negative effects on the aquifers.
Recommended Priority Actions for Water and Flood Management Reform

Priority area #1 Consolidate the existing institutional and policy framework

- Prepare and adopt sub-decree and regulations to implement provisions of the Water Law, building on lessons from projects and using comprehensive consultations. Develop strategic action plans to guide the water-related programs of concerned government agencies. Build the capacity of those agencies to implement water regulations.
- Continue to improve donor coordination, and establish cross-ministerial standing committees or working groups to address coordination issues in the water sector and to monitor intra-agency cooperation. Strengthen accountability of line agencies for the implementation of agreed actions.
- Explore, in the context of deconcentration and decentralization, water resources management, irrigation development, flood management, and water supply and sanitation options at the community level.
- Participate in the cross-country initiatives of the Mekong River Commission, including development of a water resources strategy with stakeholder participation from selected priority sub-basins. Enhance participation in the Mekong River Commission, including improving linkages and coordination of Cambodia water resources strategy and programs with transboundary Mekong water resources management and development programs.

Priority area #2 Make planning and investments more strategic and supportive of broader economic development goals

- Rationalize the prioritization of planned investments, whether small or large scale, through the use of clear selection criteria.
- Start working at the river-basin level and ensure consistency with agricultural and other broader economic development goals. Prepare and implement irrigation and flood management schemes within the context of the river basin plans that (1) emphasize benefits to the poor, (2) are compatible with and enhance fishery benefits, (3) are compatible with the natural flooding and flood recession regime, (4) are economically viable and benefit a large number of people, and (5) are prepared and implemented in conjunction with farmer water user committees.
- Develop plans and water management procedures for a priority sub-basin and communities that will (1) limit water usage and return flow discharges to amounts and water-quality levels that preserve and sustain the environment; (2) set broad allocations to different uses (environment, irrigated agriculture, municipal, and industrial) and discharge requirements to meet this sustainability objective; and (3) design and implement monitoring and water rights/discharge administration systems to manage water use within these constraints.

Priority area #3 Mainstream disaster preparedness and mitigation

- Review and approve the National Disaster Management Plan. Seek donor technical assistance, training, and investments to improve NCDM’s capabilities, damage assessment systems and procedures, and needs assessment and reporting capabilities. Design a comprehensive risk management strategy; balance the current approach to natural disaster

48 In the current process to establish joint government-donor technical working groups (TWG), an agriculture and water management group has been created. In addition, a French-financed program is supporting the establishment of a strategic Task Force in MOWRAM.
management with one that is proactive and adapted to the constraints of the RGC, in particular, to fiscal and technical capacities.

> **Review the lessons from experience with approaches of community-based hazard management by NGOs and other donors** to better design future support from NGOs and the donor community.

> **Integrate disaster preparedness and mitigation in land-use planning and infrastructure design.**

**Priority area #4 Mobilize resources for expansion of rural water supply and sanitation**

> **Enable equitable access to rural water supply and sanitation** through increasing investment in wells and latrines in more remote areas, as well as sewage systems where appropriate.

> **Encourage private sector participation.** Greater private sector involvement in rural water supply and sanitation development should be encouraged, both because of the scarcity of public investment funds and because operation and management of some facilities may be better left in private hands. In other countries, the private sector plays an increasingly important role in providing essential water supply and sanitation services.

**Increasing agricultural incomes**

106. **For progress on poverty reduction in the face of high population growth rates, the agricultural sector of the rural economy must grow at a minimum of 5 percent–6 percent per annum** (see Part I of this document). Compared to current sector performance, this is a high growth rate, and increasing rice productivity will go only so far toward meeting it.

- The potential contribution to GDP growth from increases in rice production through intensification or expansion of cultivated areas is limited by the absorptive capacity of the internal market, poor quality for exporting, excess productive capacity in the region; and the overall long-term trend in cereal prices regionally and worldwide.

- However, even with the market limitations, increases in rice production and milling efficiencies potentially will contribute up to 3 percent annual growth (FAO 2003).

- Growth in forestry and fisheries production is limited by the carrying capacity of the resource and the tradeoffs between increased harvesting for commercial purposes versus resource values in the context of availability of non-timber products, rural safety nets, and other noncommercial uses.

107. **Achieving a higher growth rate will require diversification away from rice. Diversification, for the most part, must be market driven and, to a significant extent, export oriented:**

- Given the low domestic income levels, concentration of higher incomes, and skewed income distribution, which limit growth in domestic demand, additional contributions to growth from diversification beyond traditional rice, forestry, and fisheries products require an export-market orientation.

- If production and market constraints are addressed, national demand could lead agricultural sector growth to an average 4.4 percent p.a. Future incremental domestic
food demand will derive from (1) population growth (some 2.5 percent p.a.) and (2) with income growth, changing dietary composition from rice to meat/fish, vegetables, and more highly processed food.\textsuperscript{49} Although there is a potential for import substitution in the case of high-quality rice (100,000 tons current import) and other products including vegetables and fruit, sugar, vegetable oil, poultry, and pig, realization of this potential would only be possible once market, institutional and infrastructure constraints have been removed. Currently, domestic production cannot compete with imports for a number of products, particularly from Thailand and Vietnam.

- Farmers' and agribusiness competitiveness and integration with global markets is limited by low productivity, weak infrastructure, and other institutional factors (such as corruption), which raise costs and inhibit efficient transmission of market signals to rural producers, transporters, processors, and Cambodia’s nascent rural financial markets.

108. **Supportive policies and incentives need to be developed, in consultation with farmers and the private sector, to enhance the supply response in traditional outputs such as rice, fisheries, and livestock; and to facilitate diversification** in production and value-added processing, as well as determining the factors that will enable the rural poor (producers and laborers) to capture a larger share of the additional value generated from rural-based production. Even with reduced distortions on the demand side and an effective and diversified supply response, favoring small farmers and rural laborers requires improvements in the efficiency and equity of access to productive assets and input markets including land, water, finance, and technology. Options exist (examples are emerging in Cambodia) for pursuing a strategy of pro-poor rural growth through market-led diversification, including contract farming and marketing associations. However, these options require substantial changes in the rural investment climate and the organizational structures linking rural producers with processors and the market.

109. **A higher growth rate will essentially involve a transformation from a primarily subsistence-oriented agriculture characterized by low input rice monoculture and low returns to land, to a more commercially oriented and more diversified agriculture**. This transition has already started and needs to be facilitated by supportive policies and investments. Thus, a series of cross-cutting reforms and interventions are required to reduce the perceived risks of shifting from subsistence to more commercially focused farming. Future trends in farming to a great extent will depend on government policy choices for rural areas in regards to (1) reorienting agricultural policy, resources allocation, and support services to respond to the needs of diversified farming systems, and (2) resolving production, marketing, and trade problems faced by key commodities (rice, fish, livestock, rubber); as well as (3) irrigation and water management investment priorities; (4) road and village infrastructure development, especially in more remote areas, and (5) land management and tenure security. The focus of this section is on (1) and (2); (3) to (5) are covered in other sections of Part II of this Note.

\textsuperscript{49}Taking into account the decreasing share of food expenditures with income increase, an income growth rate of 3 percent nationwide, as a rough estimate, would drive agriculture sector growth at a maximum of 4.4 percent p.a. (Combining the 2.5 percent population growth and 1.9 percent from shifting dietary patterns -3% @ 63.5%, when 63.5 percent is the share of incremental income spent on food). The income elasticity for various food items has been estimated at 0.46, 0.75, and 0.92 respectively for rice, non-rice basic staples, and meat/fish (FAO, Ernstberger and Liu 2003).
110. The diversity of local situations requires emphasis on a decentralized approach with greater community participation. However, a number of systematic constraints, such as bottlenecks in the marketing and trade regulatory environment, will require coordinated actions involving central level agencies. A combination of (1) actions to strengthen sector management for agricultural development; (2) services to support production, marketing, and trade of agricultural products; and (3) commodity-specific programs is therefore proposed.

**Strengthening sector management**

111. *Developing a clear agricultural development program is a priority.* As a first priority, the government's strategy for agricultural development needs to be clarified, and general priorities translated into specific programs, which would receive increased government and donor support. The NPRS identifies the following priorities for agricultural development: (1) accelerated and sustainable irrigation development; (2) accelerated land titling and distribution of idle land under MAFF’s management; (3) development of exports of rice and other agricultural products, and processing and quality control facilities; (4) strengthening essential agricultural support services including extension, research, marketing, credit, and input distribution; (5) expansion of livestock production with emphasis on animal health services, nutrition, and range management, and establishment of meat processing plants; (6) introduction of appropriate technologies for rice-fish farming and aquaculture; (7) promotion of community-based forestry and fisheries management; and (8) strengthening capacity at all levels of rural sector agencies. However, the NPRS does not define a clear strategy for agriculture, and its broad directions have yet to be translated into more specific priority programs.

112. *Sub-sector strategies and policies exist in several areas, but their consistency and actual implementation, as well as ownership and support at political level, remain at issue.* A combination of consistent programs aiming at revitalizing key sub-sectors (addressing identified production and marketing constraints affecting the competitiveness of specific sub-sectors, for example, rice, rubber, fish, livestock) and programs aiming at improving the quality of service delivery to the agricultural sector (for example, agricultural extension system, market information system, and financial services to allow for further diversification of agricultural production in response to market demand) would provide a framework to rationalize and focus the currently scattered efforts of various stakeholders in the sector. A credible agricultural development strategy also would support MAFF’s advocacy efforts for an increased budget allocation to the sector.

113. *Resources need to be aligned with the agricultural development strategy.* Agriculture and rural development lag behind other priority sectors in terms of improvements in public expenditure policy and management, and alignment of resources with their development objectives. Linkages between planning and budgeting and pro-poor targeting of resources have improved in the health and education sectors; however, agriculture and rural development have yet to make progress on this front. With projected revenue collection well below financing needs of the NPRS, expenditure rationalization should be a high priority. In addition, the lack of clear sector policy and output information makes the evaluation of the efficiency of public expenditure in agriculture and rural development difficult. Finally, given the volume of external assistance in total government expenditures—estimated at 75 percent or more for agriculture and rural

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50 Noteworthy are a draft Seed Law and Seed Strategy, a Livestock Policy and Strategy, an Agricultural Education Strategy, National Extension Guidelines, a draft Fisheries Law (with Council of Ministers), and draft sub-decrees and regulations on agricultural standards.
development—improving the management of external assistance to ensure greater alignment with RGC priorities is also critical.

114. **Serious public expenditure management issues undermine the economic, geographic, and intrasector efficiency of resource allocation in the rural sector, and a small overall resource envelope means impact is limited.** The 2003 Public Expenditure Review (IFAPER) identified the following major issues in the sector, based on a review of MAFF and MOWRAM:

Box 5. Key public expenditure management issues in agriculture

- **Government resources allocated to sector are quite low (less than US$1 per capita), given the high share of population dependent on agriculture.** However, there is a need for a clear pro-poor growth program that could be translated into the MTEF before any budget increase can be justified. Recent increases in expenditures have gone to subsidies, rice seeds, for example, rather than to priority sectors.

- **The budget process is undermined by considerable off-budget flows.** High off-budget revenue collection is a serious concern, especially in the forestry and fisheries sub-sectors, in which collections are not monitored effectively against budget. The profitability of rubber companies is very poor, and state-owned agricultural enterprises are not monitored by MAFF. Management of donor aid is also a major problem, with no comprehensive recording and monitoring of resources allocation and expenditures in the sector.

- **The economic allocation of resources is somewhat inefficient.** The wage bill share of recurrent expenditures has dropped by half in recent years. On the positive side, operation and maintenance at the provincial level have increased. Poor execution in the early part of the year undermines budget management, with especially negative impact on activities linked to the seasonal agricultural calendar.

- **The sub-sector and geographical allocation of resources is inefficient.** Even though extension ranks high in the government’s strategies for poverty reduction (SEDP II, NPRS), MAFF’s allocations for agricultural extension are less than 1 percent of budget. A major share of resources is allocated to central ministries (MAFF, MOWRAM). More than half of MAFF’s PAP expenditures have been spent on forestry replanting, of which a large share has been spent on staff remuneration. There are no targeting/tracking mechanisms to ensure pro-poor budgets and expenditures. There is no system for monitoring budget and financial information of MAFF departments and affiliates.


115. **Agriculture sector institutions need to be modernized to reflect the shift in economic orientations, from centrally planned and production-oriented to commercialized and market-oriented.** Cambodia’s shift toward market-oriented agriculture is reflected by the ongoing divestment/privatization of former state-owned enterprises (AIC, KAMFIMEX, rubber estates, seed farms) and the liberalization of agricultural trade, which followed the earlier liberalization of agricultural prices. However, these changes are slow, because they continue to face substantial resistance from vested interests. In parallel, sector institutions have yet to be restructured to reflect the new orientations of the economy. Four aspects requiring further support are (1) redefining the role of the public sector in agriculture; (2) reviewing the role and responsibilities of key institutions, particularly in the context of decentralization and deconcentration; (3) completing ongoing privatizations; and (4) addressing key missing skills.

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51 Findings apply to the agriculture and water components of the rural economy; the IFAPER did not cover other agencies directly involved in the rural economy.

52 16 percent in Thailand.
Redefining the role of the public sector in agriculture. Several of the current functions performed by MAFF and related institutions are obsolete and inappropriate roles for public agencies in a market-oriented economy. MAFF and public agricultural institutions need to focus on the delivery of public goods, moving away from direct involvement in production, input distribution, and marketing, which are better done by the private sector. Examples of inappropriate government involvement include the production of seeds on state-owned seed farms for sale and/or distribution to farmers and the distribution of chemical inputs. Conversely, a number of key public (macro) functions are still under-developed, for example, economic analysis for policy development, epidemiological surveillance, promotion of rural producer organizations, and development and enforcement of food safety standards. A functional review of MAFF to be undertaken under the ADB’s Agricultural Sector Development Loan will provide the basis for a plan to modernize the institution, including redefining key functions of the ministry, and corresponding staffing and skills needs. Increased political support and leadership will be needed to implement the needed restructuring. Progress with civil service reform also will be crucial to support these changes.

Reviewing the role and responsibilities of key public institutions and increasing synergies with local planning processes. The organization and mandate of MAFF at the central and lower administrative levels (provincial and district offices) has not yet evolved to reflect recent changes in Cambodia’s economic and administrative orientations: the new role of the public sector in a market-oriented economy, and, more recently, the decentralization and deconcentration processes. In particular, the roles of Provincial Departments of Agriculture, Fisheries and Forestry (PDAFFs) and District Agriculture Offices (DAOs), which are critical for effective linkages between farmers and the ministry, are poorly defined, reducing the effectiveness of policymaking and implementation and delivery of agricultural services.

There is an urgent need to redefine the mandate of these offices to better serve the core functions of planning and knowledge of the local economy. The core functions are fostering agricultural productivity (supporting the development of farmers’ organizations, extensions services, and market information services), surveillance and control of animal and plant diseases, and managing forestry and fisheries resources. The presence of MAFF at the local/district level to execute national policies, inform the ministry of local agricultural development, and monitor the implementation of laws and regulations relevant to agricultural production also will need to be redefined in view of the government’s decentralization policy. Similarly, the role and presence of provincial and district extension services need to be redefined as part of a broader analysis of MAFF presence at the provincial and local levels, including the appropriate levels of funding and staffing at those levels. With support from the Agriculture Productivity Improvement (APIP) and Agricultural Development Support to SEILA (ADESS) projects, work has been initiated on the needed modernization of PDAFF and DAO.

Completing the ongoing privatization of formerly state-owned enterprises, and creating an enabling framework for the private sector. Privatization of the major state-owned enterprises in the agriculture sector is underway, with support from the ADB. It is expected that the process will be completed by 2006. Combined with improvements in the business climate, its completion will open the way for greater private sector involvement in the provision of inputs and marketing support services.

Addressing missing sector-specific skills. The lack of financial and economic understanding or skills in agriculture-related government agencies is reflected in the lack of

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53 First Agricultural Sector Loan and upcoming Agricultural Sector Development Loan.
capacity (at all levels) for policy development, socioeconomic and/or investment analysis, water and farm management economics, agricultural marketing and trade issues, and general rural business skills. These skills are urgently required if line agencies are to contribute effectively to policy planning, provide sound recommendations for investment from farmer level to sector level, and realistically evaluate policy and investments options. Sector planning is supply driven and output oriented, rather than rural incomes and poverty reduction oriented. Awareness or experience of participatory approaches, farming systems approaches, and/or of agricultural economics within the technical ministries and their departments (both central and provincial levels) is low. Government staff tend to maintain a top-down, rather than a service-provider, approach (as, for example, in agricultural extension and water management).

**Facilitating technical and market support services**

121. *Agricultural extension can play a key role in bridging the current technology gap in agricultural production and post-harvesting handling and processing.* The mandate for agricultural extension services is placed with the recently created (1998) Department of Agricultural Extension in Phnom Penh, and the Offices of Agricultural Extension (provincial and district levels). A National Extension Strategy was developed in 1998 with support from AusAID, and training has been provided to agricultural extension workers (AEW) at provincial and district level in 13 provinces (CAAEP and CAAEP II projects). In parallel, a number of NGOs and donor-funded programs have developed different models for the delivery of extension services, including farmer-to-farmer technology transfer models, and combined delivery of credit and extension packages targeting poorer farmers.

122. However, extension services remain embryonic, with only 0.7 percent of farmers having access to any form of extension service, and important quality and effectiveness issues remain. While women represent 54 percent of the farming population, they represent only 10 percent of farmers with access to extension services. In general, messages remain top-down, and cultural and skills constraints have hampered AEW engagement in more desirable two-way exchanges with farmers. There are indications of various innovations initiated by farmers, but these are not yet well documented. Few programs are engaged in support to farmers’ exchanges or farmers’ associations. Success stories in the delivery of extension services through the private sector are rare and seem to be linked to high investment capacity, allowing strategies based on long-term returns to investments. Farmers involved in such schemes seem to be the wealthiest and best endowed. However, there has been no systematic assessment of the relative effectiveness of these different programs.

123. *Agricultural research is weak and supported primarily by donor initiatives.* The most notable achievement has been the establishment of the Cambodia Agricultural Research and Development Institute (CARDI), the main national agricultural research institution, through Australian support. Local research institutions remain poorly integrated both with the private sector (farmers and agribusiness) and other institutions such as agricultural extension and educational institutions. Under the ADB’s Agricultural Sector Development Loan, a master plan for agricultural research will be prepared to address issues faced by the sector. With support from

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55 Castellanet 2003.
56 Fewer than 25 percent of Provincial Departments of Agriculture staff have certificates or higher qualification; the percentage is probably lower at district level. The current Agricultural Extension Guidelines estimate the staffing needs at 5 skilled extension officers in each district (a total of 900 for the whole country), of whom approximately 150–200 have received initial training so far.
the APIP project, a strategy for agricultural education has been developed; however, it remains to be implemented.

124. **The central questions for the future of a national extension system supported by the public sector are financing and sustainability.** MAFF’s budget represents 1.4 percent of the government budget (IFAPER 2003), of which only 1 percent goes to the extension department. A fully public, centralized extension system able to reach all communes and villages would be costly for government, even in the medium term. For the sustainability, efficiency, and transparency of a public extension service, the question of staff salaries is essential. The current salaries at district level are far below the salary range offered in projects managed by donors, NGOs, and the private sector. This gap makes it difficult for the government extension service to retain qualified civil servants posted as district extension officers. In the absence of adequate salary and operational budgets, public extension services will continue to perform poorly.57 Furthermore, the current system might not be the best system to capitalize on farmers’ own initiatives and innovative capacity, including farmer-to-farmer communication.58 A “middle way” with targeted, public-funded extension that enabled and supporting the development of pluralistic approaches with some competition among different service providers (private, NGO) would better accommodate the existing context. However, in view of past resistance to such an approach in MAFF, a clear indication of the government’s interest and willingness to work in this direction will be necessary.59

Table 6. Characteristics of agricultural technologies and private sector incentives to provide them

<table>
<thead>
<tr>
<th>Type of good</th>
<th>Public good</th>
<th>Common pool</th>
<th>Toll</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>Features</td>
<td>Non-excludable and non-rival</td>
<td>Rival but not excludable</td>
<td>Excludable but non-rival</td>
<td>Excludable and rival</td>
</tr>
<tr>
<td>Examples</td>
<td>Weather forecast</td>
<td>Self-pollinated seeds</td>
<td>Soil analysis</td>
<td>Hybrid seeds</td>
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<td></td>
<td>Mass communication of production and market information</td>
<td>Common pasture management</td>
<td>Farm management computer programs</td>
<td>Biotechnology products</td>
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<td></td>
<td>Natural management techniques</td>
<td>Shared fishery</td>
<td>Private consultation on farming and marketing</td>
<td>Agricultural machinery and chemicals</td>
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<td></td>
<td>Livestock vector control</td>
<td>Livestock dipping</td>
<td>Veterinary supplies</td>
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<tr>
<td>Likelihood of private provision</td>
<td>Very low</td>
<td>Low</td>
<td>Higher</td>
<td>High</td>
</tr>
</tbody>
</table>


Note: Non-excludable = a person who does not pay can still receive it. Non-rival = one person’s use does not lower another person’s benefit from it.

57 Currently, extension staff have to continuously look for additional sources of income; looking for “benefits” distorts their planning of their activities.

58 Salary increases to support a public extension system based on the proposed 5 extension staff per district, remunerated at appropriate level to retain qualified staff (approximately US$150/month, based on project/private sector salaries for trained agricultural technicians) would represent a budget of US$1.62 million per year for salaries only; 3 times the total current budget for extension (or 42 percent of the total PDAFF’s budget at the moment).

59 In the past, MAFF’s policy on extension has been unclear in practice, with the ministry allowing the development of separate extension systems in different departments—the IPM program in DAALI, livestock production extension in DAHP, and rubber extension in DGPH—in parallel to the activities of DAE. Attempts to affiliate private providers with extension services with MAFF-implemented programs have encountered strong resistance from MAFF. Examples are APIP and the provision of training for VAHWs by NGOs, and CAAEP’s provision for contracting of nongovernmental extension services.
125. **The absence of market and trade services and inefficiencies in value-chains affect the competitiveness of Cambodian agriculture.** In 2001 agricultural exports (excluding forestry) declined to their lowest level since 1994, US$54 million (of which 90 percent was rubber), while agricultural imports increased to US$301 million (FAOSTATS). Production efficiencies do not compare well. Research and market information systems on high-value products are lacking, while quarantine, food, and biosafety standards are inadequately implemented. Enforcement of regulations is poor; transport costs are high; and myriad unofficial fees add to the cost of doing business and are major impediments to private investment in the agriculture and agribusiness sectors. The WTO accession process has brought these issues to the attention of the government.

126. **With the exception of limited professional associations of some farming and agribusiness groups, formal marketing and trade facilitation institutions are virtually nonexistent in Cambodia.** Limited access to market information is a key constraint to diversification of production. Furthermore, public policies’ past focus on output has neglected market demand for quality and standards. At the same time, the ability of small-scale producers to take full advantage of emerging market opportunities depends in large measure on their ability to meet market demand for quality and standards. Increasingly, these standards are regulated, particularly for international trade in products, by international and bilateral agreements, standards, and systems. The private sector also plays an increasing role in the development of quality standards. The productivity of small-scale producers often depends on the quality of inputs, with quality often difficult for the purchaser to assess. Small-scale producers often are harmed by fraudulent product. Examples for which this issue is important and for which labeling on retail packaging needs to be accurate and informative are seed quality, animal pharmaceuticals, and fertilizer and pesticide content. Cambodia is pursuing a strategy of integrating with international markets and gradually becoming a member of various international trade associations. These advances come with attendant responsibilities regarding regulating trade and specific domestic concerns (for example, pesticide use). Thus, international trade agreements are now driving the domestic capacity building agenda.

127. **During the ASEAN and WTO accession processes, the development of quality and standards regulations has accelerated.** Noteworthy initiatives include:

1. Two draft laws on technical regulations and standards are being prepared, the first for a Cambodian National Standards Institute (to serve as the inquiry point referred to in the WTO Agreement on Technical Barriers to Trade); and the second for the Quality and Safety of Products and Services.
2. Under pressure to address the widespread availability of hazardous pesticides and rural population exposure to them, the government has issued a Sub-decree on Standards and Management of Agricultural Materials. It also has created the Bureau of Agricultural Material Standards (BAMS) in MAFF to implement and monitor enforcement of the sub-decree.
3. A national Codex Alimentarius committee has been established.

However, enforcement of regulations remains a key issue.

128. **Ensuring that small producers have the means to meet market requirements will require increased support.** Cambodia has begun to marshal various sources of international assistance to strengthen its capacity in the field of agricultural product and food safety.
Despite these efforts, the lack of capacity in both domestic market regulation and sanitary and phyto-sanitary (SPS) regulation for exports directly hinders rural producers’ productivity and access to markets. For example, the low capacity of Cambodia’s veterinary inspection system means that despite duty- and quota-free access to EU markets under the “Everything But Arms” EU Initiative (EBA), local meat, poultry, and fishery products do not fulfill the EC’s sanitary and phyto-sanitary requirements and therefore cannot be imported to the European Community. In addition, potentially major export markets often apply their own individual standards, which add to the complexity of breaking into these markets. Plans are underway to export seafood to Japan and river fish to the United Kingdom, but Cambodia will need to improve inspection, packaging, and administration for these plans to materialize. Earlier attempts to export fish to Europe were blocked by the EC due to lack of quality control. Moreover, if the current promotion of agro-industrial investment in Cambodia favors large-scale producers, the risk is that small producers will be the last to acquire the skills and means to meet the requirements of these export markets.

A difficult but important issue for the government is how to build domestic capacity to address food safety issues and meet export market requirements for quality and standards while promoting small producers’ access to these systems and capacity to meet the requirements. Addressing this issue will require concerted action, probably through producer groups to reduce transaction costs. Extension and access to information will be important to facilitate small-holders’ ability to participate in emerging markets. Further work is necessary to identify options to address these issues within the specific capacity and resource constraints of Cambodia.

However, addressing the cross-cutting issues that affect marketing and trade channels for Cambodian merchandise, including agricultural products, is beyond the sole responsibility of rural sector agencies, and will require concerted actions with a number of other agencies, such as the Ministry of Commerce, Customs, the police, and the military (box 5). Agricultural sector institutions have a role to play in advocating for accelerated changes in these areas. However, demonstrated broader political support and leadership at the government level in responding to identified trade facilitation deficiencies is needed. At the sector level, public sector focus should be on promotion of food safety and standards, because promotion of quality is best done by the private sector. Improved access to financial and business services is needed to enable investments in value-adding processing technologies by agribusiness entrepreneurs.

60 Under APPI, the National Animal Health and Production Investigation Center (NAHPIC) has been reorganized and strengthened as the hub of a national laboratory network. NAHPIC will be important as part of the regulatory system for domestic food safety and international trade in livestock and meat products. Through an ASEAN support project, New Zealand, includes Cambodia in activities to undertake phytosanitary capacity development, including a national phytosanitary database that would support issuing import permits and export certificates among other capacities. An additional two phases provide for senior officials to get training and to develop strategic plans for each country: (1) through the Advisory Assistance to Industry for Export Promotion (AAIEP), UNESCAP (Bangkok), has provided support to Cambodia on the fisheries sector to identify through a market study new export potential and, with consultants from Infofish, workshops on food safety and HACCP; (2) UNIDO also has provided support on food safety systems. AusAid is also providing assistance through an ASEAN project.

61 For 2005 case studies of other East Asian countries’ experiences gearing up to meet international agricultural import regulations, see World Bank Agriculture and Rural Development Department (ARD), http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/TRADE.
### Box 6. Key constraints to Cambodian agricultural trade development

- There are significant constraints related to *trade facilitation*, with weaknesses in the Customs and Excise Department.
- A *large number of government agencies are involved* in processing and inspecting imports and exports, adding to costs and increasing delays in transactions. Current legislation permits any 1 of 10 agencies to be present at international checkpoints, with at least 5 always represented.
- *Informal/unofficial payments* characterize marketing systems in the country, including informal road tax collections, “fees” for export licenses, and other border and market charges. These payments greatly increase the costs of trade and encourage smuggling, which is still prevalent in Cambodia. These issues are compounded by the long and remote borders with neighboring countries and high duties on certain goods, such as consumer goods and petroleum.
- *Poor rural infrastructure* constrains the movement of produce around the country and isolates many agricultural communities, especially during the wet season.
- *Quality of agricultural produce is low* due to a combination of lack of awareness of quality issues on the part of farmers, inappropriate processing technologies, old and low standard of processing equipment, and damage attributed to poor handling and storage and transportation.
- The agro-enterprise sector is small scale and not well developed, leading to *low value added in product transformation*. Enterprises operate in an environment characterized by weak infrastructure as well as constraints to business development, including a weak financial sector, high levels of corruption, and low levels of business skills.


### Defining programs to improve the performance of core agricultural sub-sectors

131. Development of functional nation-wide and cross-sectoral responses to the many issues faced at different levels of commodity chains will take time. Solutions to commodity-specific issues for key commodities may be more quickly and easily supported through specific support programs. This approach would both strengthen organizations of producers and facilitate the development of public-private sector partnerships.

**Rice**

132. *Rice’s contribution to agricultural growth will remain limited, but improvements to existing systems are central for food security and the basis for further diversification of production.* MAFF’s current action program emphasizes increased rice production and rice exports (the target output for 2003–04 is 4.5 million tons, up from approximately 4 million tons in 2002). However, the absorptive capacity of the domestic market, the current glut of rice on the international market, and the excess production capacity in neighboring countries limit the potential contribution of the rice sector to agricultural growth in Cambodia. Furthermore, in 2001 approximately 10 percent of the rice marketed domestically (approximately 60,000 tons) was exported officially, while 33 percent of the paddy sold by farmers (over 450,000 tons) was exported unofficially, indicating a significant fragmentation of the marketing chain.

133. *At the farm level, increased rice yields alone could contribute only marginally to significant increases of farmers’ incomes, with returns on rice production estimated at US$100–150/ha at current prices, and average size of farms of approximately 1.5 ha. However, increased yields could help with food security for subsistence producers in areas in which no other economic alternatives are present in the short term.* The potential for increasing rice yield

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62 Annual Conference on Agriculture, Fisheries and Forestry, 2003–2004, MAFF.
levels, cropping intensity, and unit area productivity in the different rice ecosystems is good. Increasing productivity requires increased yields through the use of improved varieties, fertilizers, and irrigation. Agricultural extension is central to promote intensification of farming systems as well to develop a seed system that increases access of smallholders to improved seeds.

134. As regards seeds, substantial progress has been made in the development and diffusion of new varieties, in particular, with support from the CIAP and AQIP projects (AusAID) and under the APIP project (World Bank). However, much more work is still needed to develop the legal, regulatory, and institutional framework necessary to enable the development of a competitive and efficient private seed sector. Together with higher and more balanced fertilization, improved varieties, and good on-farm management, irrigation can increase both yield and cropping intensity. Technically, increases are possible especially in areas characterized by medium to high soil fertility, in which an average rice productivity of 5 t/ha/year—double the present productivity level—is feasible (FAO 2000). However, at current prices, heavy irrigation investments for rice monoculture are not economically feasible. Investments in irrigation should include complementary measures to ensure the diversification of rice farming systems, for example, to integrated rice-fish or rice-livestock systems; or the development of higher value crops.

135. **Rice also represents a high percentage of expenditures of the poorest households.** Thus, any policy for the rice sector should take into account the potential adverse impact of increased rice prices on the poorest segments of the population.

136. **The development of high-quality rice production for export is dependent on a conducive investment climate.** It is expected that high-quality rice production (“Thai approach”) has better return than the production of lower quality, high-yielding varieties (“Vietnamese approach”). However, due to the specific soil and agro-climatic conditions, high-quality rice could be produced on only a fraction of Cambodia’s total rice area. Consequently, only a relatively small number of farmers could be involved in the cultivation of this type of rice. Furthermore, production and marketing of high-quality rice are highly dependent on private investment and a conducive business environment. The Rice Value Chain Study (World Bank 2002) estimated that Cambodia’s potential for high-value rice exports is in the range of 200,000–300,000 tons (ADB 2002), and that an additional 100,000 tons could be produced to substitute for current imports of high-quality rice.

137. **Increasing the competitiveness of Cambodia rice for export.** Exporting rice to world markets also would require improving post-harvest systems and addressing existing constraints to rice marketing and trade. The current lower farm gate prices have discouraged investments in inputs and production technology improvements (ADB 2002). Constraints on rice marketing and trade will have to be addressed, including quality, post-harvest losses, poor infrastructure and support services, consistency of supply delivery, and transparency of transactions. The Cambodian Rice Miller Association identified “irregularities” (i.e. rent-seeking activities and unofficial fees) as a major constraint to officially exporting rice from Cambodia. The export protocols and inspection regimes are time consuming and costly for exporters, resulting in the export of rice through informal channels. It was also estimated that rent-seeking activities

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63 Some private investment in high-quality rice mills has occurred over the last few years and encountered some success both with farmers and with exports to international markets (Sources of Growth study, FAO 2003).
64 This compares with a total paddy production of approximately 4 million tons in 2001 (FAOSTATS).
65 The total cost of export procedures adds approximately US$14/ton to the cost of exported rice, and the estimated cost of ineffective regulations amounted to 85 percent–126 percent of total government
contribute to a mark-up of 20 percent–30 percent of prices received by farmers. Reduction in transaction costs could both improve the competitiveness of Cambodian rice on international markets and lead to higher farmer gate prices, possibly triggering more investments in improved milling technologies and post-harvest practices.

138. **Addressing identified constraints and inefficiencies along marketing chains in partnership with private entrepreneurs.** Compared to other sectors, the rice sector benefits from more advanced professional organizations (Rice Millers Association, Seed Grower Association), although they are still weak. It also has benefited from stronger government attention in terms of research and extension support. Constraints to production and marketing are fairly well documented, so the priority is to turn recommendations into action.

**Livestock**

139. **The livestock sector has the potential for widespread productivity gains and income growth.** Demand for meat in neighboring countries is projected to increase. Indonesia, Malaysia, and Thailand already are importing large numbers of live animals. In Vietnam, shortage of meat is expected in the near future, because living standards and purchasing power are improving. Smuggling live cattle across the borders from Cambodia to Vietnam is known to happen, and undeclared exports of live cattle to Thailand have been ongoing for several years (ADB 2002).

140. **Improving livestock production and marketing systems could bring rapid benefits for a large proportion of the rural population.** Raising livestock is an integral part of Cambodia’s farming systems and provides an important contribution to the cash incomes of most households. Backyard pig and poultry production is a major source of cash income for most rural households despite the fact that production inputs are minimal and mortality rates high.

141. With the exception of poultry, the growth rate of animal stock has not been particularly strong. Large animals (cattle and buffalo) are still used mostly for animal traction purposes, and their growth has declined over the past decade mostly as the result of increasing mechanization. Swine performance from 1996–2000 has suffered from negative effects of floods and animal health problems. Poultry registered an average annual growth rate of 8.8 percent over 1996–2000 (ADB 2002). However, this growth seems to be mostly explained by the construction of large-scale industrial poultry production units close to urban areas, which compete directly with small producers.

142. **In the short to medium terms, opportunities are to be found in increasing the efficiency of the widely practiced backyard livestock production, emphasizing animal health services and nutrition.** Much work is still needed to build the animal health system at the national level, including effective epidemiological surveillance and border controls. Nevertheless, initial investments in the development of private village veterinary services in some provinces have already reduced the mortality rates of farm animals, calling for a nationwide expansion of these services. Despite the importance of livestock sales for household economies, opportunities to increase the efficiency of livestock marketing chains and value-added captured by small producers have received limited attention so far.

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66 On average, livestock provides 17 percent of household incomes at the national level (Helmers and others 2003).
143. In the long term, the prospects for contract growing of pigs and poultry, with food conglomerates and agribusiness corporations as investors, could be of interest. With increased agricultural output, there is a potential to develop a vertically integrated agribusiness system based on local crops, livestock, and fishery products, encompassing: small- to medium-scale feed crop production systems; animal feed and fish meal processing plants; swine, poultry, and fishery production using locally formulated feed concentrates; and fish and meat processing. Cambodia could have a competitive edge over other ASEAN countries in such ventures since it is a low-cost producer of raw materials for fish and animal feeds processing (FAO 2000). However, recent experience (such as the case of Thai CP feed mills) shows that investment climate and export facilitation issues must be addressed first.

Fisheries

144. This section focuses on the culture fishery and marketing of fisheries production from both capture and culture. The management aspect of capture fisheries is reviewed above, under natural resources management. In addition to its role in fisheries management, DoF is also responsible for promoting aquaculture or culture fisheries as well as controlling processing, trade, and export activities for fish products.

145. Aquaculture, especially rice-fish farming systems, offers an opportunity for household-based increased fish production. Currently, aquaculture is limited to specific activities such as holding captured fish, including some fattening, to achieve better market prices; small-scale ponds for home consumption; and raising specific aquatic products such as crocodiles, eels, and frogs. Aquaculture often requires comparatively large investments in infrastructure and working capital and runs a relatively high risk, which demands sophisticated management skills to control losses from disease or natural disaster. In terms of future growth, over the short term, marine aquaculture is not expected to provide a significant contribution in Cambodia. Shrimp farming has been developed along Cambodia's coastline by Thai businesses, although most farms have been abandoned due to low profitability caused by various factors, including poor management combined with shrimp disease pandemics in the region. However, a local form of aquaculture practiced more widely is rice-fish culture with trap ponds, which requires little investment and provides incomes that can exceed incomes from rice cultivation alone. Output is often higher in irrigated areas when farmers have greater control over water supply, especially during the dry season. This fact shows that small-scale irrigation development not only can improve agricultural outputs but also can produce higher fish yields from the same area under cultivation. Moreover, integrated rice-fish culture requires the use of less pesticide and chemical fertilizer to produce the same rice yields. However, rice-fish culture needs to be designed and managed carefully to reduce the risk to fish of the use of agrochemicals in rice paddies.

146. Addressing inefficiencies of marketing and trade channels to increase value added and overall performance of the sector. In recent years, official exports of fish from Cambodia have ranged between 30,000 to 100,000 tons (approximately 10 percent–25 percent of the total catch), comprising predominantly unprocessed freshwater fish exported to Vietnam. Meanwhile, unofficial exports also have been growing. At the same time, significant fish losses to spoilage occur due to lack of effective marketing channels including cooling facilities. The reasons for this lie in the dysfunctional institutional framework in fish marketing, which has resulted in missed opportunities for increasing domestic value added, and a significant proportion of the value of

67 Production is recorded at 15,000 tons of fish and some 25,000 crocodiles (NIS 2001).
68 Annual fish production is usually in the order of 200–400 kg/ha, or 4–8 times higher than that of capture fisheries.
fresh-fish exports being lost through spoilage due to marketing delays and inadequate storage. The marketing system needs to either be able to quickly move perishable produce to the point of sale, or develop freezing and processing, cold storage, or ice supply facilities to preserve freshness. Meanwhile, as many fishers are small scale and unable to catch fish in sufficient quantities to reach feasible marketing volumes, a complex product assembly system has evolved with collection points, distributors, and brokers. With an improvement in marketing channels, including transport, icing, freezing, and other processing for domestic consumption and export, the value of the harvest and economic performance of the sector likely would rise. To effectively address inefficiencies in the marketing and trade of fish products, the coordination of several agencies (Customs, Fisheries, Commerce) also will be required.

147. On the policy side, some progress has been made to liberalize the sector, but transaction costs are high and trade facilitation inefficient. KAMFIMEX, a state-owned company operating under the jurisdiction of MAFF, had a monopoly in the export of fish until end-2001. Since then, more than 20 other companies have been licensed to export, and the role of KAMFIMEX has declined rapidly. However, the market is still riddled with unofficial payments and some official fees that appear to serve little purpose. All the official and unofficial fees squeeze margins on fish trade and ultimately lower prices received by fishers.69

148. The fish marketing sector also suffers from acute under-investment by the private sector in storage facilities, processing facilities, and transportation. The fisheries credit system is dominated by private money lenders who operate outside the formal financial system and charge significantly higher interest rates. It is unclear why larger firms that are able to access cheaper sources of credit have not made significant investments in processing or storage facilities. There is some production of fish paste and fish sauce, although on a relatively small-scale and more at the household level than commercially. In addition, significant investment is needed in up-grading quality food safety standards, introducing HACCP certification and other food hygiene standards, to allow access to high-value external markets (EU or USA).

Rubber

149. Restructuring the rubber sector will be critical for Cambodia to maintain its competitiveness on world markets, while the development of dynamic smallholder rubber production could provide alternative income opportunities for producers. Long-term projections for natural rubber (NR) prices are favorable. With its favorable agro-ecological conditions for rubber cultivation, substantial land availability, and low labor costs, Cambodia, together with other regional rubber producing countries, such as Indonesia or Vietnam, shares an increasing comparative advantage in rubber production over large rubber-producing countries, such as

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69 A study of fee payments identified 27 different fee payments to 15 different institutions in 16 places along the marketing chain for exports of fresh fish to Thailand (CDRI 2003). Many of the official fees are underpaid: traders negotiate a fee based on an understated quantity of fish and pay an additional unofficial payment. Under-reporting can be as much as 90 percent. This allows traders to avoid the 10 percent export tax that is levied on all fish exports. Other official taxes include a “distributor” fee of 4 percent of all fish transported through a province en route to export. Licenses for the “distributors” who collect these fees are granted through a competitive bidding process; however, “distributors” do not provide any service to the fish sector.

70 The analysis of long-term trends for NR demand and production points to a likely shortage of NR. International NR prices started to recover in 2002 and reached US$1.2/kg by end-2003. With NR accounting for 35 percent-40 percent of the total rubber market, prices are expected to continue to increase and stabilize at approximately US$2/kg after 2010 (“Economic growth and the Future of Natural Rubber,” Burger and Smit, Yamoussoukro, November 2001).
Malaysia, which are reducing planted rubber area as labor and land costs rise steeply. However, Cambodian rubber suffers from low yields, the lack of internationally recognized quality certification, and lack of transparency and competition in marketing processes. These inefficiencies in production and marketing adversely affect the income of rubber plantations.\(^7\)

The situation has improved slightly as a consequence of restructuring initiated under the first ADB Agricultural Sector Loan with the divestment of the main seven rubber plantations under control of MAFF and their transformation into independent public enterprises. However, the process must be deepened to make the sector more able to compete, to absorb increasing employment, and to contribute to increased agricultural growth (ADB 2002).

150. **Cambodian rubber prices are discounted 20 percent--30 percent due to the lack of internationally recognized certification.** Based on current prices and production costs at approximately US$0.5/ton, the country’s total potential revenues from rubber are estimated at approximately US$180 million/year, representing a net income of US$90 million/year. For smallholders, the return from labor is estimated at US$4--5/day, that is, 4 to 5 times their daily wage for agriculture, thus explaining farmers’ interest in rubber.

151. **The government has set an ambitious goal of expanding rubber cultivation areas to reach 300,000 ha.** The expansion of private industrial estates has been encouraged by the government, in parallel to efforts to develop smallholder rubber production. The effectiveness and competitiveness of smallholder production system has been demonstrated in other countries in the region. Since 1999, the Agence Française de Développement (AFD) has been financing a pilot smallholder rubber development project, while the World Bank has been supporting smallholder rubber research. Both interventions were designed to confirm the potential for possible future larger scale smallholder rubber development. Preliminary results have demonstrated farmers’ interest in rubber cultivation and Cambodia’s suitability for rubber development. The country’s potential area for rubber development (estates and smallholders) is estimated to be approximately 150,000 ha, representing a total production potential of 180,000 tons.\(^7\)

152. **However, the success of any future smallholder rubber development program is expected to depend on the improvement of transparency and competitiveness of the overall sector.** Unless smallholders feel secure in their land rights and are confident that their products could be marketed competitively, investment will be slow. The restructuring and eventual privatization of the state rubber enterprises would pave the way for a more efficient rubber sector and improve the environment for smallholders (ADB 2002). At the same time, the establishment of private sector processing facilities, independent of the large rubber plantations and combined with the liberalization of rubber marketing, would create favorable conditions to stimulate smallholder rubber development.

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\(^7\) The rubber sector is dominated by seven State Rubber Plantations: Chup, Krek, Memot, Snoul, Chamcar Andoung, Boeng Ket, and Peam Chaing). In 2001, of the total concession area of 68,709 ha, approximately 90% were under the control of the 7 state companies; approximately 1.5 percent (1,033 ha) belong to the Rubber Research Institute of Cambodia (IRCC); and the remaining 8.5 percent to the private sector in Takeo and Ratanakiri. In terms of exploited area, the 7 state companies owned approximately 84 percent of the total area of 36,402 ha in 2001. Profits and return on assets are low and may be insufficient to attract investors.

\(^7\) Based on a conservative low average yield of 1.2 ton/ha.
Other cash crops and niche products

153. **Constraints to production and marketing of other agricultural products needs to be better analyzed.** Recently, a number of studies have been initiated to assess Cambodia’s comparative advantage in the production of non-rice crops (such as feed crops) and niche products (spices, essential oils), and existing and future demand on international markets. However, as discussed above, diversification is risky in the current environment in which Cambodian farmers operate. The capacity of Cambodian farmers to capture these opportunities will depend on progress in securing their economic environment (improved infrastructure, access to finance, access to market information, land tenure security), and greater integration of rural producers with national and international markets. A better understanding of production and marketing constraints as perceived by smallholder farmers is needed.

**Recommended Priority Actions for the Agricultural Sector**

**Priority area #1  Strengthen agricultural sector management to increase efficiency and impact of resource use**

*Strengthen sector management* to increase the efficiency and impact on currently weakly coordinated support programs in agriculture and guide the development of future programs:

- Formulate an agricultural development program, focusing on rural household incomes and recognizing the diversity of local situations and the needs of different groups of farmers, in consultation with key partners and stakeholders. As a first priority, the government’s strategy for agricultural development needs to be clarified, and general priorities translated into specific programs, which would have priority for resource allocation. To that effect, use venues for donor coordination and consultative forums with private sector and other stakeholders.
- An urgent and special effort should be directed toward (1) *redefining the role of the public sector in agriculture, and fostering the development of the private sector and its involvement in the provision of agriculture support services*, (2) *reviewing the role and responsibilities of key public institutions at central and local levels*, starting with MAFF and its provincial departments and district offices (functional review), and (3) *completing ongoing privatizations*.
- Progressively *align resources* with agreed programmatic priorities and improve public finance management in the agriculture sector;

**Priority area #2  Facilitate technical and market support services to allow transition to diversified, market-oriented agriculture**

*Strengthen core support services to the sector*, selectively focusing public resources on public goods:

- Further develop the national *agricultural research and extension system into a pluralistic, cost-efficient, demand-driven system in the client services mode*, based on a review of different farmers’ group needs and demand and the possible response by public, nongovernmental and private providers of services. Move away from purely technical advice.

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73 As a first step, a joint government-donors technical working group on agriculture and water was formally established in 2004.
Strengthen the capacity of MAFF to develop and implement, in collaboration with other relevant institutions and stakeholders, food safety and quality standards, tailored to the country’s resources and capacity and to the constraints of smallholder rural producers.

Study constraints to the development of emerging rural producers’ organizations. These groups have the potential to inform agricultural strategy development and to contribute to the definition and implementation of cross-sectoral policies and agendas that affect the capacity of rural producers to respond to markets signals (the constraints include investment climate, infrastructure services development, finance services development, etc.).

Strengthen epidemiology surveillance systems (both for plants and animals) as well as early warning systems to monitor climatic changes (floods, drought) to allow for increased preparedness and mitigation of negative impacts.

Priority area #3 Develop integrated programs to improve the performance of core sub-sectors of importance for rural incomes

Address specific constraints faced by agricultural sub-sectors and proactively promote a coordinated public/private stakeholder response to identified sub-sector constraints:

- **Rice:**
  - Develop a clear strategy for the rice sector, articulated around the dual objectives of food security, particularly for subsistence producers, and increased export competitiveness.
  - Collaborate with the private sector, farmers, and other line agencies to address constraints to the competitiveness of Cambodian rice.

- **Livestock:** Focus on increasing revenues and value-added from the smallholder livestock sector through
  - Encouraging the rapid expansion of private village veterinary services nationwide.
  - Strengthening animal health information systems (above).
  - Reviewing value-chain analysis and study transactions financing in markets for live animals and animal products, to allow the definition of further support actions (policy and investments).

- **Maximize value-added of fish products**
  - Include rice-fish farming systems in programs to support the diversification of agriculture.
  - Study options to facilitate private sector investments in storage and processing of fish products.
  - Address identified constraints to fish exports to high-value markets and inefficiencies in trade facilitation.

- **Restructure the rubber sector**
  - Accelerate and complete the restructuring and privatization of the rubber state enterprises.
  - Establish an internationally recognized rubber quality certification scheme.
  - Liberalize rubber marketing.
  - Allow the establishment of private sector processing facilities independent from large rubber plantations.
  - Implement a program to develop smallholder rubber production.

- **Increase focus on other cash crops and niche products**
  - Further analyze constraints faced by farmers to further diversify into higher value-products in different regions (for example, constraints faced by feed crop producers in the Plain regions, fruit producers in the Northwest, vegetable producers in peri-
urban areas), and elaborate a program to address those constraints in consultation with key stakeholders.

**Bridging the gap in access to supporting services and infrastructure**

**Infrastructure services development in rural areas**

154. *Rural areas are underserved by infrastructure services.* Rural infrastructure was severely damaged and/or neglected during the years of war. Despite improvements in recent years, Cambodia still has a very long way to go to improve infrastructure services to levels comparable with neighboring countries, and thereby improving rural dwellers’ access to key services (Part I). Surveys of rural households indicate that improving access to infrastructure, particularly roads and water, ranks high among farmers’ perceived priorities. Among infrastructure services, micro-enterprises operating in rural areas identify improved access to transportation, communication, and energy services as priorities. Substantial work to address the specific constraints in each of these sub-sectors is underway, in particular, as part of the preparation or implementation of donor-financed projects.

155. *Progress is being made on a rural road policy framework and institutional responsibilities.* The NPRS identifies the inadequate road system as a major bottleneck to social and economic development. In particular, the lack of all-weather access roads and other transport infrastructure and services in rural areas is seen as an impediment to improved quality of life and reduced poverty in rural areas. The SEDP I further evidences the lack of strategic positioning of the transport sector to contribute effectively to the country’s poverty reduction strategy. The focus during the past few years of reconstruction has been on the primary network and some of the main urban roads. Some attention also has been given, through the Seila program and others, to community-based infrastructure. In general, however, less attention has been given to the secondary and tertiary networks, which are essential to link gaps in the network.

156. *Institutional responsibility for the rural transport network is shared* by the Ministry of Public Works and Transport (MPWT) and the Ministry of Rural Development (MRD). MPWT is responsible for overall management and development of the roads and transport sector, including primary and secondary roads. MRD is responsible for tertiary and other rural roads. A Roads Act is being drafted that will clarify the two ministries’ respective responsibilities. Currently, MRD is responsible for roads with fewer than 50 vehicles per day; however, this is not a very workable definition since there is no systematic way to hand over roads to MPWT when they reach 51 vpd.) The Roads Act will help to define which roads belong to which ministry based on function rather than volume.

157. *The transport sector lacks a coherent overall road and transport sector policy that articulates the goals of the sector and the manner in which these goals are to be achieved.* However, in 2002 the MRD adopted a Policy for Rural Roads, which aims to increase rural access by giving priority to cost-effective maintenance and rehabilitation of rural roads. This policy also promotes the use of labor-based appropriate technology (LBAT) with the involvement of the local private sector (small and medium-sized contractors) in the execution of the works. In addition, the policy provides guidelines for the delegation of responsibilities for rural roads, from

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74 The provision of water supply and sanitation services is discussed under the Water Management section.
the central ministry (MRD) to the provincial departments to the communes. Although it could be improved, in many respects, it is a reasonable policy and provides a framework for managing rural roads. Thus, the focus of future work on rural roads should be on how best to implement the policy, that is, how to overcome knowledge, technical, and financial constraints.

158. The development of roads and transport services is hindered by both a lack of effective planning and management and of a budgeting process to ensure that adequate funds are made available for construction and maintenance. The Fund for the Repair and Maintenance of Roads (FRMR) allocates funds ad hoc mainly for road rehabilitation, with no clear criteria in the selection of projects or coherent strategy for the allocation of resources. Even with greater clarity, the own-funding constraints of the FRMR limit its ability to fund adequate levels of maintenance, especially at the lower levels of the network. Since 2002, the responsibility for commune-level infrastructure has been decentralized to the newly elected Commune Councils, which are financing the construction and rehabilitation of commune-level roads, with technical assistance provided by the Provincial Departments of Rural Development. An intergovernmental fiscal transfer mechanism, the Commune/Sangkat Fund, has been established to provide core financing for this and other responsibilities of the Commune Council. However, these funds are limited. Other donor and NGO funding goes to a wide variety of projects and programs focused at the village or commune level. These projects are loosely coordinated with the provincial and commune-level efforts through District Integration Workshops. Financing the local network remains a problem, since it is doubtful that these disparate efforts can form the basis for national scaling-up.

159. Energy and telecommunication services basically are available only in urban and large township areas. Cambodia has the lowest electrification ratio among East Asian countries, as low as 5 percent in rural areas. As for telecommunication, fixed-line penetration for the entire country is only 0.27 per 100 households, while mobile penetration was 1.27 per 100 in 2000. Fixed-line coverage is even lower in rural areas, in which expansion would require massive investments, while mobile services have extended to some rural areas, albeit with high tariffs.

160. In the electricity sector, the institutional framework remains weak, and power supply is unreliable, costly, and limited mostly to urban areas. Villagers fulfill energy needs with simple but high-cost solutions such as batteries. Strengthening institutions is hindered by (a) an acute shortage of skilled staff; (b) entrenched public-oriented approach toward the management of public utilities; (c) political interference; and (d) lack of transparency in financing, with an inefficient tariff structure and prices that rank among the highest in the world. Thus, the expansion of fixed-line telecommunications into rural areas would require massive investment in the electricity sector. For private mobile service, the incentives for making necessary investment for expanding coverage are limited.

161. There is a need for a more strategic approach to rural infrastructure services development. In recent years, substantial efforts have been made to improve rural infrastructure, including numerous donor-funded projects to improve the coverage of rural infrastructure and coherence in planning and management. Several responsible line agencies also have developed policies and strategies. Further investigation is required to inform potential changes in policy, strategy, and program and project design, particularly as they relate to decentralization to the Commune Councils, and deconcentration of responsibilities from the central ministries to the provincial departments and district offices. Equally important is the flow of funding commensurate with these responsibilities.
Recommended Priority Actions to Improve Rural Infrastructure Services

Priority area #1  Strengthen strategic orientations of infrastructure investments

*With other partners’ support, develop a strategy for rural infrastructure services development.* Accomplishing this would entail a review of existing strategies and policy and institutional arrangements for infrastructure management and financing, particularly, exploring the links between infrastructure and broader rural development. Based on this information, an assessment of the adequacy of the existing framework for rural infrastructure development could be made, identifying gaps and implications for resource allocation and management. The assessment would take into account the characteristics of different types of infrastructure and the respective roles of the public and private sectors in the different sub-sectors.

Specifically, the strategy would:

- **Strengthen the consistency of infrastructure development planning with local and regional development planning**
- **Strengthen local government capacity to prioritize, plan, and manage local infrastructure and services delivery**
- **Enhance contribution of the private sector in service delivery** (through access to credit, insurance, ease of getting permits)
- **Improve cost recovery in rural infrastructure and services for sustainability.**

Priority area #2  Sustainable and strategic development of the rural road network to facilitate integration of rural areas with national and regional economies

- **Ensure that transport policies support poverty reduction objectives:** Formulate, adopt, and implement a national transport policy that addresses rural mobility needs. Align national policy with rural roads strategy.

- **Improve rural access through maintaining existing road assets and enhancing rural mobility:**
  - Prepare rural roads inventories and mapping
  - Ensure adequate links (secondary and tertiary roads) between main road network and local roads
  - Sustain and improve rural incomes by maintaining rural roads using Labor-based Appropriate Technology (LBAT)
  - Review availability, affordability, and safety of rural transport services; identify gaps and implement recommendations to fill gaps
  - Involve private sector in provision of road works and transport services.

- **Provide adequate financing for road maintenance and local road/track improvement:**
  - Reform Fund for the Repair and Maintenance of Roads to ensure adequate, predictable funding for rural road maintenance
  - Develop local government resource base and fiscal transfer system.

Priority area #3  Expand rural power supply and electricity coverage

Improve power supply and electricity coverage in rural areas:
Expand financial services in rural areas

162. With the exception of ACLEDA, a former MFI\(^{75}\) that recently transformed into a bank, the formal banking sector does not serve rural populations.\(^{76}\) Of the 24 provinces, 16 have no commercial bank except for ACLEDA branches, and 9 provinces remain unserved by any type of formal bank. While services are available in the provinces surrounding Phnom Penh, Sihanoukville, and the Tonle Sap area, other provinces in the north and northeast of the country and Koh Kong remain underserved. Where branches exist, they typically are located in provincial capitals with virtually no presence at local levels. Access of rural households to formal financial services remains very limited (Part I).  

163. In 1998 the Rural Development Bank (RDB) was established by the government with foreign assistance. In 2000 it became a wholesale bank for channeling funds from the international donor community to Cambodian microfinance institutions (MFIs). Through 2002, the RDB had loans outstanding for only US$2.5 million out of its funding of more than US$20 million, reflecting the weak capacity of both the RDB and the MFIs. According to the ADB's Performance Audit Report on the Agricultural Sector Program, this slow disbursement led to the cancellation in 2002 of US$14.8 million of its US$20.7 million loan proceeds. The future role of RDB in a strategy to encourage the development of rural financial services needs to be reconsidered in view of donors' and MFIs' recent experiences with RDB.

164. The informal and semi-formal financial sector fulfills a crucial role as a provider of credit services in rural areas. The clear market leader is ACLEDA, which covers 58 percent of the market in outstanding loans. ACLEDA started its operations as an NGO, became a specialized bank, and is currently a commercial bank that provides financial services in rural areas, generally serving micro-entrepreneurs. The top 10 MFOs,\(^{77}\) which together capture 90 percent of all outstanding loans and serve 94 percent of borrowers, have opted for licensing and are driving for sustainability. This trend towards sustainability also means that, in general, other microfinance institutions are shifting toward larger loans. MFIs are reaching up-market, focusing on individual loans rather than on group loans, and increasingly conducting transactions on their premises rather than in villages, to lower costs. Therefore, it is likely that the most recent developments in the provision of microfinance services have not benefited primarily rural households, poorer households in particular.

165. The microfinance sector benefits from a relatively favorable regulatory framework, but a recent review of the sector identified three areas of action to support rural finance services development. Licensing regulations introduced under the Law on Banking and Financial Institutions have been regarded by the main microfinance providers as a positive step to guarantee

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\(^{75}\) Microfinance institutions (MFIs) refer to institutions that focus on the provision of financial services, while microfinance organizations (MFOs) typically offer a broader range of services.

\(^{76}\) This section draws from the work conducted by Olga Torres, *Microfinance and the Rural Finance Sector in Cambodia*, 2004.

\(^{77}\) ACLEDA Bank, PCA, EMT, TPC, CEB, Seiluneth, Hatha Kaksekar, AMK, CREDIT, and VisionFund Cambodia.
the protection of deposits and to enable their growth. Supervision is provided by the National Bank of Cambodia (NBC), whose capacity is being strengthened through donor-funded programs. Expanding the provision of financial services in rural areas needs to address two major concerns: (1) increasing the confidence of households in financial institutions, and (2) decreasing the costs to MFIs of serving rural populations. Actions to address these concerns include:

a. A change of paradigm from a credit-driven sector to one that offers a full range of microfinance services. Most MFIs/MFOs in Cambodia are still focusing on the provision of credit. Other financial services, particularly savings, are of crucial importance to the rural poor to help them deal with vulnerability. The lack of savings services reflects both general reluctance to maintain deposits in the formal/semi-formal financial sector and the high costs of mobilizing deposits in rural areas. Long-term credit is also virtually nonexistent. A pilot rural health insurance scheme has been launched by an NGO (GRET) in provinces around Phnom Penh.

b. Maintaining a conducive environment for microfinance operators, micro-entrepreneurs, and the private sector alike by reducing distorting costs of operations: most notably, corruption, weakness of the judiciary, and lack of physical infrastructure.

c. Improving overall understanding about how rural households make decisions regarding sources and uses of income. MFIs face the same structural constraints as micro-entrepreneurs and small businesses in rural areas, including high transportation costs, high communication costs, and an overall weak business environment. In addition, a number of constraints specific to the sector add to the cost of operations, such as the lack of information exchange on clients, tax burden on MFIs, and currency risks.

d. Increasing transparency and professionalism in microfinance operations, specifically in those unlicensed smaller credit providers not supervised by the NBC or monitored by donors or Cambodian government bodies.

Recommended Priority Actions to Support the Development of Rural Finance

Priority area #1 Reduce the costs of microfinance operations, which eventually will reduce costs of credit to borrowers

➢ Reduce the costs of microfinance operations, through the following options:

✓ Create a national credit bureau to exchange information and monitor clients' overindebtedness
✓ Reduce currency exchange risks for MFOs, because most funding for MFIs is available in US$, which increases the risks of serving rural populations with riel-denominated products
✓ Promote NBC's plans to transfer money among provinces in riel and to expand the services of its central check clearinghouse to the provinces
✓ Promote the emerging Association of MFIs
✓ Amend the influential shareholder liability requirements
✓ Continue efforts to build capacity in the sector, including that of NBC and MFIs/MFOs.

78 Under the law, the NBC can require "influential shareholders"—those who hold more than 20 percent of the capital in an MFI—to increase their capital contribution. This law is deterring potential investors from formalizing their commitments.
Increase the transparency and professionalism of smaller credit providers by continuing to increase the supervision department of NBC, raising awareness of donors and government agencies on microfinance issues, and developing information campaigns on good practices in microfinance services.

Priority area #2 Facilitate the development of new finance services

Support the development of a wider range of finance services. To promote client confidence in the financial sector, strengthen deposit mobilization, and encourage local savings by further exploring the possibility to:

- Establish a deposit guarantee fund or institution to guarantee the payment of deposits and safeguard the interests of depositors
- Simplify the tax burden of MFIs to foster lending to SMEs and the development of savings services for small depositors.

Improve the overall understanding of rural households' sources of income and coping strategies, particularly to facilitate the expansion of rural finance services:

- Further assess financial services demand by SMEs, micro-enterprises, farms and rural households, and existing supply, to underpin efforts to stimulate rural banking operations and the deepening of rural financial markets.
- Analyze coping mechanisms and cash-flows of rural households to design tailored microfinance services for rural populations, including specific groups.79

Ensuring access to and quality of rural social services

Rural education

Education is a key component of rural development. It is essential that (a) ensuring broad-based access in rural areas to education and (b) ensuring its quality should be two integral components of any strategy for rural development. Education is linked to rural development in two main ways. First, there is a general link through literacy programs, especially functional literacy programs, targeted at rural communities. Education helps to improve health and nutrition in rural communities and to integrate remote and disadvantaged rural areas into society as a whole. Second, there is a direct link between levels of education and skills development to the ability of people in rural areas to increase farm productivity and to participate in non-farm employment opportunities as they arise. Studies worldwide show that, other factors held constant, farmers with more education produce greater farm yields. Additional education also significantly increases an individual’s chance of finding off-farm employment.

The first link mentioned above—between literacy programs and rural development—is very important at this stage of Cambodia's development. Overall literacy rates are very low. Only 67 percent of the adult population is functionally literate. Literacy drops even lower in rural areas: 35 percent of all adults and over 46 percent of female adults in rural areas are not literate. The level of illiteracy increases in upland areas among highlands peoples. Literacy programs often lack practical application and relevance to the lives of many rural people.

79 According to different sources, more than 75 percent of microcredit clients are women.
168. The specific issues of access to and quality of basic education in rural areas are recognized in the government's comprehensive education sector strategy. The vision for nationwide education development is set out in the government's Education Strategic Plan, currently under revision. To support the implementation of the strategy, the Ministry of Education, Youth and Sport (MOEYS) has adopted a rolling Education Sector Support Program (ESSP), financed in collaboration with international donor and NGOs. The ESSP has adopted an ambitious pro-poor agenda aimed at (1) increasing access to basic education (grades 1–9) for all school-age children by 2010; (2) improving the quality and relevance of schooling; and (3) enhancing the management and efficiency of educational services. The ESSP is also strongly committed to decentralization in education and includes provisions for the delegation of responsibilities to districts, school clusters, and communes.

169. Access to different levels of schooling and the quality of schooling varies across regions. Enrollment in both primary and, especially, secondary schools is lower in Cambodia than in other countries in the Western Pacific Region. The situation is particularly bleak in rural areas, especially for girls and children from disadvantaged groups. In rural areas, the poorest quintile has a net primary enrollment rate of 50 percent and fewer than 5 percent of children aged 12–14 are enrolled in lower secondary schools. The average duration of formal education for rural adults is 4.4 years for males and 2.2 years for females, which is lower than the national average of 6 years. According to a CDRI study, the percentage of workers who never attended school is higher among rice field workers, at approximately 51 percent. Only 46 percent of rural villages have a primary school.

170. Quality of education is an issue. In addition, schools in rural areas seldom provide full-day schooling, due in particular to lack of human and financial resources, and there is widespread concern about the quality of education in these schools. In part, these problems are related to deficiencies in teacher training, as most primary and secondary teachers do not possess minimum qualifications. These deficiencies are compounded by low teacher salaries, which leads to teachers' shortening the school day to take a second job. Overcrowding of facilities also forces a reduction of classroom hours to run double or even triple shifts.

171. Schools in rural areas rarely are located close to where children live. Consequently, children walk long distances to school or attend schools that do not offer the complete cycle of primary schooling. Not surprisingly, these difficulties of access lead to high levels of drop-out and repetition in rural areas.

172. Informal fees for schooling also affect access to schooling. Beyond the direct cost of schooling to rural families, the opportunity cost is also very high. Many families pull their children out of school either to work or take care of their younger siblings.

173. The following actions are recommended as priorities to support rural development:

**Recommended Priority Actions for Rural Education**

- Enable equitable access to rural education. Means include increasing investment in school infrastructure, equipment, books, and other supplies in poor and underserved areas; supporting demand-side interventions and policies to increase participation in schooling; and lowering the cost of attendance by elimination of informal fees.
➤ Improve quality of rural education. Means include strengthening decentralized education planning and administration and decentralized school quality improvement planning; enhancing teacher professional development (salaries, housing, and career path) and improving the quality of teacher training (particularly training of teachers to speak local languages); and establishing a quality assurance and monitoring system. School curricula should be enhanced and should include topics of relevance to rural communities, such as agriculture, forestry, health and nutrition, and environmental studies.

➤ Revise literacy programs. There is a need to renew the content of the literacy programs and to make the content more relevant to the rural communities. Increased relevancy could be accomplished by moving from simple literacy courses to programs with a greater functional content targeted to rural and agricultural communities in which literacy rates are low.

➤ Better target disadvantaged groups. Rural children who do not enroll or who drop out of school early tend to come from the most disadvantaged parts of society: the poor, ethnic minorities, and girls. This apparent bias can be counteracted by improving access to schooling in rural areas: building more and better equipped schools located closer to children’s homes, and training teachers to speak local languages.

Rural healthcare

174. The government’s Health Sector Strategic Plan recognizes the specific challenges of access to health services in rural areas. Since 1996, the Ministry of Health has pursued a comprehensive reform of the health sector based on the fundamental principles of equity in accessibility to quality basic health services and protection of the poor. To support the pursuit of these goals, the ministry has launched a sector-wide management reform initiative to improve performance through the formulation of a sector strategy plan and annual operational plans, and the enhancement of health sector management capacity. The Health Sector Strategic Plan for 2003–2007 has been adopted. It supports the decentralization of health services; strengthens provincial and district health administrations; and emphasizes the need for increased coverage and accessibility (including affordability), attention to quality, the importance of primary healthcare, and the need to develop sustainable sources of financing.

175. Nonetheless, most of the rural poor live far from health facilities. Healthcare facilities are confined mostly to larger urban centers leaving rural areas almost totally unserved. At the same time, rural health status is generally poor, with extremely high incidences of water- and insect-borne diseases. Infant and maternity mortality rates also are high. Health crises are the first source of income loss of rural households (Helmers and others 2003) and one of the major causes of distress sales of land, leading to increasing landlessness. Improving access to rural health services and their affordability is an important element to reduce the vulnerability of rural livelihoods.

176. Quality of health services in rural areas is another issue. In lieu of access to public healthcare, rural households commonly resort to local drug vendors, who typically are medically unqualified but are relatively inexpensive and accessible. Medicines prescribed without any physical examination, tests, or consideration of possible pharmaceutical contraindications typically are sold in inappropriately small doses without clear medical instructions.

177. In addition, the prevalence of informal fees for public healthcare and/or fees of private drug vendors place a heavy burden on poor rural households. Numerous household surveys
have indicated that healthcare costs are an important element of the vulnerability of poor rural households and a significant cause of indebtedness.

178. The major challenge facing the health sector in Cambodia—as in most other countries—is to find the best combination of private and public provision of health services. What is needed is a combination that leads to an efficient allocation of resources, while allowing public provision of adequate healthcare services to the poor and those in less accessible areas. Expenditures will need to concentrate on the efficiency of use of facilities; reorganization of the public health system throughout the country will be needed; and preventive health programs will need to be strengthened. Above all, policy and expenditure programs will need to improve the access to basic health services of the rural poor. Priority attention also will need to be given to the persistent problem of malnutrition particularly among ethnic minorities in the highlands.

179. The following actions are recommended for rural healthcare in support of rural development:

**Recommended Priority Actions for Rural Healthcare**

- **Increase accessibility and quality of health services**—through continued development of primary health care facilities and first (district) and second (provincial) referral hospitals, by financing rehabilitation and new construction, equipment, and maintenance. This program will require better data on healthcare needs by region, more effective planning, and public expenditure on healthcare facilities.

- **Improve the affordability of health services for the poor and under-served populations** by strengthening local management capacity and increasing sustainable local funding. Pricing of healthcare services should be examined with a view toward reducing fees for public health and preventive care, and developing more effective targeting mechanisms for poorer households. Renewed focus should be on public health and preventive care, which is significantly more cost effective than treatment of illness.

- **Promote private sector participation.** Private sector provision of health care should be encouraged to develop, where appropriate. There is probably limited scope for private sector involvement in more remote rural areas, and the government should remain actively engaged there.
Part III: Delivering results and next steps

180. Part II of this Note explored three policy objectives that could be at the core of a comprehensive pro-poor rural development strategy. These include policy, programmatic, and institutional reforms to (1) improve access to and management of Cambodia’s natural resource base, (2) augment agricultural productivity and farm incomes, and (3) provide quality rural infrastructure services and improve rural access to economic and social services (including financial services). In support of these three objectives, recommendations were proposed that constitute a menu of priority interventions and other forms of operational support. The recommendations are to be effectuated through RGCs own resources, supplemented by Bank lending, resources of other multilateral and bilateral programs, and the activities of NGOs and the private sector. Moving from this menu of proposed actions organized around the three policy objectives to definitions of a more concrete roadmap of specific actions and targets, necessarily will involve other partners, and needs to be fine-tuned and consolidated through consultations with all stakeholders.

181. To deliver results, such an elaborated rural development strategy would need to take into consideration several additional elements that both cut across the rural economy and link it to the rest of the economy. These elements are raised next, in turn: (1) horizontal links to other national agendas; (2) institutional capacity constraints that suggest concentrating public sector attention on key roles; and (3) pursuit of selective coordination needs, including of donor support. To conclude, this Note will suggest next steps.

Strengthen links to supportive cross-sectoral agendas

182. Progress on agricultural and rural development depends not only on addressing issues specific to these domains but also on progress on important agendas that cut horizontally across sectors. The National Poverty Reduction Strategy (NPRS 2003–2005) and the second five-year Socioeconomic Development Plan (SEDP II 2001–2005) identify the most important of these. The national development objectives expressed in these documents focus on economic growth that is broad enough to include the sectors from which the poor draw their livelihoods, social and cultural development, and the sustainable use of natural resources and sound environmental management. While agricultural and rural development are 2 of the 4 priority sectors identified, sectoral progress is recognized to depend on parallel progress regarding 3 aspects of improving governance: public resources management, decentralization, and local governance. In addition, there is the horizontal agenda of private sector development that underpins the agro-processing value chains and the non-farm rural economy more broadly.

183. Such issues define the enabling environment for rural development and are key elements to get right for rural development to proceed at the pace needed to bring welfare improvements to rural people. In large measure, the control over, and the main responsibility for, defining and driving the core reform directions on such issues will reside outside the agencies responsible for agriculture and rural development. Nevertheless, passive engagement on their part would be a mistake. First, to be effective, broad directions of reform will need to take root in sectoral agendas, and alignment of sectoral agendas will put these rural-focused agencies in the vanguard of benefiting from change. Sector agencies can gain by engaging constructively but, to do so, will need to improve their institutional capacity. Second, in some areas, through working to overcome constraints, agencies in rural development are defining solutions able to contribute to broader agendas. Examples in the context of the recent decentralization reforms include
improvements to intergovernmental financial transfers and to local development planning and implementation that are more transparent and accountable.

Public resources management

184. **Public expenditure management has improved since 1999, but remains problematic in several areas.** Much more progress is needed. Several issues challenge the realization of the country’s development objectives, particularly:

a. Improving resource mobilization to ensure fiscal sustainability
b. Reforming budget execution to reduce the risk to public funds
c. Improving cash management and public financial control systems
d. Rationalizing public expenditure policy and management to carry out the SEDP II and NPRS
e. Undertaking a comprehensive civil service reform to deliver poverty-reducing services (IFAPER 2003).

185. **Civil service reform is urgently needed to improve public service delivery.** Past experience in the sector has showed that the low level of official staff salaries is a major issue impeding progress with reforms and the effectiveness of service delivery. As a temporary solution to permit effective project implementation, most donors/projects provide supplementary allowances. While this practice has provided incentive for the remunerated staff to work more diligently, it also has created distortions affecting implementation of broader government programs by promoting rent-seeking behaviors and, combined with nontransparent staff recruitment and promotion practices, prevented retention of the most qualified and motivated staff in key positions not financed through external sources. Staff retention problems have also undermined the effectiveness of capacity building programs in several agencies, with trained staff leaving the public sector when projects terminate. Furthermore, skilled staff is concentrated in agencies in Phnom Penh, and due to the low salary level and absence of other economic opportunities in provinces and districts, there is no incentive for young graduates and/or qualified staff to seek positions at provincial and district level offices. Therefore, implementation of a sufficiently far-reaching pay and employment policy for the civil service, while needing to be defined and driven more comprehensively than from only an agricultural and rural development perspective, will be critical to the delivery of public goods and services to rural people and producers.

186. **Aligning resources with sector policy and investment priorities.** The matrix attached to this Note’s executive summary summarizes key priority actions of the rural agenda for the short, medium, and long terms (Part II). It also indicates where resources already are identified and available, and priority areas for which additional resources need to be identified and more focus is required—in particular in the short run. However, as a first step, there needs to be a clear and broad agreement among the government and its partners on the proposed priority framework. One difficulty impeding further prioritization of public investments in Cambodia is the lack of reliable data, other than anecdotal, on the payoffs to public investments. There are examples from other Asian countries (table 7), but similar research remains to be conducted in Cambodia. Meanwhile, strengthening of the local planning process, consultation, and dialogue with different stakeholders to increase the responsiveness of rural sector agencies to local demand, combined with a review of existing data on the impact of past investments in different regions, can be used to further prioritize public investments at the provincial and local level.

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86 For example, more than 50 percent of MAFF staff at these levels are unqualified (IFAPER 2003).
Table 7. Returns of agricultural public investments and impacts on poverty reduction in China and India

<table>
<thead>
<tr>
<th>Sector</th>
<th>Economic returns</th>
<th>Poverty returns</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>China</td>
<td>India</td>
</tr>
<tr>
<td>Research and Extension</td>
<td>9.59</td>
<td>13.45</td>
</tr>
<tr>
<td>Irrigation</td>
<td>1.88</td>
<td>1.36</td>
</tr>
<tr>
<td>Roads</td>
<td>8.83</td>
<td>5.31</td>
</tr>
<tr>
<td>Education</td>
<td>8.68</td>
<td>1.39</td>
</tr>
<tr>
<td>Electricity</td>
<td>1.26</td>
<td>0.26</td>
</tr>
<tr>
<td>Poverty loan</td>
<td>n.a.</td>
<td>1.09</td>
</tr>
</tbody>
</table>

Source: Agriculture Investment Sourcebook, World Bank.
Notes:
*For China, yuan total rural GDP/ yuan exp., and for India, Rupee per Rupee spending
** For China, no. poor reduced/ 10,000 yuan exp., and for India, no. poor reduced/million Rupee exp.

Decentralization and local governance

187. Decentralization and deconcentration reforms are at the core of management reforms in the rural sector. Following the Commune Council elections in February 2002, the government has engaged in a broad program of decentralization. The National Committee to Support Commune Sangkat Councils (NCSC) is in charge of the decentralization reforms. The Seila Program provided substantial lessons for the design of the decentralization reforms from the experience with local development planning, budgeting, and implementation under its earlier pilot phase, and the Seila Task Force Secretariat (the implementation arm of the Seila Task Force) coordinates donor funding to implementation of the decentralization reform, and hence represents an important aspect of the decentralization reform.

188. Two complementary approaches are being employed in Cambodia to advance the decentralization agenda. First is a normative approach starting from a conceptual framework on the nature of the state as a basis for an organic law. Second is a more pragmatic approach based on experimentation through pilots focused on incremental change building to a set of options or models that will serve as the bases for future legislation. Each approach has its own strengths and weaknesses, and they are potentially much more powerful when used in combination. The normative approach runs the risk that a single one-size-fits-all model will not work, and allowance has to be made for the particularities of different public functions. In other words, what may work well for the delivery of educational or health services may not be suitable or most efficient for agricultural or business advisory services. Similarly, the incremental approach is hampered by the lack of legislation embodying a set of overarching principles needed to expedite more far-reaching reforms in the field. The scope for innovation and reform could be limited until new legislation resolves underlying issues concerning the assignment of authority and responsibility between the center and the province.

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81 Donors supporting the Seila program are DFID, SIDA, UNDP, IFAD, DANIDA, UNICEF, World Bank, WHO, and AusAID.
189. **The Council of Administrative Reform (CAR) is responsible to take the lead on the deconcentration reforms,** the intended focus of which is on transfer of administrative powers and functions to provincial governors and the provincial and district administrations. Despite increasing donor interest and political will, there has been a lack of progress in establishing a policy and strategy for deconcentration. There are two distinct, but related, aspects to the deconcentration of administrative powers and functions. The first aspect involves the obvious complementarities between decentralization and deconcentration, and the related role of the governor and the provincial and district administrations in providing support to the Commune/Sangkat Councils. On this aspect, there has been good progress, as the role of the governor has been defined by the NCSC within the decentralization regulatory framework through a prakas, and a recent instruction by the Seila Task Force provides interim arrangements for the structure of provincial level support through the PRDC to the Commune/Sangkat Councils.

190. However, there has not been good progress on the second aspect, which involves the role of the governor and the provincial and district administration in provision of sectoral services at the provincial level, through provincial departments of line ministries. The *Organic Law on Deconcentration* is intended to provide the legal foundation for the latter aspects of the deconcentration reforms, but it is still in early stages of discussion, and there is not yet agreement on its underlying principles. The deconcentration legislation likely also will supersede the sub-decrees and prakas that allowed provincial bodies, such as PRDC and its Executive Committee (ExCom) under the Seila Program, to operate.

191. **Currently, provincial departments of central line ministries do not have authority to design and implement development initiatives within their provinces, except in the special cases of pilot activities,** such as the Provincial Investment Fund and pilots of deconcentrated national sectoral programs under the Seila Program. In the agricultural sector, for example, deconcentration is piloted under the IFAD-financed ADESS project, which operates in the northwest, involving MAFF and Provincial Departments of Agriculture (PDAFFs) in support of participatory agricultural development for poverty reduction. These activities give MAFF the experience and expertise to engage with the Seila Task Force and its Secretariat in policy dialogue to develop policy for deconcentration in the agricultural sector. MAFF has assigned these responsibilities to the ADESS Project Support Unit and a MAFF-Seila Working Group. Yet, this unit in MAFF has limited "legitimacy," that is, its roles and functions are not officially established nor recognized. It is merely part of a project. Thus, MAFF has not taken ownership of responsibility for it. In MLMUPC, land titling is being deconcentrated to provincial and district level land offices. The Cadastral Commissions responsible for dispute resolution are under the responsibility of the local government. Finally, in MOWRAM, under APIP, alignment

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82 CAR, with its Secretariat General, has an inter-ministerial working group collaborating with working groups of 11 ministries on decentralization and deconcentration issues. The 11 ministries are Health, Education, Public Works, Social Works Rural Development, Planning, Economy and Finance, Land Management, Industry, Interior, and Agriculture. It is expected that more ministries will join this working group as decentralization and deconcentration move forward.

83 Prakas on Delegation of Powers to Provincial/Municipal Governors in Support of Commune/Sangkat Councils.

84 Prakas on Establishment of Structure, Roles and Responsibilities of the Provincial/Municipal Rural Development Committee of the Seila Program.

85 Banteay Meanchey, Battambang, Siem Reap, and Pursat. Two additional provinces subsequently were included: Otdar Meanchey and Pailin.
of the planning process to rehabilitate small-scale irrigation schemes with the local planning process has been encouraged.\(^{86}\)

192. **Thus, to inform the ongoing work on the Organic Law, it is important that the pragmatic pilot approaches to deconcentration continue to move forward. Government agencies and donors should continue to pilot sector-tailored approaches to deconcentration and to document lessons learned** regarding key aspects of provincial management and administration. These key aspects include the role of the governor; the relationships among the Governor, provincial departments, and their parent ministries; the allocation of funds between the center and the provinces; responsibility for staffing; accountability to local constituents; and the role of districts and communes.

193. Three inter-ministerial bodies—NCSC, CAR and STF—and two key ministries—the Ministry of Interior (MOI) and the Ministry of Economics and Finance (MEF)—have been assigned responsibility for decentralization and deconcentration. **Better coordination across these bodies and agencies is essential.** As a positive step in this direction, an internal task force in MOI has completed a three-volume report on decentralization/deconcentration. As a preliminary step toward drafting an Organic Law on Provincial Management and Administration, this task force also is expected to organize a series of discussions on specific issues that would draw heavily on the lessons of experience to date. **The government-donor working group should engage proactively to ensure adequate coordination.** Also critical to ensure the success of ongoing reforms is further engagement in end support to the decentralization and deconcentration process by the key rural sector agencies, such as MAFF and MOWRAM.

**Legal and judicial reform, and fighting corruption**

194. **Corruption adds to costs for farmers and threatens the competitiveness of Cambodia’s rural producers.** Cambodia may not be unusual in the ways that its rural producers face informal passage fees in transporting their farm products, informal access fees to sell at public markets, and unauthorized “administration” costs in getting access to public services. However, the country is notable for the apparent heavy burden of these informal fees. Value-chain analysis of rice marketing indicates that such informal charges add the equivalent of US$14 per ton (10 percent–15 percent) to the cost of milled rice reaching market. Recent research conducted by CDRI also quantified the cost of unofficial fees paid by fish exporters, as well as the numerous fees and institutions involved (CDRI 2003). For farmers, these charges directly reduce incomes from marketing and reinforce opting for semi-subsistence. Many of these practices persist through the tolerance and culture of local politics. Developing dynamic rural producer organizations can prove an important counterbalance by working with local governments to identify and address the most onerous of these practices.

195. **Non-farm rural informal firms identify similar practices as their main constraint,** but that it is a less severe constraint than it is reported to be for formal firms. These typically micro and small enterprises appear to avoid many of the problems and costs that are confronted by more formal operations that have regular interactions with the government. The Investment Climate Assessment data show rural firms (for example, rural water and rural electricity providers) as consistently less constrained by bribes than more traditionally urban sectors such as garments or tourism. If corruption at the level currently existing in the urban sector were inflicted on farmers, they would not be able to operate. The type of bribes paid by the garment sector (over $1,000 per

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\(^{86}\) The Ministry of Rural Development is a slightly different case: it has a specific mandate for local-level rural development.
container) would exceed the profit margin of many agricultural commodities. The bribes plus the numerous administrative measures that enable them combine to keep the rural sector informal. The situation merits attention, therefore, so that small-scale informal activity does not forego opportunities for scale-up because of perceived costs of becoming more visible.

196. **Improvements in ineffective judicial enforcement and rule of law would benefit critical areas for the rural economy.** As discussed above, weaknesses of the judicial and legal system are perceived by banks as the main constraint to expansion of service coverage, both geographically—in rural areas—and in terms of nature of their clients (SMEs and micro-enterprises). The lack of rule of law and judicial enforcement contributes to investors’ perception of an unfavorable business climate. The draft Investment Climate Assessment shows that, of a number of public institutions and agencies rated for their integrity, the judiciary rated lowest. As the economy grows and formalizes, the judiciary will become more important as a means to protect economic rights of businesses and uphold contracts.

197. Furthermore, with three-fourths of the population depending on natural resources for their livelihoods, conflicts often evolve around the use of natural resources. However, these conflicts cannot be resolved because of lack of clear and enforceable laws, and because the gains from bending the implementation of the laws can be so great to people in positions of authority. The swings in government policy on allocation of fishing and forestry concessions are evidence of the economic and political powers at play, so far to the detriment of more broadly based and equitable economic growth. Moving forward, more transparency in the formulation of policy, and in the design and application of implementation mechanisms, will be important to securing property rights, as will progress with judicial enforcement to protect these rights.

198. **Progress is being made in legal and judicial reform, but much remains to be done to respond to the diverse needs of the rural sector.** A Government's Legal and Judicial Reform Strategy was adopted by the COM in June 2003, and work is ongoing to prioritize the Legal and Judicial Reform Action Plan interventions to implement the strategy. More efforts are needed to complement these developments. As an example, contract farming inevitably raises the broader issue in Cambodia of the prevailing lack of predictability of contracts, a condition for the enhancement of Cambodia's rural investment climate and the empowerment of Cambodia's rural poor; Requirements for the improvement of predictability of contracts will involve a complex set of actions (box 6).

199. More research and analysis is needed to define the reform programs that would give appropriate weight not only to the "supply side" of services (including the law-making process, dispute resolution services, and registry office services) but also to the demand for services, including civil society consultations, support for legal aid and civil rights groups, and access to justice. Especially with respect to "demand side" initiatives, it will be important to know, for instance, much more about traditional Cambodian forms of dispute resolution in rural settings, as well as the degree to which rural communities are, or can be, organized to provide input on initiatives and are seen as capable/interested in providing input. Obviously, Cambodia's laws and rights will remain meaningless if Cambodians cannot realize, enforce, and enjoy them through actual access to justice. Appropriate weight also must be given to initiatives that, to some extent, straddle both supply and demand aspects and may be termed elements of the "enabling environment." These elements include rural/public education on matters of civil and property rights and the provision of legal aid services in land-related and other non criminal cases.
Box 7. Improving the predictability of contracts

1. An established contract law is needed. This law would include rules that Cambodian society accepts because the public has had the opportunity to participate in shaping them regarding which matters must be contained in a contract to make it valid and which matters cannot be the subject of contract. While Contract Law no. 36 of 1988 sets out a broadly appropriate framework, in the 17 years since, no provision of this law has ever been interpreted by Cambodia's courts. Furthermore, the 1988 law is to be superseded by the enactment of a civil code, the draft of which still needs to be widely shared with civil society and the private sector for review and comment.

2. The law of contract must be properly published and widely disseminated. However, the publication of any law in Cambodia remains problematic, as does wide dissemination.

3. This law must be widely understood and applied, first and foremost by legal advisers and judges, and, second, by all those interested in contracting. However, the teaching of Cambodian law remains rudimentary to practicing legal advisors and judges, let alone to those who are interested in contracting, including in respect of farming.

4. When breaches of contracts and of the law of contract occur, these contracts and this law must be applied in a consistent and impartial fashion by competent courts or other dispute resolution entities.

5. The judgments of the courts in these matters must be based on the law, written, available for wide publication, and, subject to possible appeal on the question of the lower court's application of the law, strictly and efficiently enforced. Judgments in Cambodian civil cases typically are not reasoned (that is, rarely make explicit reference to how the law applies to the facts), are not standardized, do not follow precedent, are not published, and often are never enforced. Thus, in practice, contract enforcement rests largely on ensuring that all parties receive sufficient benefits so that it is in their mutual interest to uphold all contractual terms.

Private sector development and the non-farm rural economy

200. There is growing recognition of the role of the non-farm economy in the rural development of Cambodia. Rapid growth in the manufacturing sector has not been very successful in creating new jobs. Most of the 0.25 million people being added to the labor force annually are being absorbed into agriculture and the informal sector, in which labor productivity and income levels already are lower than in the manufacturing and services sectors. Although it is important to capitalize on the potential for productivity growth and diversification in farming; in the long run, the agricultural sector increasingly will face limitations in its capacity for employment generation. Therefore, the creation of off-farm employment opportunities is a key avenue for reducing both poverty and the growing rural-urban income gap in Cambodia.

201. Non-farm employment opportunities in the rural sector likely will come from:

- Commercialization of inputs into the agriculture, forestry, and fishing sectors
- Development of the processing, storage, transport, and marketing chain from the farm-gate to the point of domestic or export sale
- Development of labor-intensive rural manufacturing and services industries.

202. Exemplifying the cross-cutting nature of this development challenge are the:

- Diversity in sectoral sources of non-farm rural income
• Breadth of the agenda that will successfully address the constraints facing more rapid development of the non-farm rural enterprises.
• Array of RGC agencies with a mandate that impinges on some portion of this agenda.

203. Recent research reveals that this transition to non-farm based livelihoods is already well underway, even with the present limited opportunities, challenging the traditional view of rural incomes being dominated by agriculture. Furthermore, there will be pressure for the non-farm economy to play an even larger role in view of increasing levels of rural landlessness and land-poor households.

204. **Despite the importance of non-farm incomes, little is known about the exact nature of these activities.** Currently, much of wage labor opportunities are in the informal sector and, therefore, are difficult to both measure and categorize. However, what is clear is the diversity in employment sources and types of micro-enterprise. The approximately one-third of wage income that is agriculturally based (Helmers and others 2003) is also highly seasonal. Construction is the next largest source (approximately 20 percent) with the remainder made up of activities in transportation, factory work, services (unspecified), and government work. For micro-businesses, the picture is equally diverse. Preparing processed foods for sale and providing services (unspecified) jointly make up approximately half of the businesses. The remainder comprises petty trading in agricultural produce, fish, and livestock; and making and trading manufactured goods.

205. **The main constraints to the development of non-farm rural businesses depend on their size and location, and need to be better analyzed.** Cambodia should be in a good position to develop labor-intensive activities, but several forms of public policy bias are working against the development of these activities. A distinction exists between small and medium enterprises, with salaried employees, operating mostly in small rural towns, and village-level micro-enterprises that tend to be seasonal and informal. The distinction is important when considering the development of the sector, because research has shown that the two types of enterprise have markedly different constraints. The ongoing research on the investment climate in Cambodia sheds some light on the constraints to conducting formal SME business in rural parts of the country.

206. **Apart from the governance-related constraints discussed previously, other important constraints are criminal theft and disorder, economic policy uncertainty, macroeconomic instability, and, anticompetitive or unfair practices.** Surprisingly, access to electricity, transportation, and access to financial services were not mentioned by many survey respondents as severe constraints. More frequently, weak marketing systems, including transport infrastructure and transportation services, and the large (unmet) demand for credit for productive purposes in rural areas, particularly in villages, are identified as important. Generally, marketing systems in rural areas are characterized by low levels of market integration; competition in specific sectors is often fragmented with a risk of local monopolies; and marketing and transaction costs are high. Research also has revealed the importance of proximity to (road) transportation as a determinant of the size and prominence of non-farm activities in rural household incomes. This finding suggests that, while transport constraints may not be perceived as an immediate priority constraint to activities, wage labor opportunities and/or business

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87 However, these, too, are very small-scale with over 80 percent employing fewer than 10 employees, and all providing goods and services for the domestic market only.

88 One explanation is that existing, established businesses de facto are involved in activities less dependent on these factors.
opportunities are related to access to enterprises or markets beyond the immediate vicinity of villages. The majority (81 percent) of business activities conducted by village households is located within the village or commune, and half of wage labor is located within the same village or commune. In other words, the remaining 50 percent requires commuting/migration elsewhere within the district, province, or country (and occasionally in neighboring countries).

207. **Government has no clear policy to promote of rural non-farm enterprise and industry.** Rural non-farm enterprise is not mentioned in the second Socioeconomic Development Plan, and there is only passing mention in the National Poverty Reduction Strategy. Policymakers have given limited attention to the non-farm sector. This lack of attention has prevented a holistic government response to the challenges of the sector. Instead, various initiatives tackle different elements of the issues, but each by itself is unlikely to contribute significantly to non-farm rural development. Recent work conducted by donors in partnership with government, such as the “Investment Climate Assessment and Reform Strategy,” have highlighted the need for a coherent private sector development strategy, including the needs of rural areas, and allowed to define a common agenda for private sector development, which should also benefit rural entrepreneurs.

208. **The specific case of agribusiness warrants further analysis.** While Cambodian agribusiness should benefit from a comparative advantage based on low labor costs and availability of natural resources and productive land, the subsistence nature of agriculture, characterized by low productivity and limited marketed surplus, constrains the potential for value-added processing in the sector. The constraints to agribusiness development are garnering attention, both in government and among donors, in view of the potential limitations, this implies for the rural economy. In addition to general business climate constraints, initial studies point to lack of access to finance (for example, for technology upgrades), lack of information about market demand, and lack of basic business skills. Due to its potential impact on rural household incomes, more research is needed to better analyze the specific needs of the sector.

209. A Cambodia Private Sector Strategy (and a government action plan to implement that strategy) has been prepared to address general actions needed to support the development of the private sector. Implementation of this strategy will be helpful, with adequate inclusion of the needs of rural enterprises (for example, finance, infrastructure, skill) to begin clarifying the diagnostic foundation to priority actions that need to begin emerging in parallel. A beneficial next step may be to undertake technical assistance with supporting studies, to design action plan(s) that can foster a more supportive rural business environment and address technology upgrading, business and technical skills, and marketing, product acquisition and financing difficulties as well as location-specific issues.

Table 8. Areas in which cross-sectoral reforms affect the rural economy: Selected examples

<table>
<thead>
<tr>
<th>Civil service reform</th>
<th>Decentralization and deconcentration</th>
<th>Legal and judicial reform</th>
<th>Fighting corruption</th>
<th>Investment climate improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>Improved land office services</td>
<td>Improved land dispute resolution</td>
<td>Improved land dispute resolution</td>
<td>Access to credit investments in land improvement</td>
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<tr>
<td></td>
<td>Improved land-use planning</td>
<td>Contracts enforcement</td>
<td>Transparency and accountability of land agencies</td>
<td></td>
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<tr>
<td>Better trained and paid fisheries officers</td>
<td>Improved local community management of fisheries resources</td>
<td>Enforcement of fisheries law and regulations Access to resources for communities</td>
<td>Reduction of fisheries conflicts Enforcement of law and regulations Access to resources for communities</td>
<td>Private investments in storage, cooling, and processing facilities Competitiveness of fish exports</td>
</tr>
<tr>
<td>Fisheries</td>
<td>Improved fisheries administration</td>
<td>Development of contract-farming Access to rural credit</td>
<td>Improved royalties collection</td>
<td>Agribusiness development</td>
</tr>
<tr>
<td>Improved resources allocation Improved public services</td>
<td>Improved regional and local agricultural development planning</td>
<td>Improved local and community planning/maintenance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture sector management</td>
<td>Improved agricultural development planning</td>
<td>Improved public services</td>
<td></td>
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<tr>
<td>Agriculture services</td>
<td>Demand-driven services Opportunities for contracting of services Improved service delivery Private sector provision of agriculture services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficient trade facilitation agencies</td>
<td>Contracts enforcement Improved competitiveness of Cambodia products</td>
<td>Improved access Tailored-products</td>
<td>Reduced costs of doing business Economic opportunities</td>
<td>Private investments in marketing channels</td>
</tr>
<tr>
<td>Rural finance services</td>
<td>Improved access Tailored-products Contracts enforcement</td>
<td>Improved service delivery Improved service delivery</td>
<td>Reduced costs of doing business Economic opportunities</td>
<td>Private investments</td>
</tr>
<tr>
<td>Infrastructure services</td>
<td>Improved local planning/maintenance Contracts enforcement Lower costs of doing business</td>
<td></td>
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</tbody>
</table>

Concentrate on key public sector roles

210. A challenge for the government is selectivity in its focus of building capacity for fulfilling roles in guiding economic development for efficient and equitable growth. The government already largely has shed activities that still burden the public sector in neighboring countries, such as direct involvement in production and state domination of market institutions. It still faces enormous tasks to provide public goods, address market failures, and provide useful services that the private sector is likely to find unprofitable. Additional roles include creating consensus on, implementing, and coordinating sector policies that involve conflicting goals. In addition, with the importance of donors in funding support for public investments, there is the additional challenge of coordinating these donor activities, so that they are aligned with national priorities.

211. Limited capacities in the government agencies put a premium on selectivity even in the provision of various services that will be important to rural producers as they seek to diversify activities and orient more to market opportunities. For agricultural extension, for example, there may be quicker impacts to the government seeking partners in a coordinated, multi-provider
approach to service deliver than to aim to build extensive capacity within the public sector. Working in partnership with the government, NGOs, agricultural technical schools, and private providers can add capacity for provision of extension services. Similarly, animal health services may more rapidly scale up if a private provider model is pursued, even if, for public vaccination campaigns against communicable animal diseases, public resources contract these services for provision to small-scale farmers.

212. In the effort to promote crop and market diversification as one of the drivers of rural income growth, the government will need to pay attention to product quality and standards issues. The role of the public sector is shifting in this domain, particularly where export markets or supermarket-based procurement chains are gaining prominence. In these two growth markets, quality and standards norms increasingly are being determined by private procurement channels, with specifications often out in front of public norms definitions. As markets evolve in this direction, the government will be less effective in concentrating on public norm-setting. It also will be more challenged to work for favorable social outcomes by working with small farmers and their organizations to provide them market information and production techniques that enable them to meet the requirements of these emerging market opportunities.

213. The government faces enormous challenges in a role only it can perform, that of putting in place the array of linked elements needed to enable a socially beneficial allocation of natural resources currently vested in the State. As argued above, achieving progress in this area is one of the most important challenges to achieving rural growth sufficient to reduce rural poverty. Proactivity by the government will be an essential ingredient in almost all components of the system that needs to be built. Components include will defining technical and social bounds to the scope and location of reallocation, establishing criteria for beneficiary eligibility, ensuring complementary supportive measures, building public consensus behind this package of choices, and effective use of sanctions in which individuals subvert implementation of these public choices.

214. Finally, in the role of addressing perceived market failure, one area in which the government may consider assessing its current approach is in improving access to financial credit and saving services by rural producers, whether farmers or small entrepreneurs. Direct provision of capital through government program credits targeting rural beneficiaries should be avoided, as it contributes little to building sustainable institutions capable of extending access to financial services to unserved rural populations. Nor is such use of the government’s limited resources likely any time soon to be a viable solution to addressing the sizable unmet rural demand for financial services. Creating the enabling environment that promotes improved financial institutional development and financial intermediation of rural savings into rural investment is more tenable public sector focus.

Coordination needs, including of donor support

215. The “multiple agencies” issue. Many line agencies are involved in agriculture and rural development. Responsibilities and resources for agriculture and rural development (ARD) are spread between the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Ministry of Water Resources and Meteorology (MOWRAM), the Ministry of Rural Development (MRD), and the Ministry of Land Management, Urban Planning and Construction (MLMUPC), resulting in an oversized public administration for agriculture and rural development. Overlapping mandates and weak coordination affect the performance of these institutions, which remain dependent on donor support. Additional ministries such as the Environment (MOE), Veterans and
Women Affairs (MOVWA), Commerce (MOC), and Industry, Mines and Energy (MIME) also play lesser roles in agriculture and rural development. Improved capacity for coordinating strategies and actions for ARD is critical and deserves attention. Formally, the existing inter-ministerial Council for Agriculture and Rural Development, chaired by the Prime Minister, is a vehicle for such coordination, but it appears to exist mostly on paper, rarely meets, and has yet to become effective.

216. **Donor coordination in ARD is a critical issue for aid effectiveness but remains limited.** The high level of external assistance to the rural sector over the last decade contrast sharply with the lack of progress in reducing rural poverty and average performance of the rural economy, questioning the overall effectiveness of past efforts. The significant level of external assistance going to the ARD sector, the multiplicity of sources, and the important share of off-budget grant funding (approximately 45 percent of external assistance to the sector in 2002 according to CDC data) mean that any efforts to improve alignment of budgets with policy priorities will be dependent on improved donor coordination.

217. **More effective interaction among donors, and between donors and RGC, will be critical for a more strategic and coordinated response to the sector's many challenges.** Recent reviews of external assistance found that many projects appear to be implemented without sufficient coordination either with each other or with Cambodian undertakings. Project and strategy proliferation exists with donors delivering activities that are uncoordinated, lack national ownership, and impose diverse donor procedures and objectives on government. There is little information sharing, leading to development assistance in the rural sector being characterized by multiplicity, both in terms of donors and their approaches. The quality of donor inputs into policy processes is uneven. Little empirical evidence based on field experience or research is brought to policy considerations, and there is a dearth of comprehensive, consistent, rigorous assessment of project impact. However, there are a number of successful experiences that could be up-scaled (box 8).

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90 Data on ODA flows are from CDC and are used with the caveat that these data need improving, for example, to address classification issues, such as road projects with rural components, which escape identification and inclusion. CDC data indicate that donors disbursed approximately US$66 million for ARD in 2002; disbursement from the government’s budget amounted approximately to US$23 million in 2001. Of the 2002 ODA, bilateral assistance included support from Japan (16 percent of all ODA disbursements), Australia, Denmark, France, and Germany. Multilateral agency support to ARD includes the World Bank (approximately 22 percent of 2002 disbursements), ADB (14 percent), EU (13 percent), IFAD (5 percent), and UN agencies (4 percent) (IFAPER 2003).
Box 8. Lessons from recent reviews of external assistance

Working through government procedures. For maximum efficiency, project implementation should follow existing procedures wherever possible rather than establishing parallel systems. To the extent possible, donors should follow the new government financial and project implementation procedures introduced following the election of the commune councils and the establishment of the Commune/Sangkat Fund (C/SF).

Complementarity with other partners. Cambodia still needs multisector interventions to tackle the causes of widespread rural poverty and to improve household food and income security. To avoid complex projects, which are difficult to implement with weak institutional capacity, donors should engage in partnerships with other programs and projects to provide complementary services to the rural poor to achieve common objectives.

Flexibility and phasing. Projects and programs design should be flexible to allow for uncertainties and risks during project implementation and to allow for adjustment as experience is gained.

Local institutions. At present, central ministries, provincial departments, their district staff, and commune councils have limited capacity. With a lack of financial incentives and low staff morale, payment of staff allowances is necessary to ensure full-time working. However, these should be linked to responsibility and accountability for the work output of the staff concerned. For a coherent approach to development, the provincial rural development committees (PRDCs) or their eventual successor should coordinate project activities at provincial level as part of their wider role of coordinating all rural development activities in the province.

Participation and sustainability. Members of rural communities should be fully involved in planning and implementing programmed activities to ensure their sustainability and ownership. Rural communities and the commune councils should contribute to the investments costs and assume responsibility for O&M of small-scale commune infrastructure investments.

Development approach. Experience has shown that the livelihoods of the poor can be significantly improved by providing (1) direct financial assistance; (2) access to technology, financial services, and markets; and (3) intensive capacity building.

Proven technology. Proven crop and livestock technology and appropriate extension approaches are available in the national extension guidelines and generally appropriate to local conditions and specific to the technical constraints to be addressed.

Economic viability of irrigation. Several projects indicate the doubtful economic viability and financial sustainability of large and medium-scale irrigation schemes in Cambodia. Donors should take a cautious approach to investment in such schemes.

218. There has been a recent opening for better sharing of experiences and improving the effectiveness of external assistance for agricultural and rural development. In 2003 an initiative to coordinate donor policy and support led to the creation of several joint government-donors technical working groups (TWGs): forums for RGC, donors, and others to work together to reduce poverty through agricultural and rural development and promote: (1) pro-poor sector policy, (2) coordination and information sharing; and (3) transparency around the use and mobilization of limited resources. While this is a positive development, an additional issue is that donors' assistance is still being earmarked to institutions. To ensure that sector policies and implementation strategies are appropriately comprehensive, recent reviews of external assistance recommended that donors support a shift from "budgeting for institutions" to "budgeting for programs" and such working groups could assess whether this is a timely agenda for Cambodia-donor partnership.

219. Current efforts for coordination in ARD will be most effective if accompanied by stronger government leadership. An active Council on Agriculture and Rural Development would be one option for this, perhaps with the support of a small but standing secretariat, also chaired by RGC; perhaps with pooled grant support from donors to cover a modest routine budget and work program aimed at improving the procedures and content of consultation and coordination. The experience in the land sector shows the progress that can be made when there is
an agreed strategic framework and strong government leadership pushing for efficient, sector-wide coordination.

Next steps

220. **Reaching consensus among development partners and setting relative priorities.** Moving from the elements of a rural development strategy proposed in this Note to a robustly integrated and prioritized agenda clearly will take additional work and dialogue. The extent to which such work and dialogue should be pursued depends to a great extent on resources—the government, donors, NGOs, private sector—available for agriculture and rural development. Furthermore, discussions and review of existing/future available resources are needed to assess existing gaps in resources, and within each area, define possible targets. The eventual reform agenda necessarily will be broad-based and comprehensive. It would consist of a portfolio of actions and reforms targeted to catalyze needed improvements in production and general rural productivity; create gainful employment for the growing numbers of rural poor including women; and replace the over-exploitation of the country’s natural resources with sustainable community-based uses.

221. For the most part, these actions will bear fruit in the medium term, although some will have an immediate salutary effect on rural incomes and will ease rural poverty. For these benefits to accrue, however, steps to prepare and implement the agenda should begin now, before Cambodia’s rural economy options become totally hostage to the neutralizing impact of its rural population dynamics. The broad outlines of most of the proposed reforms already are well known, and the cost of further delay could be substantial, especially to the rural poor. Moving forward with sector the rural reform agenda is an obligation that both the government and the donor community owe to Cambodia’s legion of rural residents, who continue to live perilously close to the margin of subsistence.

222. This Note will serve as a contribution to the government’s efforts to define its agenda to develop rural areas in the short to medium term in collaboration with other partners. The Note does not purport at this stage to present a comprehensive strategy, since important information gaps and limited engagement with the government in its formulation leave significant work for subsequent stages. Further consultations, during the preparation of the National Strategic Development Plan 2006–2010, in the short term, and through ongoing dialogue within forums such as the government-donors TWGs, in the medium term, would aim to clarify with the government strategic directions, priority sub-sectors on which to focus, linkages and information gaps needing further assessment, and specific areas in which enough is already known to embark on implementing concrete agendas. The World Bank stands prepared to support this subsequent phase of work in agreement with the government.
Annex 1. Cambodia’s Millennium Development Goals

<table>
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<tr>
<th>Selected indicators</th>
<th>Base year</th>
<th>2015</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MDG1: Eradicate extreme poverty and hunger</strong></td>
<td>Halve proportion of people who suffer from hunger (%)</td>
<td>39 (1993)</td>
<td>19.5</td>
</tr>
<tr>
<td>Proportion of people whose income is less than the national poverty line</td>
<td>7.4 (1993)</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Share of the poorest quintile in national consumption</td>
<td>45.2 (2000)</td>
<td>22.6</td>
<td></td>
</tr>
<tr>
<td>Prevalence of underweight children under 5 yrs old</td>
<td>15 (2000)</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td><strong>MDG 2: Achieve universal nine-year basic education</strong></td>
<td>Ensure all children complete basic schooling by 2015 (%)</td>
<td>59 (1997)</td>
<td>100</td>
</tr>
<tr>
<td>Net admission rate</td>
<td>78 (1997)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Net enrolment rate in primary education</td>
<td>14 (1997)</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td><strong>MDG 3: Promote gender equality and empower women</strong></td>
<td>Reduce gender disparities in all level of education</td>
<td>47 (2002)</td>
<td>100</td>
</tr>
<tr>
<td>Ratio of girls to boys in upper secondary education</td>
<td>9 (1997)</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Ratio of girls to boys in tertiary education</td>
<td>4% (1993)</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>Proportion of seats held by women in national assembly</td>
<td>47 (2002)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td><strong>MDG4: Reduce child mortality</strong></td>
<td>Reduce the under-five mortality rate</td>
<td>124 (2000)</td>
<td>65</td>
</tr>
<tr>
<td>Under-five mortality rate (per 1,000 live births)</td>
<td>95 (1997)</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Infant mortality rate (per 1,000 live births)</td>
<td>41% (2000)</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>Proportion of children under 1 yr immunized against measles</td>
<td>47 (2002)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td><strong>MDG5: Improve maternal health</strong></td>
<td>Reduce maternal mortality ratio</td>
<td>437 (2000)</td>
<td>140</td>
</tr>
<tr>
<td>Maternal mortality ratio (per 100,000 live births)</td>
<td>32% (2000)</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>Proportion of births attended by skilled health personnel</td>
<td>2.6 (2002)</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td><strong>MDG6: Combat HIV/AIDS, malaria and other diseases</strong></td>
<td>Decrease the spread of HIV/AIDS, malaria, DF, and TB</td>
<td>0.4 (2000)</td>
<td>0.1</td>
</tr>
<tr>
<td>HIV prevalence rate among adults aged 15–49</td>
<td>61 (2002)</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Malaria case fatality rate reported by public health sector</td>
<td>24 (1998)</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td><strong>MDG7: Ensure environmental sustainability</strong></td>
<td>Achieve various standard targets to ensure environmental sustainability (%)</td>
<td>8.6 (1998)</td>
<td>30</td>
</tr>
<tr>
<td>Forest coverage as a percentage of total area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of rural population with access to safe water source</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of rural population with access to improved sanitation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MDG8: Forge a global partnership for development</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Localized targets to be finalized.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MDG9: Demining, UXO, and victim assistance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target: Moving toward zero impact from landmines and UXOs by 2012.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target: Eliminate the negative humanitarian and socioeconomic impact of landmines and UXOs by 2025.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source: UNDP.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Annex 2. Farming systems

1. *Cambodia is characterized by a great diversity of farming systems,* which can be classified in 7 major groups: 4 rice-based farming systems, 2 chamcar-crops-based farming systems (see point 3 below), and 1 more limited, industrial production system. These systems differ in their potential for intensification, diversification, and commercialization. However, terrace rain-fed rice farming systems, characterized by low productivity, employs approximately 70 percent of the rural population and represents 80 percent of the rice cropping areas. These figures explain Cambodia’s low aggregate agricultural performance.

2. *The 4 major types of rice farming systems include* (a) type found in non-irrigated terrace zones, characterized by poorly productive and rainfall-dependent seasonal rice cropping, and frequently associated with sugar palm. This system is the most common among Cambodian farmers (table A2.1). Recent changes include the introduction of double-cropping. (b) flood recession zones, in which water control allows intensive rice cropping. With good water and soil fertility control, evolution can be rapid either toward specialization in intensive rice farming—with land concentration and development of a salaried workforce—or toward the diversification of production. (c) floating rice in large flooded fields. In this type, the extensive nature of farming practices allows good labor productivity but hydraulic risks are higher. These systems are regressing and evolving into either flood recession rice or irrigated double-cropping; and (d) upland rice-based systems involving slash-and-burn land preparation, located mainly in less densely populated areas of the North-Eastern provinces. These systems are less and less rice based, with increased population inflows and the development of cash crops by migrants.

3. *Chamcar cropping refers to widely diversified farming systems in which rice cropping is most often found but in which “dry” cropping is prevalent.* There are two groups of chamcar systems: (1) river bank farming systems, dominated by diversified cropping systems following the annual flooding cycle, with a high development potential. Land prices are high, and land concentration induces the emergence of larger farms with mechanization and use of a smaller workforce; and (2) red and black soils upland farming systems, in which rubber farming is concentrated and other cash crops are developing fast. The future of these systems depends on the restructuring of the rubber industry and on the development of annual crops, notably, maize, soybeans, and other tree crops such as cashews or bananas.

4. *The last system is the modern, capital-intensive one found mostly near cities,* whether in riverbank zones (around Phnom Penh) or in a combination of riverbanks and terraces (Battambang, Siem Reap). This system includes intensive market garden cropping, industrial chicken farming, and orchards. The evolution of this system will depend on the expansion of urban markets, labor costs, and development of alternative uses for capital in other economic sectors, as well as on the evolution of external markets for the main export commodities (oil palm, soybean, cashew).

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Relative importance of main farming systems, 2000

<table>
<thead>
<tr>
<th></th>
<th>Terraces (rice)</th>
<th>Receding rice</th>
<th>Floating rice</th>
<th>Riverbank rice</th>
<th>Red soils</th>
<th>Slash and burn</th>
<th>Modern/ capitalized</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural pop. (million)</td>
<td>7.5</td>
<td>0.75</td>
<td>0.125</td>
<td>1.5</td>
<td>0.8</td>
<td>0.07</td>
<td>-</td>
<td>10.75</td>
</tr>
<tr>
<td>Households (x 1000)</td>
<td>1,500</td>
<td>150</td>
<td>25</td>
<td>300 (14%)</td>
<td>160</td>
<td>14 (0.6%)</td>
<td>5</td>
<td>2,149</td>
</tr>
<tr>
<td>Rice area (x 1000 ha)</td>
<td>1,500</td>
<td>150</td>
<td>56</td>
<td>100</td>
<td>24</td>
<td>14</td>
<td>0</td>
<td>1,844</td>
</tr>
<tr>
<td>Yield/ha*</td>
<td>1.75</td>
<td>3.5</td>
<td>2.0</td>
<td>3.5</td>
<td>2.3</td>
<td>1.5</td>
<td>-</td>
<td>2.0</td>
</tr>
<tr>
<td>% of paddy production</td>
<td>71%</td>
<td>14%</td>
<td>3%</td>
<td>9%</td>
<td>1.5%</td>
<td>0.5%</td>
<td>0</td>
<td>3,688 million t</td>
</tr>
<tr>
<td>Expected pop. growth by 2020 (million)</td>
<td>4.03</td>
<td>0.40</td>
<td>0.67</td>
<td>0.80</td>
<td>0.43</td>
<td>0.38</td>
<td>0.003</td>
<td>5.73</td>
</tr>
</tbody>
</table>

Source: APPI/GRET study.

Note:
a. 3-year average, ton/ha.

5. Options for intensification and diversification in rain-fed terrace areas. Rain-fed rice cropping is especially important in the two areas in which the majority of the population are concentrated: the Plain provinces in the Southeast (Prey Veng, Svay Rieng, Takeo, Kampot, and south of Kompong Cham) and the Northwest provinces in the Tonle Sap region (Battambang, Siem Reap, Banteay Maenchey). Irrigated double cropping has developed primarily in the Southeast provinces around Phnom Penh (Kandal, Takeo, Prey Veng, Kompong Cham, Kompong Speu, Kampot).

6. Water constraints and low soil fertility are the main constraints to further intensification of this system, and irrigation combined with the use of improved varieties of early rice is the main option for intensification, provided the ratio of rice prices to input prices evolves favorably (including the price of fuel for water pumping) and significant support is provided in terms of decentralized research and extension, farmer training, and availability of credit and quality inputs. Among possible opportunities, the development of small-scale fish farming is the most promising or, when markets exist, the development of dry-season vegetable production. However, the capacity of these systems to absorb additional population in the coming years is limited, as indicated by the low cultivated area available per household: less than 1 ha in the Southeast, where no more land is available, and less than 1.5 ha in the Northwest. The balance of these systems is also highly dependent on the development of off-farm income opportunities. Given current yields, it takes 0.9 ha of paddy to meet the food needs of a family of 5. Most farm households rely on off-farm incomes and non-rice farming activities—fishing, palm sugar fabrication, woodcutting, charcoal fabrication, and seasonal migrations to the cities—for more than 50 percent of their incomes.

7. Expansion of receding rice farming systems. Receding rice systems have been expanding rapidly (although from a smaller surface base), both through the clearing of remaining flooded forests and by the transformation of floating rice systems, with the development of water control investments, adoption of early maturing (IR) varieties, and increasing use of fertilizers. Receding rice systems are labor and input intensive and yields up to 3 t/ha can be obtained without additional fertilizers; if irrigation is mastered and with adequate pest control and fertilizer management, yields up to 6-7 t/ha are observed. These systems are less dependent on off-farm incomes, and a significant share of farm production is marketed. Land prices have raised rapidly in these areas and land concentration to the benefits of the wealthiest, best equipped farmers is observed. Key determinants for future

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92 Thirty years ago, these average surface areas were twice as large.
93 The system is the one for which the recommendations formulated by national research and extension services best fit farmers’ constraints and strategies.
intensification and development of these systems include the evolution of paddy/input price ratios, availability of agricultural extension services addressing these milieus' specific constraints, availability of labor (or adoption of different varieties—direct sowing species—less dependent on labor), and government's actions to preserve the remaining flooded forest. Floating rice systems, which are highly vulnerable to flooding, are gradually being transformed into receding rice systems, with investments in improved varieties and small-scale irrigation (motor pumps, tube wells). Riverbanks farming systems include intensive, diversified poly-cropping and animal rearing systems, or crop-fish and crop-animal-fish farming systems, and households usually get involved in a wider range of activities depending on local opportunities (fishing, fuel wood sales, small business, temporary or permanent job in Phnom Penh of a family member, etc.). Under increasing population pressure, clearing of flooded forest—as the only remaining land reserve—is occurring, as well as land concentration to the benefit of farmers who managed to accumulate assets (motor pumps, tractors, transport means, etc.). The evolution of riverbank farming systems, which have had a marked commercial orientation for a long time due to easier access to towns, will be linked to the development of the second and tertiary sector and expansion of urban food markets.

8. **Diversification and development of chamcar farming systems.** Slash and burn and red and black soils upland farming systems extend in an area including Rattanakiri and Mondulkiri provinces, and parts of Kompong Cham, Kratie, and Kompong Thom provinces. Slash and burn agriculture is mainly practiced by ethnic groups (approximately 14,000 households) in less densely populated areas, and collection of forest products is an important source of revenues for households in addition to agricultural production (rice, legumes, cassava, bananas, spices, vegetables). Recent trends include the development of cashew nut orchards, and sedentarization closer to main roads. In-migration is important in these areas and has resulted in the introduction of commercially oriented production of coffee, rubber, cashew trees and soybean. Future agricultural development will depend on government policy regarding local development, in particular the options that will be chosen for allocation of land offering the greatest potential (red soil plateau area to develop cash crops or shallow water areas for rice production), as well as the availability of agricultural support services able to promote the development of sustainable farming systems under the current increase in population. Further diversification into smallholder rubber plantations and other perennial crops (cashew, banana, etc.) will depend on improvements in land tenure security, development of infrastructure, credit and extension services, and in the case of rubber, restructuring of the sector and improvement in the marketing environment.

9. **Conclusion.** Key determinants of future evolution of farming systems, and subsequently of their capacity to provide remunerative employment for the fast growing population, depend on a number of factors, some of them exogenous to the rural space, in particular, the development of employment opportunities in the secondary and tertiary sectors in urban areas. However, future trends will in a great extent depend on government policy choices for rural areas as regards: (1) Land management and tenure security, especially in the Plateau and less densely populated areas of the Northwest; (2) Priorities for investments in irrigation and water management; (3) Addressing marketing and trade constraints for a number of key commodities (rice, fish, livestock, rubber, etc.); (4) Re-orientation of the research and extension system to respond to the needs of diversified farming systems; and (5) Infrastructure development, in particular in more remote areas less connected to markets and towns.

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94 The current trend is to diversify into other crops, such as mung bean.

95 According to the 1998 Census, 25 percent of the population of Rattanakiri was made up of migrants from other provinces and neighboring countries.
Annex 3. Maps

1. Geographical regions
2. Cambodia MDGs composite index by province
3. Incidence of poverty by district and road network
References


